

David Jiles

Chair, Department of Electrical & Computer Engineering,
Palmer Endowed Chair and Anson Marston Distinguished Professor
Iowa State University

1. PROFESSIONAL EXPERIENCE

2010 - Anson Marston Distinguished Professor, Chairman, Department of Electrical & Computer Engineering, Palmer Chair Holder, Iowa State University
Professor of Materials Science & Engineering, Iowa State University
2005-2010 Professor of Magnetics, Director & Royal Society Research Fellow, Wolfson Centre for Magnetics, Cardiff University, UK
2003-2005 Anson Marston Distinguished Professor, Iowa State University, USA
2004 Visiting Professor, Wolfson Centre for Magnetics, Cardiff University, UK
2000, '03, '07 Visiting Professor, Vienna University of Technology, Austria
1999 Visiting Scientist, Institute of Physics, Czech Academy of Sciences
1997 Visiting Professor, University of the Saarland, Germany
1992-2005 Professor of Electrical & Computer Engineering, Iowa State University.
1992, 1997 Visiting Professor, Fraunhofer Institute, University of the Saarland, Germany.
1991, 1994 Visiting Professor, Department of Applied Physics, University of Hull, UK.
1990-2005 Professor of Materials Science & Engineering, Iowa State University.
1990-2005 Senior Scientist, Ames Laboratory US Department of Energy.
1986-90 Associate Physicist/Assistant Professor - Physicist/Associate Professor.
1984-86 Research Fellow, Ames Laboratory, US Department of Energy.
1981-84 Research Associate, Physics Department, Queen's University, Kingston, Canada.
1979-81 Postdoctoral Fellow, Physics Department, Victoria University, New Zealand.

2. SCIENTIFIC AND TECHNICAL SOCIETY MEMBERSHIPS

Fellow of the Royal Academy of Engineering (Elected 2014)
Honorary Fellow, Indian Society for Nondestructive Testing (Elected 2011)
Fellow of the Institute of Materials, Minerals and Mining UK (Elected 2007)
Fellow Japan Society for the Promotion of Science (Elected 2006)
Royal Society Research Fellow (2005)
Fellow of the Institute of Physics, UK (Elected 1988).
Fellow of the Institute of Electrical & Electronic Engineers (Elected 1994).
Fellow of the Institution of Electrical Engineers, UK (Elected 1995).
Fellow of the Magnetics Society (Elected 1994).
Fellow of the American Physical Society (Elected 1997).
Fellow of the Institute of Mathematics and its Applications, UK (Elected 1999).
Member American Society for Engineering Education.
Member American Association for the Advancement of Science
Member of the European Physical Society.
Member of the Materials Research Society.
Member of the American Society for Materials.
Member of the Metallurgical Society.
Member of the American Society for Nondestructive Testing.

3. AUTHORSHIP OF BOOKS

"Introduction to Magnetism and Magnetic Materials," by D.C. Jiles. 430 pages, Chapman and Hall Publishers, London and New York. First edition 1991. Second edition 1998.

"Introduction to the Electronic Properties of Materials," by D.C. Jiles. 418 pages, Chapman and Hall Publishers, London and New York. First edition 1994. Second edition 2001.

"Introduction to the Principles of Materials Evaluation", by D.C. Jiles. 279 pages, Taylor and Francis, Boca Raton, 2007.

4. PROFESSIONAL ACTIVITIES, HONORS & AWARDS

Elected Fellow of the Royal Academy of Engineering (2014)
Elected Member Board of Governors of IEEE-HKN (2013)
Honorary Fellow, Indian Society for Nondestructive Testing (2011)
Member HKN (eta-kappa-nu, the Electrical Engineering Honor Society) (2011)
Member TBII (tau-beta-pi, the Engineering Honor Society) (2011)
Honorary Professor, School of Engineering, Cardiff University, UK
Visiting Professor, Department of Materials Science & Engineering, University of Sheffield, UK
Chairman, United Kingdom & Republic of Ireland Section, IEEE Magnetics Society (2009-10)
Fellow Japan Society for the Promotion of Science (2006)
Royal Society Research Fellow (2005-2010)
Ewing Distinguished Lecturer, UK Magnetics Society (2005)
Editor-in-Chief, IEEE Transactions on Magnetics (2005-2011)
Selected for "Who's Who in the World", (2000, 2001, 2002, 2003, ...2014)
Selected for "Who's Who in America", (2001, 2002, 2003, ...2014)
Selected for "Who's Who in Science and Engineering" (1998, 1999, 2000, 2001, 2002, 2003, ...2014)
International Advisory Committee, IUPAP International Conference on Magnetism (2000, 2003)
Magnetics Society Distinguished Lecturer (1997-98)
Chairman, American Physical Society Topical Group on Magnetism and its Applications (1996-97, 1997-98)
Program Committee International Magnetics Conference (1996, 1999, 2008)
Administrative Committee of the Magnetics Society (1996-1998, 1999-2001, 2003-2006, 2007-2009, 2012-14)
Member US Nuclear Regulatory Commission Expert Panel on NDE of Radiation Embrittlement (1999)
Federal Laboratory Consortium Award for Excellence in Technology Transfer (1994)
Editor of IEEE Transactions on Magnetics (1992-2004)
Editor of Nondestructive Testing & Evaluation (1988-2005)
ASM Committee on Hard and Soft Magnetic Materials, (1987-1997)
Chairman, Properties and Application of Magnetic Materials Conference (1985-2001)
Recipient of Iowa State University Foundation Award for Outstanding Achievement in Research (2001)
Editorial Board, Journal of Materials Science: Materials in Electronics (2002-)
Anson Marston Distinguished Professor, Iowa State University (2003-)
Chairman, American Physical Society Tutorials, (2003-2008).

5. PROFESSIONAL LICENCES

1989-2014 PE Professional Engineer, State of Iowa
1989-2014 CEng Chartered Engineer, United Kingdom

6. RESEARCH PROJECTS, CONTRACTS AND GRANTS

"Magnetic Measurements and Modeling", D.C.Jiles, R L.Hadimani, C. I. Nlebedim, Y. Melikhov, A. Porch, \$244,312.
National Science Foundation, International Research Experience for Students (IRES), 2014-17

"Towards Room Temperature Surface States in Topological Insulators", I.C. Nlebedim and D.C.Jiles, \$16,000,
National Science Foundation, 2014-15.

"Improved magnetic materials for NMR sensor applications", D.C. Jiles, \$107,490, Schlumberger-Doll, 2013-14

"A Laboratory for Deep Brain Stimulation for Diagnostic and Therapeutic Purposes using Electromagnetic and Ultrasonic Methods", D.C.Jiles, T.Bigelow, A. Kanthasamy, \$536,005, Carver Trust, 2012-14.

"Application of Barkhausen Noise Method for Depth Profiling of Stress in Helicopter Transmission Gears", \$140,688,
Agusta Westland, 2012-14.

“High Sensitivity Probe for Magnetic Non-destructive Evaluation”, D.C.Jiles and N. Prabhu Gaunkar, \$15,000, American Society for Nondestructive Testing, 2013-2014.

“Topological Electromagnetic Sensors”, F. Xiu and D.C. Jiles, National Science Foundation, Division of Electrical, Communications and Cyber Systems, ECCS-1201883, \$295,008, 2012-15

“Magnetic Nondestructive Evaluations for Detection of Flaws”, D.C.Jiles, Sperry Rail International, UK, £110,436, 2010-2011

“Development of Energy Efficient Magnetic Cooling and Refrigeration”, Royal Academy of Engineering, UK, Exchange Grant with India, £12,597, 2010-12.

“The Integrated Brain Imaging and Stimulation Project”, Welsh Assembly Government, UK, £194,285, 2010-2012.

“Development of magnetic torsion angle sensor”, Valeo GmbH, Germany, £19,485, 2009-10.

“Welsh Electromagnetics Network”, Welsh Assembly Government, UK, £99,776, 2009-2011

“Magnetic Metrology: Advanced Modelling and Measurements for Welsh Engineering Industries” Welsh Assembly Government, UK, £254,372, 2009-2012

“Magnetic characterization and micromagnetic simulation of nanowire arrays”, Royal Society, UK, £5,754, 2009-2011.

“Strategic Partnership Agreement”, Cogent Power Ltd., UK, £175,000, 2009-2012.

“Development of Magnetic Stimulation Devices for Medical Applications”, UK, £209,540, Welsh Assembly Government, 2008-10.

“Development of an Expanded Magnetic Metrology Service”, £19, 639, Welsh Assembly Government, UK, 2008.

“Endowed Lectureship”, Cogent Power Ltd., UK, £210,000, 2008-2011.

“Development of Barkhausen Noise Method for residual stress evaluation on helicopters components”, £47,500, Agusta-Westland, UK, 2008-09

“Royal Society Conference Travel Grant”, UK, £1,120, 2007.

"Characterization and modelling of magnetic materials for fault current limiters", £147,930, Zenergy Power Systems, California, USA.2006 - 2009.

“Characterisation of Soft Magnetic Materials for Metering Current Transformers and Other Low Flux Density Applications”, with A.J.Moses and P.I.Anderson, EP/E006434/1. £399,712, EPSRC, UK, 2007-2010.

“Investigation of high magnetostriction materials for advanced sensors and actuators”with A.J.Moses and P.I.Williams, EP/D057094/1. £322,087 EPSRC, UK. 2006-2009.

“Development of Wolfson Magnetics Research Laboratories”, £1,500,000, Higher Education Funding Council of Wales, UK, 2006-2008.

“Investigation of new magnetoelastic-caloric materials for device applications”, The Royal Society, UK, £120,000, 2005-2010.

“New composite magnetoelastic materials with high stress sensitivity and low hysteresis“, National Science Foundation, Division of Materials Research, DMR-0402716, \$473,299, 2004-2008.

“Development of magnetic filtering for fine metal particles using finite element method” with S.J. Lee and D.M. O’Neel, Institute for Physical Research and Technology, \$19,558, 2004.

“US-UK Cooperative Research: New composite magnetoelastic materials with high stress sensitivity and low hysteresis“, International Cooperative Project with Cardiff University, UK. National Science Foundation, Division of International Programs, OISE 0437293, \$24,995, 2004-2007.

“Magnetic measurement system for determination of magnetoresistance, hysteresis and magnetostriction of new spintronic materials”, \$425,000, Carver Trust, 2004-2006.

“Application of a magneto-optic sensor for nondestructive evaluation”, \$35,697, National Aeronautics and Space Administration, 2003-04.

“The piezomagnetic Matteucci effect in nickel”, NSF/REU, \$5,000, 2003.

“Magnetic sensors for integrated vehicle health monitoring”, \$50,500, National Aeronautics and Space Administration, 2003-04.

“A novel approach to characterizing surface residual stress in engine alloys using alternating current potential drop measurements” USAF, with M. Johnson and S.J. Lee, 2003-2004.

“CRCRD: Vertically Integrated Engineering Design”, NSF/REU, \$5,000, 2003

“Magnetic sensors for integrated vehicle health monitoring”, \$75,500, National Aeronautics and Space Administration, 2002-03.

“Magnetic evaluation of fatigue damage and deformation”, INT-0138400, \$25,000, International Cooperative Project with the National Metallurgical Laboratory, Jamshedpur, India. National Science Foundation, US- India Cooperative Research Program, 2002-2007.

“Development of miniature pumps mixers and based on magnetically induced flow of magnetic liquids”, with R.Shinar and M.Porter, State of Iowa, \$146,051, 2002-2003.

“Magnetic Particle inspection improvements for aerospace applications”, with B.Larsen L.Brasche et al., Center for NDE, \$485,282, Federal Aviation Authority, 2001-2004.

“Magnetic properties of PrNiSi alloys”, US Department of Energy, \$103,000 (2002-2003), \$12,500 (2003-2004), \$121,000 (2004-2005), US Department of Energy.

"Extraordinary responsive magnetic rare earth materials," K.A. Gschneidner, Jr., V.K. Pecharsky, D.C. Jiles, et al., \$4,987,000, (2000), \$70,000 (2000-2001), \$70,000, (2001-2002), \$70,000 (2002-2003), \$70,000 (2003-2004), \$75,000 (2004-2005). US Department of Energy.

“Magnetization, time dependent magnetization processes and domain wall motion”, US Department of Energy. \$107,000 (1999-2000), 97,500 (2000-2001), \$110,000 (2001-2002).

"Laboratory for magnetic thin film and magnetoelectronic device research", \$530,000, Roy. J. Carver Trust, 2000-03.

"New magnetic tunnel junctions using semiconductor sandwich layers with controllable band gaps", ECS-0100799, \$54,802, J.E. Snyder, D.C. Jiles, National Science Foundation, 2001-2002.

"Analysis of relationships between magnetic hysteresis parameters and defects of non-uniform materials using the Preisach model". DGE-0108046, \$49,926, NSF-NATO postdoctoral fellowships in science and engineering for scientists from NATO partner countries. D.C.Jiles and C.C.H.Lo. National Science Foundation, 2001-2003.

"Vertically integrated engineering design for combined research and curriculum development", EEC-9980331, with R.B.Thompson, K.Constant, M.Akinc, J.Gray and L.W. Schmerr, \$443,968, National Science Foundation, 1999-2003.

"Magnetic FEM course modules and demonstrations," S.-J. Lee, D.C. Jiles, \$5,000, Ansoft Corporation, 2000.

"Animation of magnetic fields from two different shaped magnet arrays used for magnetic therapy", \$6,830, Vector Fields Inc., 2000.

"Magnetic processing for enhancement of lifetimes of ferrous metals subjected to repeated stress", CMS-9910147, \$49,940, National Science Foundation, 1999-2000.

"The piezomagnetic Matteucci effect in nickel alloys: development of theory and applications", DMR-9902415, \$433,144, National Science Foundation, 1999-2002

"Non destructive enhancement of material lifetimes by stress reduction in ferrous metals without associated microstructural changes", IPRT Seed Fund Program, \$65,128, 1999-2000.

"Development of highly efficiency rotary magnetocaloric refrigeration prototype", \$750,000 (with K.A.Gschneidner and V.Pecharsky), US Department of Energy, 1999-2002.

"Development of vehicle magnetic air conditioner technology", \$50,000, US Department of Energy, CARAT Program, 1998.

"Modeling of magnetization processes in magnetic materials for evaluation of microstructures", OISE-9732135, \$23,681, International Collaborative project with the Academy of Sciences of the Czech Republic, National Science Foundation 1998-2001.

"Development of orthogonal magnetics", Rockwell International, \$25,000, 1998

"Characterization of the magnetic and structural properties of recording head materials", with J.Shinar, R.Weber and J.E.Snyder, Seagate Technology Inc., \$200,000, 1997-98.

"Composite magnetostrictive materials for advanced automotive magnetomechanical sensors", US DoE, Advanced Energy Projects, \$820,000, 1996-99.

"Examination of the relationship between magnetic hysteresis and the mechanical properties of steels", CMS-9532056, \$244,050, National Science Foundation, 1996-2001.

"Ferrite substrates for miniaturization of power electronics", Rockwell International and the State of Iowa, \$65,000, 1996.

"Research experiences for undergraduates grant for examination of the relationship between magnetic hysteresis and the mechanical properties of steels " National Science Foundation, \$5,000, 1997-98.

"Physical interpretation and comparison of hysteresis in magnetic materials", NATO, \$8,600, 1996-98.

"Laser scribing of metallic glasses to improve efficiency of electric motors and transformers", DMI-9622649, \$90,000, National Science Foundation, 1996-98.

"Research experiences for undergraduates grant for: Improved manufacturing processes for the production of new high efficiency materials for transformer cores " National Science Foundation, \$5,000, 1996-97.

"Loss reduction in metallic glasses through domain refinement", Asea Brown Boveri, \$40,000, 1996-97.

"New amorphous magnetic fibers for highly energy efficient soft magnetic cores", US Department of Energy, \$20,000, 1996.

"Assessment of Barkhausen effect measurements for evaluation of ground steel components", EEC-9418363, \$55,000, National Science Foundation, 1994-96.

"Research experiences for undergraduates for: Assessment of Barkhausen effect measurements for evaluation of ground steel components" National Science Foundation, \$5,000, 1995-96.

"Tailored microstructures in hard magnets," R.W.McCallum, I.E.Anderson, P.Canfield and D.C.Jiles. US Department of Energy, \$60,000, 1994-95, \$50,000, 1995-96.

"Development of the Magnescope as an instrument for in situ evaluation of steel components," Nuclear Regulatory Commission, \$99,998, 1994-97.

"An investigation of the effects of creep on structure sensitive magnetic properties of nickel through simulated cavitation in a model material," National Science Foundation, DMR-9310273, \$295,273, 1994-97.

"Research experiences for undergraduates for: An investigation of the effects of creep on structure sensitive magnetic properties of nickel through simulated cavitation in a model material " National Science Foundation, \$5,000, 1995-97.

"Characterization of magnetic property changes due to creep damage in pipe weldments," Electric Power Research Institute, \$39,525, 1995.

"Development of a new magnetostrictive material for sensors and actuators," US Department of Energy (Cooperative Research and Development Agreement with General Motors Corporation), \$67,422, 1994-95.

"Micromagnetic method for evaluation of residual stress in crankshaft fillets," Cummins Engine Company, \$34,883, 1994-5.

"Effects of processing and structural modifications on magnetic properties of high permeability, low core loss materials," US Department of Energy (Cooperative Research and Development Agreement with ABB Inc.), \$40,000, 1993-94.

"Effects of laser scribing on the core losses in silicon iron laminations," \$25,000, Asea Brown Boveri, 1993-94.

"Magnetic NDE for railroad wheel inspection programs," Association of American Railroads, \$39,919, 1993-94.

"Exploratory research on the effect of creep damage on magnetic properties in ferritic steels," \$37,400, Electric Power Research Institute, 1993-94.

"Laser magnetic domain refinement of transformer cores," P.Molian and D.C.Jiles, Electric Power Research Center, \$17,500, 1993-94.

"Magnetostriction in Tb-Dy-Fe alloys: measurement and modelling of properties," \$5,900, NATO, 1993-95.

"Magnetic inspection of creep damaged components in power generating systems," D.C.Jiles and S.B.Biner. Ontario Hydro, \$58,600, 1992-93.

"Rapidly solidified magnetic materials for highly efficient energy conversion devices," D.C.Jiles, I.E.Anderson, P.Molian and M.R.Govindaraju. State of Iowa, Institute for Physical Research and Technology, \$63,600, 1992-93.

"Magneprobe: a micromagnetic inspection system for inspection of surfaces," US Department of Commerce, \$242,000, 1991-93.

"Quantitative NDE for steel components of large structural systems", MSS-9018532, \$249,995, D.C.Jiles and S.B.Biner, National Science Foundation, 1990-1992.

"Magnetic properties measurements of irradiated, aged and prestrained materials (continuation)," D.C.Jiles. Westinghouse Electric Corporation, \$10,440, 1992.

"Detection of fatigue damage in aircraft landing gears," D.C.Jiles. McDonnell Douglas Aircraft Corporation, \$8,400, 1992.

"Prediction of changes in the magnetic properties of steels due to mechanical deformations," D.C.Jiles and M.J.Sablik, Electric Power Research Institute, \$221,797, 1990-92.

"Magnetostriction in Tb-Dy-Fe alloys: measurement and modelling of properties". D.C.Jiles and R.D.Greenough, North Atlantic Treaty Organization, \$4,900, 1991-1993.

"Magnetic properties measurements of irradiated, aged and prestrained materials". D.C.Jiles. Westinghouse Electric Corporation, \$10,164, 1991

"Creep damage assessment of Cr-Mo steels using magnetic methods". D.C.Jiles Ontario Hydro \$6,700, 1991.

"A Terfenol laser diode magnetometer," D.C.Jiles and R.Weber. US Department of Commerce, Center for Advanced Technology Development, \$29,989, 1991-92.

"Application of a new magnetic monitoring technique to in situ evaluation of fatigue damage in ferrous components of nuclear primary systems," D.C.Jiles and S.B.Biner. Nuclear Regulatory Commission, \$99,980, 1991-1993.

"Micromagnetic surface studies of materials for NDE," MSS-8915428, \$55,500, International Cooperative Project with the Universitat des Saarlandes, Germany, National Science Foundation, 1990- 92.

"Magnescope: a portable magnetic inspection system". Center for Advanced Technology Development, \$90,000, 1990-91.

"Development of NDE measurement techniques of interest to the railroad industry". Association of American Railroads, \$9,910, 1990.

"Non destructive methods for determination of mechanical properties of materials." Center for NDE, (NSF/Industrial Consortium, \$28,811 1985-86; \$45,214 1986-87; \$43,500 1987-88; \$58,000 1988-89; \$63,859 1989-90; \$60,560 1991-92)

"Magnetic methods for non destructive evaluation." Center for NDE, (N.S.F./Industrial Consortium \$16,357 1985-86; \$43,723 1986-87;\$47,500 1987-88; \$71,020 1988-89; \$61,426 1989-90, \$63,800 1993-94)

"NDE Measurement techniques." U.S. Department of Energy, Ames Laboratory, (Department of Energy B.E.S. Contract to Ames Laboratory for NDE Measurement Techniques, \$500,000 1984-85, \$552,000 1985-86 with O.Buck and R.B.Thompson).

"Microstructural effects on magnetic properties." U.S. Department of Energy, Ames Laboratory, (\$87,000 1988-89, \$85,400 1993-94, \$85,000 1994-95, \$85,000 1995-96. Funded as part of the NDE measurement techniques task).

7. OTHER RESEARCH PROJECTS

"Investigation of the effects of mechanical stress on the magnetic properties of pipeline steels for stress monitoring", Queen's University, Canada (1981-84).

"Optical properties and electronic structure of Al, Au, Ni, Pt, Er, Gd, and Dy, using stress modulated spectroscopy." Victoria University, New Zealand (1979-81).

"Ultrasonic investigation of the magnetic and elastic properties of heavy rare earth metals at cryogenic temperatures". University of Hull, U.K., (1976-79).

"Utilisation of diamond as a solid state nuclear doserate-meter." University of Birmingham, U.K., (1976).

"X ray diffraction studies of metallurgical phases in the aluminum-manganese alloy system." University of Exeter, UK, (1974-75).

8. TEACHING

Academic areas of specialization :

- Magnetism and magnetic materials
- Condensed matter and materials physics
- Electronic properties of materials
- Nondestructive evaluation of materials

Courses of instruction :

- Electronic Engineering Laboratory, University of Hull, UK (1977-79)
- Applied Physics Laboratory, University of Hull, UK (1977-79)
- Experimental Physics Laboratory, Victoria University, New Zealand (1980-81)
- Applied Magnetics, Queen's University, Canada (1982)
- Nondestructive Evaluation Laboratory, Iowa State University (1985-87)
- Magnetism & magnetic materials, Iowa State University (1988-99, 2001, 2002, 2004, 2011)
- Introduction to electronic properties of materials, Iowa State University (1990-97, 2001)
- Electronic properties of materials, National Technological University (1993)
- Fabrication and processing of materials, Iowa State University (1997)
- Introduction to magnetic materials, University of the Saarland, (1997)
- Introduction to Materials Science and Engineering, Iowa State University (1997, 1999, 2002, 2003)
- Magnetism and Magnetic Materials, National Technological University (2001)
- Principles of Nondestructive testing, Iowa State University (1998-99, 2000-2003, 2005)
- Magnetic hysteresis modeling, Vienna University of Technology (2000)
- Vertically integrated design, Iowa State University (2000, 2001, 2002)
- Magnetic materials: applications in sensors and actuators, Vienna University of Technology (2003)
- Electrical Machines, Cardiff University (2005, 2006, 2007)
- Engineering Design Case Studies, Cardiff University (2006, 2007, 2008)
- Introduction to Magnetic Materials (2007, 2008, 2009)
- Avanced Magnetic Materials, Cardiff University (2009, 2010)
- Principles of Nondestructive Evaluation, Cardiff University (2009)
- Magnetism & magnetic materials, Iowa State University (2011, 2012, 2013)

Postdoctoral fellows sponsored and scientific staff supported

M.R.Govindaraju, Associate Metallurgist (1992-97)
A.P.Parakka, Assistant Engineer (1994-97)
A.Mitra, Visiting Scientist (1996)
J.E.Snyder, Associate Scientist (1997-2005)
M.J.Johnson, Associate Engineer (1997-1999)
C.C.Lo, Associate Scientist (1998-2005)
S.J.Lee, Postdoctoral Fellow (1999-2005)
Y.Melikhov, Postdoctoral Fellow (2002-2005)
N.Ranvah, Postdoctoral Fellow (2009-10)
C.I. Nlebedim, Postdoctoral Fellow (2010-13)
R. Hadimani, Postdoctoral Fellow (2011-14)

Graduate students :

Iowa State University 1984-2005

Suresh Hariharan (Electrical Engineering, MS 1990)
Michael Devine (Materials Science & Engineering, MS 1992)
Alan Eichmann (Electrical Engineering, MS 1992)
Levent Sipahi (Physics, MS 1992)
Jennifer Thaelke (Physics, MS 1992)
David Kaminski (Materials Science & Engineering, MS 1994)
Russell Chung (Electrical Engineering, MS 1991, PhD 1999)
Patricia Pulvirenti (Materials Science & Engineering, MS 1996)
Zhao Jun Chen (Electrical Engineering, PhD 1994) *
Andrew Strom (Materials Science & Engineering, MS 1994)
Mark Negley (Electrical Engineering, MS 1997)
Zhan Gao (Electrical Engineering, MS 1995)
Achal Ramesh (Materials Science & Engineering, MS 1996)
Ying Bi (Electrical Engineering, MS 1997, PhD 1998) *
Drew Delaney (Materials Science and Engineering, with T.Lograsso, MS 1998)
Hui Cao (Materials Science & Engineering, MS 1998)
Ruoqi Chen (Electrical Engineering, MS 1999)*
Yonghua Chen (Materials Science & Engineering, PhD 1999)
Fei Tang (Materials Science & Engineering, MS 1999)
Bin Zhu (Electrical Engineering, PhD 2001)*
Mangui Han (Materials Science & Engineering, MS 2002, PhD 2004)
Yuping Shen (Materials Science & Engineering, MS 2003)
#Jeff Leib (Materials Science & Engineering, MS 2003)
Junyoul Lee (Electrical & Computer Engineering, MS 2003)
Lu Li (Electrical & Computer Engineering, MS 2003, PhD 2004)
Bryan Baker (Materials Science & Engineering, MS 2003)
Jason Paulsen (Mechanical Engineering, MS 2004)
Sang Hoon Song (Materials Science & Engineering, MS 2005, PhD 2007)
Emily Kinser (Materials Science & Engineering, MS 2005)
Andrew Ring (Information Technology, MS 2006)

Cardiff University 2005-2010

George Katranas (EEE, PhD, 2006)
Osama Alasamar (EEE, MS, 2009)
Ravi Hadimani (EEE, PhD 2009)

Naresh Ranvah (EEE, PhD 2010)
Arun Kumar (EEE, PhD 2010)
Esaindang Umenei (EEE, PhD 2010)
Nikhil Sawant (EEE, MS, 2010)
Orfeas Kypris (EEE, MS, 2010)
Lukasz Mierczak (EEE, PhD 2015)

Iowa State University 2010-

Lawrence Crowther (EE PhD 2014)
Orpheus Kypris (EE, PhD 2014)
Ahmet Unsal (EE, PhD, 2014)
Yan Ni (EE PhD, 2015)
Neelam Gaunkar (EE MS, 2014)
Alexandria Benson (EE, MS, 2013)
Rachna Kaul (EE, MS, 2014)
Pratik Wagh (MSE, MS, 2014)
Helena Khazdozian (EE, PhD 2016)
Priyam Rastogi (EE, PhD, 2017)

* Winners of Iowa State University Research Excellence Award for thesis work

Winner of National Science Foundation Graduate Research Fellowship

External examiner for the following students :

Thomas Koble (PhD), University of the Saarland, Germany (1992).
Jonathan Makar (PhD), Queen's University, Canada (1993).
Ian Reed (PhD), University of Hull, United Kingdom (1994).
Brian Phelps (PhD), Queen's University, Canada (1997).
Matthias Linde (MS), University of the Saarland (1998).
Neil Munns (MSc), University of Hull, United Kingdom (2000).
Ashis Panda (PhD), Indian Institute of Technology, Kharagpur, India (2002).
George Loisos (PhD), University of Cardiff, United Kingdom (2002).
Julian Dean (PhD), University of Sheffield, (2007)
Seema Kumari (PhD), Bengal University of Engineering, India, (2007)
John Wilson (PhD), University of Newcastle-upon-Tyne, (2009)
David Ribbenfjard (PhD), Royal Institute of Technology, Sweden (2010).
Partha Sarkar (PhD), Bengal University of Engineering, India (2013)
Peter Haumer (PhD), Vienna University of Technology, (2013)

Internal thesis examiner for the following students

Ram Deshmukh PhD, Cardiff University, 2008
Xiao Jun Di PhD, Cardiff University, 2008
Mimi Thant, PhD, Cardiff University, 2008
Juan Saguarday, PhD, Cardiff University, 2009
Harshad Patel, PhD Cardiff University 2009
Ming Huang PhD Cardiff University 2009

Member of program of study committee for :

Gregory Ojaard (PhD Materials Science and Engineering 1991)
Jason Harp (MS Chemistry 1994)
Alessandro Leon (PhD Chemistry 1995)
Di Wang (MS Physics 1997)
Tad Calkins (PhD Mechanical Engineering 1997)

Robert Henning (PhD Chemistry 1998)
Gregory Kobidze (PhD, Electrical Engineering, 1998)
Paul Stucky (PhD, Electrical Engineering 1998)
Guizhong Liu (MS Materials Science & Engineering, 2000)
Marcello Dapino (PhD, Mechanical Engineering, 1999)
Paul Maggard (PhD Chemistry, 2000)
Zhang Ruili (MS Electrical Engineering, 1999)
Wei Zhang (MS Materials Science & Engineering, 2000)
Peter Guschl (MS Chemical Engineering, 2000, PhD Chemical Engineering 2002)
Bryan Oliver (MS Electrical and Computer Engineering, 1999, PhD Electrical and Computer Engineering)
Russell Cusick (PhD Electrical and Computer Engineering)

International exchange students :

Steven Hardwick (Physics Dept, University of Warwick, UK 1992)
Gary Williams (Applied Physics Dept., University of Hull, UK, 1992)
Martino LoBue (Politecnica di Torino, Italy, 1994)
Jonathan Roderick (University of Warwick, UK, 1995)
Matthias Linde (University of the Saarland, Germany, 1997)
Zhenya Melikhov (Charles University, Prague, Czech Republic 1999)
Alexei Perevertov (Charles University, Prague, Czech Republic, 2000)
K.M.Koo (Chinese University, Hong Kong, 2001)
S. Wu (Chinese University, Hong Kong, 2002)
Stefan Kreuz (University of Karlsruhe, Germany, 2006)
Lukasz Mierczak (Czestohowa University, Poland, 2007)
Konstantin Porzig (University of Ilmenau, Germany, 2012)
Robert Uhlig (University of Ilmenau, Germany, 2012)

Undergraduate research students :

Iowa State University 1990-2007

Peter Schuster (Electrical Engineering) 1990-91
Tony Peterson (Physics) 1991
Bryce Kagay (Electrical Engineering) 1991
Brent Moore (Electrical Engineering) 1992
John Apostol (Electrical Engineering) 1992
David Chandler (Electrical Engineering) 1992
Jonathan Baker (Electrical Engineering) 1992
Paul Searls (Aerospace Engineering) 1992-93
James Gregory (Electrical Engineering) 1993
Edward Rios (Electrical Engineering) 1993
Matt Sosa (Physics) 1994
Chris Rode (Computer Engineering) 1994
Bryan Hall (Physics, Michigan Technical University) 1994
Scott Beckman (Materials Science & Engineering) 1994-95, 1997
Wayne Kinyon (Materials Science & Engineering) 1994-95
Kenneth Bratland (Materials Science & Engineering) 1994-95
Jennifer Dolan (Electrical Engineering/Physics) 1995
Teresa Gansemer (Mechanical Engineering) 1996
John Meyers (Materials Science & Engineering) 1996-97
Jill Batey (Materials Science & Engineering) 1996-97
Brynne Kriegermeier (Materials Science & Engineering) 1997-2000
Brandon Verbrugge (Electrical Engineering) 1997

Dana Falzgraf (Materials Science & Engineering) 1997
 Liap Su (Materials Science & Engineering) 1997
 Steven Fan Fung (Electrical Engineering) 1998
 Melinda Goossen (Humboldt State University) 1998
 Andrew Ring (Mechanical Engineering) 1998-2002
 + John Kenkel (Electrical Engineering) 1999-2002
 Laura Kerdus (Industrial Engineering) 1999-2001
 * @Jeffrey Lieb (Materials Science & Engineering) 1999-2002
 Aaron Bakke (Materials Science & Engineering) 2000
 Aaron Schlager (Materials Science & Engineering) 2000
 Jason Paulsen (Mechanical Engineering) 2000-2002
 David Doty (Computer Engineering) 2000
 Cory Lubahn (Computer Engineering) 2000-2001
 Joe Bruner (Computer Engineering) 2000
 Stephanie Connor (Materials Science & Engineering) 2000-01
 Emily Kinser (Materials Science & Engineering) 2000-03
 Heath Reimers (Materials Science & Engineering) 2000, 2002
 Eric Straw (Materials Science & Engineering) 2000
 Jessica Woolm (Materials Science & Engineering) 2000
 Meredith Berger (Materials Science & Engineering) 2000
 Kim Brueske (Materials Science & Engineering) 2000-01
 David Eisenman (Materials Science & Engineering) 2000-01
 Gabriel Weigelt (Materials Science & Engineering) 2001
 Darrel Enyart (Materials Science & Engineering) 2001-02
 Scott Hentscher (Materials Science & Engineering) 2001-02
 Jacob Auliff (Materials Science & Engineering) 2001-02
 Nick Olson (Electrical and Computer Engineering) 2002
 Kurtis Kenne (Electrical and Computer Engineering) 2002
 Kira Campos-Anderson (Materials Science & Engineering), 2002
 Bryan Baker (Materials Science & Engineering), 2002-03
 Tony Barsic (Electrical and Computer Engineering) 2004-05
 Chris Hess (Materials Science & Engineering) 2004
 Paul Matlage (Materials Science & Engineering) 2004-05
 Ritesh Desai (Electrical and Computer Engineering) 2004
 Hattie Ziegler (Physics) 2004-05
 Courtney Slach (Materials Science & Engineering) 2004-05
 Seth Aldini (Materials Science & Engineering) 2006
 Paul Radke (Materials Science & Engineering) 2007

Winner of Philip H. Trickey Prize, National Award for Undergraduate Research

+ Winner of the Mal Iles Technology Innovation Award 2002

* Winner of the Iowa State University Student of Distinction Award 2002

@ Winner of the 2003 Outstanding Senior Undergraduate of the Year Award

Cardiff University 2005-2010

Ceri Shave (EEE), 2006
 Nikhil Sawant (EEE), 2006
 Liam Jones, MEng, (EEE), 2008-9
 Matthew Perry, MEng, (EEE), 2008-9
 Lloyd Dowden, MEng, (EEE), 2008-9
 Steve Kinnard, MEng, (EEE), 2008-9
 Lawrence Crowther, MEng, (EEE), 2008-9

Nelo Dehghan, MEng, (EEE), 2008-9
Agbortoko Mbiwan, MEng, (EEE), 2008-9
Haneef Nasir, MEng, (EEE), 2008-9
Andrew Ahabue, BEng (EEE), 2008-09
Sarah Gooding, MEng (EEE), 2008-09
Sarah Maber, MEng (EEE), 2009-10
Mohamed Hakem, MEng (EEE), 2009-10
Mark Atkinson, MEng (EEE), 2009-10
Rhydian Jones, MEng (EEE), 2009-10
Robbie Cooper, BEng (EEE), 2009-10
Raymond Hlatswayo, BEng (EEE), 2009-10

Iowa State University 2010-

Maria Peters (Materials Science & Engineering) 2011
Mengqian Ding (Electrical and Computer Engineering) 2011
Matthew Murphy (Electrical and Computer Engineering) 2012
Haisheng Xu (Materials Science & Engineering) 2012-13
Rachana Kaul (Electrical and Computer Engineering) 2012-13
Rajnikant Singh (Electrical and Computer Engineering) 2012-14
Daniel Yiwen Meng (Electrical and Computer Engineering) 2012-14
Daniel Stiner (Electrical and Computer Engineering) 2012-14
Stephen March (Electrical and Computer Engineering) 2012-13
Michael Senter (Electrical and Computer Engineering) 2012-13
Spencer McAtee (Electrical and Computer Engineering) 2012-13
Kris Spoth (Electrical and Computer Engineering) 2012-13
Morgan Benson (Electrical and Computer Engineering) 2013-14
Zhengpei Ding (Electrical and Computer Engineering) 2013-14
Wyatt Lauer (Electrical and Computer Engineering) 2014
David Kirpes (Electrical and Computer Engineering) 2014
Xiaoyu Che (Electrical and Computer Engineering) 2014
Chris Whitmore (Materials Science & Engineering) 2014
Erik Lee (Electrical and Computer Engineering) 2014
Matthew Backes (Electrical and Computer Engineering) 2014

Departmental external examiner

Physics Department, University of Pertanian, Malaysia, 1996.

Examiner for faculty promotions at the following universities:

University of Tasmania, Australia (1994)
Vienna University of Technology, Austria (1995)
University of Bath, UK (1996)
University of Salford, UK (1997)
University of Hull, UK (1996, 1998)
University of Pertanian, Malaysia (1997-2002)
Queens University, Canada (1999)
Trinity College, Dublin, Ireland (2004)

9. POSTGRADUATE THESES SUPERVISED

1. "Development of instrumentation for magnetic nondestructive evaluation." S.Hariharan, MS, Iowa State University 1990.
2. "A laser diode magnetostrictive Terfenol-D magnetometer." R.Chung, MS, Iowa State University 1990.
3. "Development and applications of a new computer controlled magnetic inspection system." A.R.Eichmann, MS, Iowa State University 1992.
4. "Stress dependence of the magnetic properties of steels." M.K.Devine, MS, Iowa State University 1992.
5. "Micromagnetic surface studies of materials for nondestructive evaluation." L.B.Sipahi, MS, Iowa State University 1992.
6. "Magnetization and magnetostriction in highly magnetostrictive materials." J.B.Thoelke, MS, Iowa State University 1993.
7. "Magnetic property measurements for the evaluation of fatigue in steels." A.C.Strom, MS, Iowa State University 1994.
8. "Angular dependence of magnetic properties of steels under stress." D.A.Kaminski, MS, Iowa State University 1994.
9. "Measurement and modelling of structure sensitive magnetic properties of materials." Z.J.Chen, PhD, Iowa State University 1994. (Iowa State University Research Excellence Award Winner).
10. "The implementation and applications of a hysteresis model." Z.Gao, MS, Iowa State University 1995.
11. "Magnetoelastic properties of Terfenol-D under time dependent applied magnetic fields", P.P.Pulvirenti, MS, Iowa State University 1996.
12. "Effects of localized defects and anisotropy on the magnetization behavior of nickel", A.Ramesh, MS, Iowa State University 1996.
13. "Dynamic variations of the magnetic properties of steel due to cyclic loading", Y.Bi, MS, Iowa State University, 1997. (Iowa State University Research Excellence Award Winner).
14. "Measurement of magnetic phenomena for determination of critical component lifetime", M.Negley, MS, Iowa State University, 1998.
15. "Magnetostriction of eutectic and dendritic terbium-zinc", D.W.Delaney, MS, Iowa State University, 1998.
16. "Measurements and modeling of the effects of orthogonal bias field on properties of isotropic magnetic materials", Y.Bi, PhD, Iowa State University, 1998.
17. "Steel microstructure characterization by magnetic nondestructive evaluation", H.Cao, MS, Iowa State University, 1998.
18. "Measurement of magnetic property improvements resulting from materials processing of high permeability soft magnetic materials", R.Chen, MS, Iowa State University, 1999. (Iowa State University Research Excellence Award Winner).

19. "Design, fabrication and analysis of a portable Terfenol-D based magnetostrictive diode laser external cavity sensor with advanced signal processing capability", R.Chung, PhD, Iowa State University, 1999.
20. "Application of magnetic NDE techniques to the fatigue of ferrous alloys", F.Tang, MS, Iowa State University, 1999.
21. "Development of highly magnetostrictive composites for applications in magnetomechanical torque sensors", Y.H.Chen, PhD, Iowa State University, 1999.
22. "Non-linear irreversible magnetization processes in magnetic materials: instrumentation, measurements, modeling and applications", B.Zhu, PhD, Iowa State University, 2001. (Iowa State University Research Excellence Award Winner).
23. "Thermal expansion studies on the magnetic-crystallographic transformation of $Gd_5(Si_xGe_{1-x})_4$ ", M.G.Han, MS, Iowa State University, 2002.
24. "Development of high sensitivity materials for applications in magnetomechanical torque sensors", Y.P.Shen, MS, Iowa State University, 2003.
25. "Correlation between domain behavior and magnetic properties of materials", J.S.Leib, MS, Iowa State University, 2003.
26. "Investigation of magnetomechanical behaviour of materials: instrumentation, measurement and modeling", L.Li, MS, Iowa State University, 2003.
27. "Development of modeling and simulation for magnetic particle inspection using finite elements", J.Y.Lee, MS, Iowa State University, 2003.
28. "A model for spin-dependent magnetic junction behavior", B.Baker, MS, Iowa State University, 2003
29. "Development of magnetic stress detection methods involving a cobalt ferrite composite stress sensing material and a magnetic imaging system", J.A.Paulsen, MS, Iowa State University, 2004.
30. "Critical behavior of thermal expansion and magnetostriction in the vicinity of the first order transition at the Curie point of $Gd_5(Si_xGe_{1-x})_4$ ", M.Han, PhD, Iowa State University, 2004.
31. "Effects of stress on the magnetic properties of stainless steel and nickel", L.Li, PhD, Iowa State University, 2004.
32. "Examination of magnetic phase transition in $Pr_{(n+2)(n+1)}Ni_{n(n-1)+2}Si_{n(n+1)}$ compounds using thermal expansion and magnetostriction", S.H. Song, MS, Iowa State University, 2005.
33. "Magnetic nondestructive characterization of case depth in surface-hardened steel", E.R.Kinser, MS, Iowa State University, 2005
34. "Investigation of magnetic and magnetoelastic properties of novel materials involving cobalt ferrite and terbium silicon germanium systems", A.P.Ring, MS, Iowa State University, 2006.
35. "Design and Development of Bilayer Sensor Systems for Biomedical and Automotive Applications", G.S. Katranas, PhD, Cardiff University, 2006.
36. "Magnetic and magnetoelastic properties of M-substituted cobalt ferrites (M = Mn, Cr, Ga, Ge)", S.H.Song, PhD, Iowa State University, 2007.

37. "Development of Barkhausen Noise Method for Residual Stress Evaluation in Steels", O. Alasamar, MSc, Cardiff University, 2009.
38. "Advanced Magnetoelastic and Magnetocaloric Materials for Device Applications", R.L.Hadimani, PhD, Cardiff University, 2009.
39. "Investigation and analysis of a magnetic torsion angle sensor", N.Sawant, MSc, Cardiff University, 2010.
40. "Investigation of chemically substituted cobalt ferrite for high magnetostriction based sensor and actuator applications", N. Ranvah, PhD, Cardiff University, 2010.
41. "Growth, Characterisation and Modelling of Novel Magnetic Thin Films for Engineering Applications", A.K.Raghunathan, PhD, Cardiff University, 2010.
42. "Development and Application of Magnetic Modelling to the Design of Power Devices", E.A.Umenei, PhD, Cardiff University, 2010.
43. "Treatment for traumatic brain injury in mice using transcranial magnetic stimulation", A. M. Carr, MS, Iowa State University, 2013.
44. "Magnetic hysteresis and Barkhausen noise emission analysis of magnetic materials and composites," N. Prabhu-Gaunkar, MS, Iowa State University, 2014.
45. "Analysis and development of transcranial magnetic stimulation devices", L.J.Crowther, PhD, Iowa State University, 2014.
46. "Detection of sub-surface stresses in ferromagnetic materials using a new Barkhausen noise method", O. Kypris, PhD, Iowa State University, 2015.

10. INTELLECTUAL PROPERTY: PATENTS & DISCLOSURES

1. "Nondestructive evaluation of the T1 phase in Al-Li-Cu alloys", US Patent No. 4,947,117, (August 1990). Buck; Otto (Ames, IA), Bracci; David J. (Maryland Heights, MO), Jiles; David C. (Ames, IA), Brasche; Lisa J. H. (Nevada, IA), Shield; Jeffrey E. (Ames, IA), Chumbley; Leonard S. (Ames, IA)
2. "Nondestructive stress detection in ferromagnetic materials", US Patent No. 5,012,189, (April 1991). Jiles; David C. (Ames, IA)
3. "Multiparameter magnetic inspection system", US Patent No. 5,008,621, (April 1991). Jiles; David C. (Ames, IA)
4. "Laser diode terfenol magnetostrictive magnetometer", US Patent No. 5,039,943, (August 1991). Weber; Robert J. (Boone, IA), Chung; Wing C. (Ames, IA), Jiles; David C. (Ames, IA), Verhoeven; John D. (Ames, IA)
5. "System and method for nondestructive evaluation of surface characteristics of a magnetic material", US Patent No. 5,313,405, (May 1994). Jiles; David C. (Ames, IA), Sipahi; Levent B. (Ames, IA)
6. "A magnetic imaging system and method", US Patent No. 5,394,083, (February 1995). Jiles; David C. (Ames, IA)
7. "Magnetic inspection probe for measurement of anisotropy", US Patent No. 5,475,305, (December 1995). Jiles; David

C. (Ames, IA), Devine; Michael K. (Ames, IA)

8. "A universal contoured magnetic inspection head for magnetic inspection", US Patent No. 5,479,099, (1995). Jiles; David C. (Ames, IA), Kaminski; David A. (Ames, IA)
9. "Apparatus and method for on line Barkhausen measurement", US Patent No. 6,084,404, (July 2000). Jiles; David C. (Ames, IA), Parakka; Anthony (Plano, TX)
10. "A material for magnetostrictive sensors and other applications based on ferrite materials", US Patent No. 6,093,337, (July 2000). McCallum; R. William (Ames, IA), Snyder; John E. (Ames, IA), Dennis; Kevin W. (Ames, IA), Schwichtenberg; Carl R. (Ames, IA), Jiles; David C. (Ames, IA)
11. "Magnetostrictive materials and method for improving frequency response in same", US Patent No 6,273,965, (August 2001). Pulvirenti; Patricia P. (Chicago, IL), Jiles; David C. (Ames, IA)
12. "A material for magnetostrictive sensors and other applications based on ferrite materials", US Patent No. 6,352,649, (March 2002). McCallum; R. William (Ames, IA), Snyder; John E. (Ames, IA), Dennis; Kevin W. (Ames, IA), Schwichtenberg; Carl R. (Ames, IA), Jiles; David C. (Ames, IA)
13. "Permanent magnet array for generation of magnetic fields", US Patent No. 6,680,663, (January 2004). Lee; Seong-Jae (Ames, IA), Jiles; David (Ames, IA), Gschneidner, Jr.; Karl A. (Ames, IA), Pecharsky; Vitalij (Ames, IA)
14. "Cobalt Ferrite Based Magnetostrictive Materials for Magnetic Stress Sensor and Actuator Applications", US Patent No. 7,326,360, (February 2008). Jiles; David C. (Ames, IA), Paulsen; Jason A. (St. Paul, MN), Snyder; John E. (Ames, IA), Lo; Chester C. H. (Ames, IA), Ring; Andrew P. (Ames, IA), Bormann; Keith A. (State Center, IA)
15. "Magneto-Optic Remote Sensor for Angular Rotation, Linear Displacements, and Evaluation of Surface Deformations", Lee; Seong-Jae (Ames, IA), Song; Sang-Hoon (Ames, IA), Melikhov; Yevgen (Penarth, GB), Park; Choon-Mahn (Seoul, KR), Hauser; Hans (Vienna, AT), Jiles; David (Glamorgan, GB) Patent No. 7,365,533 (April 2008)
16. "Method for improving frequency response of magnetostrictive materials", (Pending). ISURF 2051
17. "A high permeability low core loss, amorphous fiber composite magnetic material", (Pending). ISURF 2088
18. "Controllable magnetic inductor using virtual air gap technology", (Pending) ISURF 2525
19. "New manganese substituted cobalt ferrite materials for stress sensor and actuator applications" (Provisional application), ISURF 3066
20. "Method for altering the conductivity of materials", Jiles David C., Magnell Steffen and Mina, Mani. WO2011133597,

11. CONSULTANCY

Consultant for the following organisations :

- Analogy Inc., Oregon (1988)
- MicroSim Corporation, California (1988-1992)
- Thomatronik, Germany (1988-1992)
- Pepperl and Fuchs, GmbH, Germany (1988)
- Vector Fields, UK (1989)
- Gas Research Institute, Illinois (1989)

Avca Corporation, Ohio, (1991)
Flow Research Evaluation & Diagnostics, UK (1991)
MoD, Admiralty Research Establishment UK (1990-92)
Luxtron Corporation, California (1991-92)
Binney & Smith Inc., Pennsylvania (1992)
Kawasaki Steel Corporation, Japan (1992)
Anacad, Germany (1992)
CISE, Italy (1990-1992)
Italian Society for nondestructive testing, monitoring and diagnostics (1991-92)
Sensormatic Electronics Corporation, Florida (1994)
SSI/Technical Advances Inc., Iowa (1994-5)
US Nuclear Regulatory Commission (1996)
Southwest Research Institute/Electric Power Research Institute (1997)
Lord Corporation, (1998)
Brinks, Hofer, Gilson and Lione, LLP (1999-2001)
Holcomb Healthcare (1999-2001)
North Atlantic Treaty Organization "NATO" (2000)
Howrey, Simon, Arnold and White, LLP (2000-06)
Caterpillar Inc. (2000-2006)
Burgess-Norton (2002)
Lord Corporation (2002)
Hovey Williams, LLP (2002-04)
Thermal Solutions Inc. (2001-2004)
Baker, Donelson, Bearman, Caldwell & Berkowitz, LLP (2004)
Alticor (2004)
Authentix (2009)
Dynapulse (2009-11)
Novak, Druce & Quigg, LLP (2012)
Intellectual Ventures (2012)
Sidley Austin LLP (2014)
Rubin Anders Scientific (2014)
Sensormatic and Tyco (2014)

12. OTHER RELATED PROFESSIONAL ACTIVITIES

President, Magnetics Technology Inc. (1988-present)
Director, Magnetica Inc. (1992-97)
Chairman, Magnetics Technology UK Ltd (2004-2013)

Expert witness testimony

I have acted as an expert advisor and witness for the following cases:

State of Iowa v. Quattro Corporation
Amway v. Nikken
Caterpillar v. Sturman Industries
Thermal Solutions Inc. v. Vesture

These included preparation of expert reports, videotaped deposition testimony and court appearances.

Recent contract research and development projects conducted through Magnetics Technology Inc. :

"Computer modelling of ferromagnetic hysteresis for electrical circuit simulation"
"Frequency dependence of the hysteresis curves of materials for inductor cores"
"Assessment of the design of a novel magnetic process for copper plating of steel"
"Design and performance considerations for magnetostrictive current sensors"

"Modelling of the effects of cyclic stress on the magnetization of steels under constant applied magnetic field"

"Design consideration for a magnetically operated erasable drawing pad"

"Magnetic hysteresis in Fe-Si alloy plates"

"Review of NDE methods for evaluation of pressure vessel material properties"

"Magnetic materials for magnetorheological applications"

"Evaluation of magnet arrays for magnetic therapy"

"Evaluations of magnetically operated fuel injectors"

"Development of variable reluctance magnetic sensors for torsional stress determination in rotating components of aircraft engines"

"In situ magnetic method for materials property evaluation: possible technology for practical implementation"

"Evaluation of inductively heated magnetic pads for maintenance of temperature of heated products"

13. EDUCATION

D.Sc. (1990) Physics, University of Birmingham

Ph.D. (1979) Applied Physics, University of Hull

M.Sc. (1976) Applied Nuclear Physics, University of Birmingham

B.Sc. (1975) Physics & Mathematics, University of Exeter

14. TITLES OF THESES

D.Sc. "Magnetic and electronic properties of metals"

Ph.D. "Development of a new ultrasonic sing around system and its application to the investigation of magnetoelastic effects in some heavy rare earths"

M.Sc. "Diamond as a viable radiation doserate meter"

B.Sc. "Phase transitions in the aluminum rich region of the Al-Mn phase diagram"

15. PROFESSIONAL SOCIETY MEMBERSHIP NUMBERS

Fellow of the Institute of Materials, Minerals and Mining UK (IOM3 449959)

Fellow of the American Physical Society (APS# MJ1182368).

Fellow of the Institute of Physics (IOP# 042146E).

Fellow of the Institute of Electrical & Electronic Engineers (IEEE# 04949145).

Fellow of the Magnetics Society of IEEE

Fellow of the Institution of Electrical Engineers (IEE# 22355784).

Fellow of the Institute of Mathematics and its Applications (IMA# 7848).

Member of the European Physical Society (EPS# 948005).

Member of the American Society for Materials (ASM# 051493).

Member of the Metallurgical Society (TMS# 039384).

Member of the American Society for Nondestructive Testing (ASNT# 44324)

Member of the Materials Research Society (MRS# 0076138).

Member of the American Society for Engineering Education (ASEE# 44588)

Chartered Engineer, UK, CEng. Number 399553

Professional Engineer, Iowa, PE. Number 11592

16. MANAGEMENT COURSES COMPLETED

Practical Leadership for University Management (10 month part time course)

1. *Leadership and Delegation*
2. *Communicating Effectively*

3. Planning and Controlling work

4. Leading Change and Implementing Strategy

Cardiff Approach to Project Management

Chairing University Appointment Panels

Conducting Academic Appraisals

Financial Framework of the University

17. RESEARCH CONTRACT REPORTS

1. "Development of NDE measurement techniques of interest to the railroad industry", D.C.Jiles and M.K.Devine. Association of American Railroads, March 1991.
2. "Magnescope : a portable magnetic inspection system", D.C.Jiles. US Department of Commerce, July 1991.
3. "A Terfenol laser diode magnetometer", R.Weber and D.C.Jiles. US Department of Commerce, March 1992.
4. "Micromagnetic surface studies of materials for NDE", D.C.Jiles, National Science Foundation, Final Report, Grant Number MSS-8915428, September 1992.
5. "Mechanical deformation effects on magnetic properties: Part I, Effects of stress", M.J.Sablik and D.C.Jiles, Electric Power Research Institute, November 1992.
6. "Magnetostriction in Tb-Dy-Fe alloys: measurement and modelling of properties", D.C.Jiles and R.D.Greenough, North Atlantic Treaty Organization, March 1993.
7. "Magnetic inspection of creep damaged components in power generating systems", D.C.Jiles, M.R.Govindaraju and S.B.Biner. Ontario Hydro, April 1993.
8. "Magnetic properties measurements of irradiated, aged and prestrained materials", L.B.Sipahi, M.R.Govindaraju and D.C.Jiles. Westinghouse Electric Corporation, May 1993.
9. "Quantitative NDE for steel components of large structural systems", D.C.Jiles, S.B.Biner and M.R.Govindaraju. National Science Foundation, Final Report, Grant Number MSS-9018532, August 1993.
10. "Detection of fatigue damage in aircraft landing gears", D.C.Jiles. McDonnell Douglas Aircraft Corporation, September 1993.
11. "Improving the energy efficiency characteristics of magnetic metallic glasses through materials processing and optimization of magnetic field waveform", D.C.Jiles, P.Molian, A.P.Parakka and M.R.Govindaraju. State of Iowa, October 1993.
12. "Application of a new magnetic monitoring technique to in situ evaluation of fatigue damage in ferrous components of nuclear primary systems", D.C.Jiles, S.B.Biner M.Govindaraju and Z.J.Chen. Nuclear Regulatory Commission, Final Report, Grant Number NRC-04-91-098, May 1994.
13. "Magneprobe: a micromagnetic inspection system for inspection of surfaces", D.C.Jiles. US Department of Commerce, July 1994.
14. "Mechanical deformation effects on magnetic properties: Part II, Effects of creep damage", M.J.Sablik and D.C.Jiles. Electric Power Research Institute, July 1994.
15. "Laser magnetic domain refinement of transformer cores", P.Molian and D.C.Jiles, Electric Power Research Center, July 1994.
16. "Magnetic nondestructive evaluation for railroad wheel inspection programs", Association of American Railroads, November 1994.
17. "Micromagnetic methods for evaluation of residual stress in crankshaft fillets", D.C.Jiles and D.A.Kaminski,

Cummins Engine Company, February 1995.

18. "An investigation of the effects of creep on the structure and magnetic properties of nickel through simulated cavitation in a model material", D.C.Jiles, S.B.Biner and M.R.Govindaraju, National Science Foundation, Grant Number DMR-9310273, February 1995.
19. "Effects of laser surface scribing on the core losses in silicon iron laminations", M.R.Govindaraju, A.P.Parakka and D.C.Jiles, US Department of Energy, CRADA with ABB Inc., May 1995.
20. "Mechanical deformation effects on magnetic properties: Part III, Magnetic detection of creep damage at seam welds", M.J.Sablik and D.C.Jiles, Electric Power Research Institute, October 1995.
21. "Development of new magnetostrictive material for sensors and actuators", D.C.Jiles and R.W.McCallum, US Department of Energy, CRADA Number AL-95-08, with General Motors Corporation, December 1995.
22. "Magnetostriction in Tb-Dy-Fe alloys: measurement and modelling of properties", D.C.Jiles and R.D.Greenough, Final report, NATO Grant Number CRG-910275, March 1996.
23. "New amorphous magnetic fibers for highly efficient soft magnetic cores", Final Report, US Department of Energy, Laboratory Directed Research and Development Project, December 1996.
24. "Ferrite substrates for miniaturization of power electronics", Contract Report for Rockwell-Collins, December 1996.
25. "Improved manufacturing processes for the production of new high efficiency materials for transformer cores", M.Govindaraju, P.Molian and D.C.Jiles. Contract Report for ABB, December 1996.
26. "Assessment of Barkhausen effect measurements for evaluation of ground steel components", D.C.Jiles and A.P.Parakka and H.Gupta. Final report, National Science Foundation Grant Number EEC-94-18363, December 1996.
27. "Development of the Magnoscope as an instrument for in-situ evaluation of steel components of nuclear systems", D.C.Jiles, Y.Bi and S.B.Biner. Final report, US Nuclear Regulatory Commission, Grant Number NRC-04-94-092, February 1997.
28. "An investigation of the effects of creep on the structure sensitive magnetic properties of nickel", D.C.Jiles. Final report, National Science Foundation, Grant Number DMR-9310273, December 1997.
29. "Microstrutural study of NdFeB permanent magnet materials doped with Dy", D.C.Jiles and C.C.Lo, US Department of Energy, Center for Excellence in Synthesis and Processing, July 1998.
30. "Physical interpretation and comparison of hysteresis in magnetic materials", D.C.Jiles and M.Pasquale, Final report, NATO, Grant number CRG 960765, August 1998.
31. "Improved manufacturing processes for the production of new high efficiency materials for transformer and motor cores", Final report, National Science Foundation, Grant Number DMII-9622649, November 1998.
32. "Measurements and modeling of the effects of an orthogonal bias field on properties of isotropic magnetic materials", Y.Bi, D.C.Jiles and S.J.Lee, Final Report, Avionics and Communications Division, Rockwell Collins Inc., January 1999.
33. "Characterization of the magnetic and structural properties of recording head materials", D.C.Jiles, M.J.Kramer, C.C.H.Lo and J.E.Snyder, Seagate Technology Inc., Minneapolis, March 1999.

34. "Nondestructive enhancement of material lifetimes by stress reduction in ferrous metals without associated microstructural changes", State of Iowa/IPRT, June 1999.
35. "Composite magnetostrictive materials for advanced automotive magnetomechanical sensors", US DOE, Office of Computational and Technology Research, December 1999.
36. "Examination of the relationship between magnetic hysteresis and the mechanical properties of steels", Final Report, National Science Foundation, Grant Number CMS-9532056, February 2001.
37. "Magnetic finite element course modules and demonstrations", Final Report, Ansoft University Program, March 2001.
38. "Modeling of magnetization processes in magnetic materials for evaluation of microstructure", Final Report, National Science Foundation, Grant Number INT-9732135, April 2001.
39. "Development of high efficiency rotary magnetocaloric refrigerator prototype: permanent magnet array for magnetic field generation", US Department of Energy, May 2002.
40. "Simulation of permanent magnets for applications in orthopaedic surgery", National Institutes of Health and Mayo Clinic, May 2002.
41. "Magnetic processing for enhancement of lifetimes of ferrous metals subjected to repeated stress", National Science Foundation, Grant Number CMS-9910147, October 2002.
42. "New sandwich layers for magnetic tunnel junctions with controllable band gaps", National Science Foundation", Grant Number ECS-0100799, January 2003.
43. "Laboratory for magnetic thin film and magnetoelectronic device research", Roy J. Carver Charitable Trust, February 2003.
44. "The piezomagnetic Matteucci effect in nickel alloys: development of theory and applications", National Science Foundation, Grant Number DMR-9902415, December 2003.
45. "Vertically integrated Design for Combined Research and Curriculum Development: A blueprint for Education in Engineering Design", National Science Foundation, Grant Number, Grant Number EEC-9980331, March 2005.
46. "Magnetic measurement equipment for materials property characterization in the Magnetelectronic and Spintronics Laboratory", Roy J. Carver Charitable Trust, April 2005.
47. "Magnetic Particle Inspection Improvements for Aerospace Applications", US Federal Aviation Authority, April 2005.
48. "FRG: New Magnetoelastic Materials with High Stress Sensitivity and Low Hysteresis", National Science Foundation, Grant Number DMR-0402716, June 2006.
49. "Characterization and modelling of magnetic materials for fault current limiters", D.C.Jiles, E. Umenei, Zenergy Power Systems, 2009.
50. "Development of Barkhausen Noise Method for residual stress evaluation on helicopter components", Final Report, D.C. Jiles and L. Mierczak, Agusta Westland, October 2009.

51. "Development of Magnetic Stimulation Devices for Medical Applications, DC Jiles. PI Williams, P Marketos and L. Crowther, MagStim Company Ltd. and the Welsh Assembly Government, January 2011.

52. "Development of Energy Efficient Magnetic Cooling for Healthcare Applications in Refrigeration of Pharmaceuticals", D.C.Jiles and A.Prahakar, Royal Academy of Engineering, March 2011.

53. "Investigation of new magnetoelastic-caloric materials for device applications", The Royal Society, 2011.

18. INVITED SEMINARS AND COLLOQUIA

1. "Third order elastic constants of erbium", Physics Department, Victoria University, Wellington, New Zealand, August, 1980.
2. "Magnetoelastic properties of terbium", Physics Department, Victoria University, Wellington, New Zealand, September, 1980.
3. "Piezo optic properties of Au-V and Au-Co alloys", Physics Department, Queen's University, Kingston, Canada, December, 1981.
4. "Theory of ferromagnetic hysteresis and the effects of stress on magnetic properties", Physics Department, Queen's University, Kingston, Canada, September, 1982.
5. "Investigation of the effects of mechanical stress on the magnetic properties of pipeline steels for pipeline stress monitoring", Energy and Mineral Resources Research Institute, National Research Council of Canada, Montreal, August 1983.
6. "Theory of ferromagnetic hysteresis and the effects of stress on the magnetic properties of steels", Ames Laboratory, Iowa State University, February 1984.
7. "Microstructural dependence of the magnetic properties of the Fe-C alloy system", Energy and Mineral Resources Research Institute, National Research Council of Canada, Montreal, December 1984.
8. "Microstructural dependence of the magnetic properties of the Fe-C alloy system", Physics Department, Queen's University, Kingston, Canada, January 1985.
9. "Microstructural dependence of the magnetic properties of the Fe-C alloy system", Physics Department, University of Minnesota, Duluth, February 1985.
10. "Theory of ferromagnetic hysteresis", Department of Geophysics, University of Edinburgh, Scotland, May 1985.
11. "Magnetic methods for non destructive evaluation", Department of Applied Physics, University of Hull, June 1986.
12. "An automated control and data logging system for the determination of magnetic properties of materials for nondestructive evaluation", Department of Geophysics, University of Edinburgh, Scotland, June 1986.
13. "An Automated control and data logging system for the determination of magnetic properties of materials for nondestructive evaluation", Department of Geology and Physical Sciences, Oxford Polytechnic, Oxford, U.K., July 1986

14. "Microstructural dependence of the magnetic properties of 4130 alloy steels for NDE", Battelle Memorial Institute, Columbus, Ohio, September 1986.
15. "Evaluation of the mechanical and metallurgical condition of steel from magnetization measurements", Westinghouse Electric Corporation, Research & Development Center, Pittsburgh, Pennsylvania, U.S.A., April 1987.
16. "Physical systems exhibiting hysteresis", Physics Department, University of Southampton, December 1987.
17. "Integrated on line instrumentation for automated measurement of magnetic field, induction, magnetostriction, magnetic Barkhausen effect and magnetoacoustic emission", Department of Applied Physics, University of Hull, December 1987.
18. "Magnetic methods for non destructive evaluation", British Gas, On Line Inspection Centre, Cramlington, Northumberland, December 1987
19. "Physical systems exhibiting hysteresis", Physics Department, University of Warwick, December 1987.
20. "Physical systems exhibiting hysteresis", Analogy Inc., Portland, Oregon, February, 1988
21. "Magnetomechanical properties of some iron and nickel based alloys", Physics Department, University of Warwick, July 1988.
22. "Determination of stress in ferromagnetic steels from differential magnetic susceptibility measurements", Harwell Laboratory, U.K. Atomic Energy Authority, July 1988.
23. "Magnetomechanical properties of some iron and nickel based alloys", Department of Applied Physics, University of Hull, July 1988.
24. "Determination of stress in ferromagnetic steels from differential magnetic susceptibility measurements", Lancashire Polytechnic, Preston, July 1988.
25. "Determination of stress in ferromagnetic steels from differential magnetic susceptibility measurements", General Electric Company, Engineering Research Laboratory, Stafford, July 1988.
26. "Determination of stress in ferromagnetic steels from differential magnetic susceptibility measurements", Fraunhofer Institute for Non Destructive Testing, University of the Saarland, Germany, July 1988.
27. "Determination of stress in ferromagnetic steels from differential magnetic susceptibility measurements", French Iron and Steel Research Institute, St. Germain-en-laye, Paris, France, July 1988.
28. "Applications of magnetism to NDE", Physics Department, Queen's University, Kingston, Canada, January 5th, 1989.
29. "Theory of ferromagnetic hysteresis: the influence of defects on magnetic domain wall motion", Physics Department, Iowa State University, January 25th, 1989.
30. "Applications of magnetism to NDE", Southwest Research Institute, San Antonio, Texas, April 21st, 1989.
31. "Magnetomechanical effects in ferromagnetic materials", Centre National de Recherche des Sciences, (CNRS), Laboratoire de Magnetisme, Meudon-Bellevue, France, May 26th, 1989.

32. "Theory of ferromagnetic hysteresis and its applications to modelling of bulk magnetic properties of magnetic materials", Pepperl and Fuchs, Mannheim, West Germany, May 29th, 1989.
33. "Magnetomechanical effects in ferromagnetic materials", Physics Department, University of Salford, Salford, United Kingdom, May 30th, 1989.
34. "Theory of ferromagnetic hysteresis and its applications to modelling of bulk magnetic properties of magnetic materials", Vector Fields Ltd, Kidlington, Oxford, United Kingdom, June 2nd, 1989.
35. "Evaluation of microstructure and mechanical properties of steels from magnetic property measurements", CISE Spa., Segrate, Milan, Italy, December 18th, 1990.
36. "Theory of hysteresis: comparison of theory and experiment", CISE Spa., Segrate, Milan, Italy, December 19th, 1990.
37. "Theoretical modelling of the magnetization process in ferromagnetic materials", Istituto Elettrotecnico Nazionale Galileo Ferraris, Turin, Italy, December 20th, 1990.
38. "Magnetic NDE: applications to plant life extension", Westinghouse Science & Technology Center, Pittsburgh, Pennsylvania, January 25th, 1991.
39. "Detection of incipient failure of steels from magnetic property measurements", Ontario Hydro, Kipling Research Centre, Toronto, Canada, 26th March 1991.
40. "Application of magnetism to NDE", Electric Power Research Institute, Palo Alto, California, 18th April 1991.
41. "Real time modelling of the magnetic properties of materials on small computers", Seminar on Non-linear hysteresis modelling, Rosenheim, Germany, 12th June 1991.
42. "Critical changes in magnetic properties of steels resulting from incipient failure mechanisms", Fraunhofer Institute, University of the Saarland, Saarbrücken, Germany, 13th June, 1991.
43. "Hysteresis and magnetostriction in Terfenol and other ferromagnetic materials", Department of Metallurgy and Materials Science, University of Birmingham, United Kingdom, June 15th 1991.
44. "Research, the funding cycle and other mysteries", Magnetics Seminar Series, Iowa State University, 9th February 1992.
45. "Nondestructive evaluation at Iowa State University", CISE Spa., Milan, Italy, 21st May, 1992.
46. "Magnetic property measurements for assessment of material condition", CISE Spa., Milan, Italy, 22nd May, 1992.
47. "Hysteresis modelling in ferromagnetic materials: effects of temperature, frequency and stress", Seminar on Non-linear hysteresis modelling, Rosenheim, Germany, 25th May 1992.
48. "Generalized self consistent modelling of minor loops in the theory of hysteresis", CNRS Laboratoire de Magnetisme et Materiaux Magnetique, Bellevue, France, 26th June 1992.
49. "Development of new magnetic inspection instrumentation for evaluation of microstructure and mechanical condition of steels", IRSID, St.Germain en Laye, France, 29th June 1992

50. "Magnetic property modelling and its applications to assessment of material condition", Istituto Elettrotecnico Nazionale, Torino, Italy, 3rd July, 1992.
51. "The development of new magnetic inspection instrumentation and its applications to nondestructive evaluation", Fraunhofer Institute, University of the Saarland, Germany, 6th July 1992.
52. "Detection of stress and related problems in steels from magnetic property measurements", Department of Physics and Applied Mathematics, Technical University of Gdansk, Poland, 10th July, 1992.
53. "Magnetic methods for nondestructive testing", Department of Mechanical Engineering, Universitat des Saarlandes, Germany, July 15th, 1992.
54. "The laser diode magnetometer", Electric Power Research Center, Iowa Test and Evaluation Facility Annual Meeting, March 23rd, 1993.
55. "Modelling of hysteresis in magnetic materials", National Institutes of Standards & Technology, Gaithersburg, Maryland, October 15th, 1993.
56. "Theoretical modelling of the effects of anisotropy and stress on the magnetization and magnetostriction of terbium-dysprosium-iron", General Motors Corporation, Research and Development Center, Warren, Michigan, November 4th, 1993.
57. "Recent advances in modelling the effects of time dependent stress and magnetic field on hysteresis", Thomatronik Inc., Rosenheim, Germany, 10th December, 1993.
58. "Appropriate scale theories for modelling magnetic properties of materials", Department of Applied Physics, University of Hull, United Kingdom, December 15th, 1993.
59. "Theoretical modelling of the effects of anisotropy and stress on the magnetization and magnetostriction of terbium-dysprosium-iron", Physics Department, Queen's University, Canada, January 4th, 1994.
60. "Modelling of magnetic properties of materials: the interface between physical understanding and technological application", Southwest Research Institute, San Antonio, Texas, July 14th, 1994.
61. "Unravelling the mysteries of hysteresis: effects of time dependent stress and magnetic field on magnetization", Department of Applied Physics, University of Hull, United Kingdom, August 17th, 1994.
62. "Measurement and modelling of the structure sensitive magnetic properties of materials", Idaho National Engineering Laboratory, November 17th, 1994.
63. "Measurement and modelling of the structure sensitive magnetic properties of materials", Department of Materials Science and Mineral Engineering, University of California, Berkeley, November 29th, 1994.
64. "Theory and modelling of the effects of applied stress and frequency of magnetic field on magnetization in magnetic materials", Brookhaven National Laboratory, December 6th, 1994.
65. "Modeling the magnetic properties of materials", Dept. Materials Science and Engineering, Johns Hopkins University, February 8, 1995.
66. "Properties and applications of magnetic materials", Physics Department, University of Pertanian, Selangor, Malaysia, April 11, 1995.

67. "Theoretical modelling of hysteresis in ferromagnets", Physics Department, University of Pertanian, Selangor, Malaysia, April 12, 1995.
68. "Modelling of hysteresis in magnetic materials", School of Physics and Astronomy, University of Minnesota, Minneapolis, May 26, 1995.
69. "Modeling the magnetic properties of materials", Oak Ridge National Laboratory, Oak Ridge, Tennessee, December 15, 1995.
70. "Magnetic materials for sensors", Department of Materials Science and Engineering, Ohio State University, Columbus, Ohio, October 10, 1996.
71. "Anisotropic three dimensional model for hysteresis in materials", Department of Applied Physics, University of Hull, UK, December 16, 1996.
72. "Anisotropic three dimensional model for hysteresis in materials", Department of Physics, University of Surrey, UK, December 16, 1996.
73. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Queen's University, Kingston, Canada, March 26, 1997.
74. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Illinois Institute of Technology, Chicago, April 15, 1997.
75. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, National Institutes of Standards and Technology, Boulder, Colorado, May 21, 1997.
76. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, University College of Wales, Cardiff, UK, June 3, 1997.
77. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Department of Physics, University of Hull, UK, June 5, 1997.
78. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Technical University of Vienna, Austria, June 20, 1997.
79. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Univeristy of the Saarland, Saarbrucken, Germany, Department of Materials Science, June 24, 1997.
80. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Max Planck Institute, University of Stuttgart, Stuttgart, Germany, June 27, 1997.
81. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Instituto Elettrotecnico Nazioinale, Galileo Ferraris, Turin, Italy, July 4, 1997.
82. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Electricite de France, Paris, France, July 7, 1997.
83. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Magnetics Society UK Chapter Meeting, University of Bangor, Wales, July 11, 1997.
84. "Effects of stress and creep cavitation on the magnetic properties of steels", Fraunhofer Institute for Non

- destructive Testing, University of the Saarland, Saarbrucken, Germany, July 15, 1997.
85. “Magnetic methods for materials evaluation”, Physics Department, University of Western Australia, Perth, Australia, August 4, 1997.
 86. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Physics Department, University of Western Australia, Perth, Australia, August 6, 1997.
 87. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Santa Clara Valley Chapter of the IEEE, September 16, 1997.
 88. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Twin Cities Chapter of the IEEE, September 25, 1997.
 89. “Magnetic methods for materials evaluation”, EPRI Nondestructive Evaluation Center, Charlotte, North Carolina, November 4, 1997.
 90. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Mid Texas Chapter of the IEEE, November 11, 1997.
 91. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Boston Chapter of the IEEE, November 19, 1997.
 92. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Seagate Technology Inc., Minneapolis, January 21, 1998.
 93. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Physics Department, Colorado State University, Fort Collins, Colorado, January 26, 1998.
 94. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Department of Electrical Engineering and Computer Science, George Washington University, Washington DC., March 2, 1998.
 95. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Department of Physics, Purdue University, April 2, 1998.
 96. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Quantum Corporation, Shrewsbury, Massachusetts, April 14, 1998.
 97. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Central New England Chapter of IEEE, Worcester, Massachusetts, April 15, 1998.
 98. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Instituto de Magnetismo Aplicado, Las Rosas, Madrid, June 15, 1998.
 99. “Modeling the magnetic properties of materials”, Magnetics Society Distinguished Lecture, Politecnico di Milano, Italy, June 16, 1998.
 100. “Different aspects of magnetic materials modeling”, Istituto Elettrotecnico Nazionale, Galileo Ferraris, Turin, Italy, June 17, 1998.
 101. “Short course on magnetism and magnetic materials”, Lord Corporation, Cary, North Carolina, August 4 & 5th,

- 1998.
102. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Physics Department, Iowa State University, September 1, 1998.
 103. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Carnegie Mellon University, October 9, 1998.
 104. "Modeling the magnetic properties of materials", Magnetics Society Distinguished Lecture, Department of Electrical Engineering, Iowa State University, October 22, 1998.
 105. "Applications of magnetic hysteresis and magnetomechanical effects in materials", Institute of Physics, Czech Academy of Sciences, Na Slovance, Prague, Czech Republic, June 29, 1999.
 106. "Applications of magnetic hysteresis and magnetomechanical effects in materials", Istituto Elettrotecnico Nazionale, Turin, Italy, July 5, 1999.
 107. "Applications of magnetic hysteresis and magnetomechanical effects in materials", Technical University of Vienna, July 8, 1999.
 108. "Applications of magnetic hysteresis and magnetomechanical effects in materials", Department of Magnetism, Czech Academy of Sciences, Cukravarnicka, Prague, Czech Republic, July 9, 1999.
 109. "Modeling magnetic properties of materials", Laboratoire d'Electrotechnique, University of Grenoble, France, July 12, 1999.
 110. "Magnetomechanical effect in metal-bonded cobalt ferrite composites under torsional strain for torque sensors", Physics Department, University of Hull, December 20, 1999.
 111. "Magnetic hysteresis modeling". A short course presented at the Technical University of Vienna, June-July 2000.
 112. "Recent advances in magnetoelastic materials for Matteucci (inverse Wiedemann) effect sensors", Institute of Physics, Czech Academy of Sciences, Na Slovance, Prague, Czech Republic, June 19, 2000.
 113. "Modeling the magnetic properties of materials", Center for Advanced European Studies and Research, Research Institute, Bonn, Germany, June 26, 2000.
 114. "Modeling the magnetic properties of materials", Forschungszentrum Julich, June 27, 2000.
 115. "Theory and modeling of the Matteucci (inverse Wiedemann) effect in nickel and cobalt ferrite", Istituto Elettrotecnico Nazionale, Turin, Italy, July 3, 2000.
 116. "The Matteucci (inverse Wiedemann) effect and its applications to magnetomechanical torque sensors", Institute of Physics, Slovak Academy of Sciences, Bratislava, July 6, 2000.
 117. "New magnetostrictive composite material for magnetoelastic torque sensors applications", Center for Micromagnetics and Information Technology, University of Minnesota, November 3, 2000.
 118. "The application of magnetic measurements to the nondestructive evaluation of materials", Michigan State University, October 3, 2002.

119. "Development of new magnetic imaging equipment for nondestructive evaluation of materials", Tata Steel Company, Jamshedpur, October 24, 2002
120. "The effects of stress on magnetic properties and the use of magnetic measurements for evaluation of materials" Conference on Resurgence of Metallic Materials, Institute of Engineers of India, Jamshedpur, October 25, 2002.
121. "Development of new magnetic imaging equipment for nondestructive evaluation of materials", National Metallurgical Laboratory, Jamshedpur, October 28, 2002
122. "Extraordinary magnetomechanical coupling as a result of a combined magnetic structural transition in a new class of rare earth compound", Indian Institute of Technology, Kharagpur, October 30, 2002
123. "The effects of stress on magnetic properties and the use of magnetic measurements for evaluation of materials", Indian Association for the Cultivation of Science, Calcutta, October 31, 2002
124. "Development of new magnetic imaging equipment for nondestructive evaluation of materials", Variable Energy Cyclotron Centre, Department of Atomic Energy of India, Calcutta, November 1, 2002
125. "Development of new magnetic imaging equipment for nondestructive evaluation of materials", Bengal Engineering College, Howrah, November 2, 2002.
126. "Extraordinary magnetic and magnetocaloric properties in a new class of rare earth compound", Department of Materials Science and Engineering, University of Sheffield, United Kingdom, November 26, 2002.
127. "Extraordinary magnetomechanical coupling as a result of a combined magnetic/structural transition in a new class of rare earth compound", Physics Department, University of York, United Kingdom, November 27, 2002.
128. "The effects of stress on magnetic properties of materials and the use of magnetic measurements for evaluation of materials" Wolfson Centre for Magnetics Technology, University of Cardiff, United Kingdom, November 28, 2002.
129. "Extraordinary magnetomechanical coupling as a result of a combined magnetic/structural transition in a new class of rare earth compound", Annual Conference of the Korean Magnetics Society, Yong Pyeong, Korea, December 11, 2002.
130. "Recent developments in rare earth based magnetostrictive materials and their applications", D.C.Jiles, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky, Institute of Physics, Academy of Sciences of the Czech Republic, Prague, Czech Republic, June 10, 2003.
131. "Recent developments in rare earth based magnetostrictive materials and their applications" D.C.Jiles, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky, Istituto Elettrotecnico Nazionale 'Galileo Ferraris', Torino, Italy, June 18, 2003.
132. "Recent developments in rare earth based magnetostrictive materials and their applications" D.C.Jiles, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky, Physics Department, Vienna University of Technology, Vienna, Austria, June 27, 2003.
133. "Magnetic Materials: Applications in Sensors and Actuators", D.C. Jiles, Department of Communication and Electronic Engineering, University of Plymouth, July 3, 2003.
134. "Recent advances and future directions in magnetic materials", Osborn Research Club, Iowa State University, October 13, 2003.

135. “Recent developments in rare earth based magnetostrictive materials and their applications” D.C.Jiles, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky, Wolfson Center for Magnetics Technology, University of Cardiff, UK, February 3, 2004.
136. “New manganese-doped cobalt ferrite material for applications in magnetoelastic sensors and actuators”, D.C.Jiles, Department of Engineering Materials, University of Sheffield, March 24, 2004.
137. “New manganese-doped cobalt ferrite material for applications in magnetoelastic sensors and actuators”, D.C.Jiles, Department of Pure and Applied Physics, University of Salford, March 31, 2004.
138. “A new class of rare earth magnetic compounds based on $Gd_5(S_xGe_{1-x})_4$ with extraordinary magnetostriction, magnetocaloric effect and magnetoresistive properties”, D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. University of Glasgow, May 14, 2004.
139. “A new class of rare earth magnetic compounds based on $Gd_5(S_xGe_{1-x})_4$ with extraordinary magnetostriction, magnetocaloric effect and magnetoresistive properties”, D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. University of Durham, June 16, 2004.
140. “A new class of rare earth magnetic compounds based on $Gd_5(S_xGe_{1-x})_4$ with extraordinary magnetostriction, magnetocaloric effect and magnetoresistive properties”, D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. University of Exeter, June 25, 2004.
141. “Magnetic Methods for Nondestructive Evaluation of Surface Condition”, D.C. Jiles, C.C.H. Lo, L. Li, E.R. Kinser, A. Barsic, National Metallurgical Laboratory, Jamshedpur, India, March 16, 2005.
142. “New Mn and Cr substituted cobalt ferrite materials for magnetoelastic stress sensor applications”, D.C. Jiles, A.P. Ring, C.C. H. Lo and J.E. Snyder, E.Melikhov, National Metallurgical Laboratory, Jamshedpur, India, March 16, 2005.
143. “Magnetic Methods for Nondestructive Evaluation of Surface Condition”, D.C. Jiles, C.C.H. Lo, L. Li, E.R. Kinser, A. Barsic, Bengal Engineering and Science University, Howrah, India, March 17, 2005.
144. “New Mn and Cr substituted cobalt ferrite materials for magnetoelastic stress sensor applications”, D.C. Jiles, A.P. Ring, C.C. H. Lo and J.E. Snyder, Y. Melikhov, Central Glass and Ceramics Research Institute, Kolkata, India, March 17, 2005.
145. “A new class of rare earth magnetic compounds based on $Gd_5(Si_xGe_{1-x})_4$ with extraordinary magnetostriction, magnetocaloric and magnetoresistive properties” D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. Center for Materials Research and Analysis, University of Nebraska Lincoln, May 10, 2005.
146. “A new class of rare earth magnetic compounds based on $Gd_5(Si_xGe_{1-x})_4$ with extraordinary magnetostriction, magnetocaloric and magnetoresistive properties” D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. Magnetic Microscopy Center, Physics Department, University of Minnesota, June 29, 2005.
147. “Non linear behavior in magnetic materials (Invited)”, Ewing Lecture, Annual Lecture of the UK Magnetics Society, Royal Society, London, December 6, 2005.
148. “Non linear behavior in magnetic materials”, Physics Department, Cardiff University, December 14, 2005.
149. “Magnetic methods for materials characterization”, Tata Steel Company, Jamshedpur, India, January 12, 2006.

150. "Non-linear Behaviour in Magnetic Materials", Indian Institute of Technology, Kharagpur, January 13, 2006.
151. "Magnetic methods for materials characterization", Centre for Nondestructive Evaluation, Indian Institute of Technology, Madras, January 14, 2006.
152. "Non-linear Behaviour in Magnetic Materials", Department of Materials Science, Indian Institute of Technology, Madras, January 15, 2006.
153. "Exploitation of technical magnetization processes for nondestructive evaluation of materials", Indira Gandhi Centre for Atomic Research, India, January 16, 2006
154. "Non-linear Behaviour in Magnetic Materials", Institute of Electrical Engineers, Research Channel, Web Broadcast, June 7, 2006.
155. "Measurement of magnetization processes for nondestructive evaluation of materials", Kobe University, Kobe, Japan, August 28, 2006.
156. "Measurement of magnetization processes for nondestructive evaluation of materials", Iwate University, Morioka, Japan, August 31, 2006.
157. "Magnetic methods for nondestructive evaluation", Newport and District Materials Society, 24 October 2006
158. "Non-linear behavior in magnetic materials", Bernard Cooper Memorial Lecture, Physics Department, University of West Virginia, Morgantown., West Virginia, March 1, 2007.
159. "Application of magnetic techniques to NDE of radiation embrittlement, creep and fatigue damage in ferrous materials", Tata Steel Company, Jamshedpur, India, April 12, 2007.
160. "Hysteresis and non-linear behavior in magnetic materials", IEE Solent Branch, Southampton, October 11, 2007.
161. "Recent developments in advanced magnetoelastic and magnetocaloric materials", Indian Institute of Technology Madras, Chennai, India, March 31, 2008.
162. "Non linear modeling of magnetic materials", Faculty of Engineering, University of Wollongong, Australia, June 25, 2008
163. "Biomedical Applications of Magnetism: Plans for Development of the Wolfson Centre for Magnetism", School of Dentistry, University of Birmingham, August 29, 2008.
164. "Recent progress in magnetoelastic and magnetocaloric materials", National Physical Laboratory, Teddington, September 8, 2008.
165. "Magnetic Hysteresis: Physical Principles", Seminar series on magnetic materials and hysteresis modeling", Department of Electrical Energy Systems and Automation, University of Ghent, Ghent, Belgium, September 10, 2008.
166. "Magnetic Hysteresis: Non linear modeling", Seminar series on magnetic materials and hysteresis modeling", Department of Electrical Energy Systems and Automation, University of Ghent, Ghent, Belgium, September 10, 2008.
167. "Magnetoelastic coupling and the effects of stress on magnetic properties of materials", Seminar series on

- magnetic materials and hysteresis modeling, Department of Electrical Energy Systems and Automation, University of Ghent, Ghent, Belgium, September 10, 2008.
168. “Magnetic methods for nondestructive evaluation: examples, possibilities and limitations”, Seminar series on magnetic materials and hysteresis modeling, Department of Electrical Energy Systems and Automation, University of Ghent, Ghent, Belgium, September 10, 2008.
 169. “Cation substituted cobalt ferrite – a new material for composite multiferroic applications”, Seagate Technology, Bloomington Heights, Minnesota, September 22, 2008.
 170. “Examination of Universal Network for Magnetic Nondestructive Evaluation Round Robin samples using Barkhausen and Hysteresis techniques”, Universal Network for Magnetic Nondestructive Evaluation, Budapest, September 25, 2008.
 171. “Magnetic Hysteresis Modeling: Jiles Atherton Approach (**Invited**)”, Workshop on Hysteresis Modelling, Vienna University of Technology, December 12, 2008.
 172. “Exceptional properties of some new magnetostrictive and magnetocaloric materials” (**Invited**), D.C.Jiles, Y.Melikhov and J.E.Snyder, UK Magnetics Society Seminar on Advanced Functional Materials, 19 March 2009, National Physical Laboratory, Teddington, UK.
 173. “New giant magnetocaloric materials for magnetic refrigeration applications”, D.C.Jiles, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, September 16, 2009.
 174. “The development of new highly magnetostrictive materials for magnetic sensors”, D.C.Jiles, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, September 17, 2009.
 175. “Applications of magnetic Barkhausen effect to the nondestructive detection of surface mechanical condition in steels”, D.C.Jiles, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, September 18, 2009.
 176. “New highly magnetostrictive ferrite materials for multiferroic applications”, Department of Electrical, Electronic and Computer Engineering, University of Birmingham, February 5, 2010.
 177. “Recent Developments in Highly Magnetoelastic and Highly Magnetocaloric Materials”, Royal Institute of Technology, Stockholm, Sweden, June 18th, 2010.
 178. “Magnetocaloric Effect and Magnetic Refrigeration”, Dept. Electrical Engineering, Indian Institute of Technology Madras, Chennai, India, July 1st, 2010.
 179. “Detection of Surface Stress and Hardness in Ground Steel Components using Magnetic Barkhausen Measurements”, Centre for Nondestructive Evaluation, Indian Institute of Technology Madras, Chennai, India, July 5th, 2010.
 180. “Detection of Surface Stress and Hardness in Ground Steel Components using Magnetic Barkhausen Measurements”, Indira Gandhi Centre for Atomic Research, Kalpakkam, India, July 6th, 2010
 181. “Recent progress in magnetoelastic and magnetocaloric materials”, Department of Physics, Indian Institute of Technology Madras, Chennai, India, July 7th, 2010.
 182. “Magnetic Barkhausen Measurements for Detection of Surface Stress and Hardness in High Strength Steel”, Department of Materials Science & Engineering, University of Sheffield, September 15, 2010.

183. “Deep Brain Stimulation using Transcranial Magnetic Stimulation for Diagnostic and Therapeutic Purposes”, Indian Institute of Technology Madras, Chennai, March 9, 2011.
184. “Deep Brain Stimulation using Magnetic Fields in TMS”, Department of Electrical and Computer Engineering, University of Iowa, May 5th, 2011.
185. “The Magnetocaloric Effect and Magnetic Refrigeration”, Department of Materials Science & Engineering, University of Sheffield, UK, June 9, 2011.
186. “Detection of Surface Stress and Hardness in Ground Steel Components using Magnetic Barkhausen Measurements”, University of the Saarland, Germany, June 14, 2011.
187. “Deep Brain Stimulation using Magnetic Fields in Transcranial Magnetic Stimulation”, D. C. Jiles, University of Goettingen, Germany, June 16, 2011.
188. “Detection of Surface Stress and Hardness in Ground Steel Components using Magnetic Barkhausen Measurements”, University of Ilmenau, Germany, June 17, 2011.
189. “Deep Brain Stimulation using Magnetic Fields in TMS”, Osborn Research Club, Iowa State University, November 14, 2011.
190. “Non-linear magnetic modeling: breaking through the materials barrier”, Department of Electrical and Computer Engineering, McGill University, Montreal, Canada, November 22, 2011.
191. “Non-linear magnetic modeling: breaking through the materials barrier”, General Electric Company, Bangalore, India, December 8, 2011.
192. “TMS: Deep Brain Stimulation using Magnetic Fields”, Iowa Lutheran Hospital, Des Moines, Iowa, January 20, 2012.
193. “Pushing back the boundaries affects you too: research highlights from Electrical and Computer Engineering”, Ames Lions Club, February 23, 2012
194. “TMS: Deep Brain Stimulation using Magnetic Fields”, University of Iowa Medical School, April 6, 2012.
195. “Development of new highly magnetostrictive materials for magnetic sensors”, University of the Saarland, Saarbrucken, Germany, June 26, 2012
196. “Magnetocaloric Effect and Magnetic Refrigeration”, Department of Physics, University of Goettingen, June 29, 2012
197. “Deep Brain Stimulation using Magnetic Fields”, Sheffield University, July 5, 2012.
198. “Deep Brain Stimulation using Magnetic Fields”, School of Engineering, Cardiff University, July 6, 2012.
199. “Non-linear magnetic modeling: breaking through the materials barrier”, Wayne State University, December 6, 2012.
200. “Recent progress in magnetoelastic and magnetocaloric materials”, University of Minnesota, April 12, 2013.

201. “Theory and Modeling of the Barkhausen Effect: Applications to Nondestructive Testing”, Wolfson Centre for Magnetics, Cardiff University, June 18, 2013.
202. “Deep Brain Stimulation using Magnetic Fields for Non-invasive Therapy of Brain Disorders”, School of Engineering, Cardiff University, June 19, 2013.
203. “Non-linear modeling: breaking through the magnetic materials barrier”, Department of Earth Sciences, University of Cambridge, June 20, 2013.
204. “Deep Brain Stimulation using Magnetic Fields for non-invasive Therapy of Brain Disorders”, Department of Electrical Engineering, University of Florida, November 14, 2013.
205. “A fresh look at some familiar non-metallic magnetic compounds for applications in magnetoelectric sensors”, Department of Materials Engineering, Sheffield University, June 24, 2014.
206. “Transcranial Magnetic Stimulation for Non-invasive Treatment of Brain Disorders”, Department of Electrical Engineering, Technical University of Vienna, August 21, 2014.
207. “Theory and modeling of the magnetic Barkhausen effect”, Department of Physics, Technical University of Vienna, August 22, 2014.

19. CONFERENCE PAPERS

1. "The magnetic phase diagram of terbium", S.B. Palmer and D.C. Jiles. Rare Earths Conference, Birmingham, England, April 17-18, 1978.
2. "The magnetic phase diagrams of gadolinium and terbium", D.C. Jiles and S.B. Palmer. Institute of Physics Magnetism Symposium on Bloch Wall Dynamics, London, England, April 1979.
3. "The magnetic phase diagram of gadolinium", D.C. Jiles and S.B. Palmer. International Conference on Magnetism (ICM), Munich, West Germany, September 3-7, 1979.
4. "Magnetoelastic effects in some heavy rare earths", D.C. Jiles and S.B. Palmer. Australia & New Zealand Institutes of Physics Solid State Physics Conference, Auckland, New Zealand, February 1980.
5. "Third order elastic constants of erbium", (Invited Paper), D.C. Jiles and S.B. Palmer. . Australia & New Zealand Institutes of Physics Solid State Physics Conference, Wagga, NSW, Australia, February 1981.
6. "Domain magnetisation interpretation of magnetoelastic effects in gadolinium", D.J. Martin, S.B. Palmer and D.C. Jiles. Rare Earths Conference, Birmingham, England, April 1981.
7. "A mean field model of the hysteresis mechanism in ferromagnetic materials", D.C. Jiles and D.L. Atherton. Canadian Association of Physicists Conference, Kingston, Ontario, Canada, June 1982.
8. "The development of an above-ground stress measurement method for pipelines", D.L. Atherton, D.C. Jiles, A. Teitsma and H. French. International Conference on Pipeline Inspection Methods, Edmonton, Canada, June 1983.
9. "Ferromagnetic hysteresis", D.C. Jiles and D.L. Atherton, International Magnetism Conference, Philadelphia, April 5-8, 1983.
10. "Effects of stress on the magnetisation of steel", D.C. Jiles and D.L. Atherton, International Magnetism Conference, Philadelphia, April 5-8, 1983.
11. "Theory of ferromagnetic hysteresis", (Invited Paper), D.C. Jiles and D.L. Atherton, Magnetism and Magnetic Materials Conference 1983.
12. "Ferromagnetic hysteresis and the effects of stress on magnetisation", (Invited Paper), D.C. Jiles. Third Conference on Properties and Applications of Magnetic Materials, Chicago, U.S.A. May, 1984.
13. "Application of hysteresis modelling to the nondestructive inspection of stress", (Invited Paper), D.C. Jiles, S. Habermehl and D.L. Atherton. First National Seminar on Nondestructive Inspection of Ferromagnetic Materials, Houston, Texas, March 1984.
14. "The influence of stress on the inspection of steel with particular reference to gas pipelines", D.L. Atherton, C. Welbourn and D.C. Jiles. Fifth Canadian Conference on Non Destructive Testing, Toronto, Canada, October 1984.
15. "Dependence of the anhysteretic magnetisation on stress in steel", L.G. Dobranski, D.C. Jiles and D.L. Atherton, 30th Conference on Magnetism and Magnetic Materials, San Diego, California, 27-30, November 1984.
16. "Influence of chemical composition and heat treatment on the magnetic properties of steel", S. Habermehl, D.C. Jiles and C.M. Teller. International Magnetism Conference, St. Paul, Minnesota, April 29-May 2, 1985.

17. "Magnetomechanical effects in steel and the influence of microstructure", D.L. Atherton, D.C. Jiles and C. Welbourn. Fourth Conference on the Properties and Applications of Magnetic Materials, Chicago, May 1985.
18. "An automated control and data logging system for the determination of magnetic properties of materials for non destructive evaluation", S.Habermehl and D.C.Jiles, Review of Progress in Quantitative NDE, 5, 843, 1986.
19. "Piezo-optic properties of gadolinium", D.C. Jiles and M.P. Staines. International Conference on Magnetism (ICM), San Francisco, U.S.A., August 1985.
20. "Effects of stress on the magnetic properties of ferromagnetic materials: a study of the magnetomechanical effect in steel", D.C. Jiles and D.L. Atherton. International Conference on Magnetism (ICM), San Francisco, U.S.A., August 1985.
21. "Microstructural dependence of the magnetic properties of the iron carbon system", S. Habermehl, D.C. Jiles, J.D. Verhoeven and H. Downing. International Conference on Magnetism (ICM), San Francisco, California, August 1985.
22. "Magnetic methods for non destructive evaluation", (Invited Paper), D.C.Jiles. Conference on Advanced Methods in Non Destructive Evaluation, Kingston, Canada, October 1985.
23. "Evaluation of the properties and treatment of ferromagnetic steels using magnetic measurements", D.C. Jiles. Conference on Non Destructive Inspection of Ferromagnetic Materials, Houston, U.S.A., March 1986.
24. "Magnetoacoustic emission, magnetisation and Barkhausen effect in decarburised steel", R. Ranjan, D.C. Jiles and P.K. Rastogi, International Magnetism Conference, Phoenix, Arizona, April 14-17, 1986.
25. "Magnetic methods for characterisation of materials properties", D.C. Jiles. . Fifth Conference on Properties and Applications of Magnetic Materials, Chicago, U.S.A., May 1986.
26. "Investigation of the microstructural dependence of the magnetic properties of 4130 alloy steels for NDE", D.C. Jiles and J.D. Verhoeven, Review of Progress in Quantitative Nondestructive Evaluation" 6, 1681, 1987.
27. "NDE methods for determination of thermal history and mechanical properties of Al-Li alloys", D.J. Bracci D.C. Jiles and O. Buck, in Review of Progress in Quantitative Nondestructive Evaluation, 6, 1395, 1987.
28. "A model for the effect of tensile & compressive stress on ferromagnetic hysteresis", M.J. Sablik, H. Kwun, G.L. Burkhardt and D.C. Jiles, Magnetism and Magnetic Materials Conference, 1986.
29. "Grain size measurements using magnetic & acoustic Barkhausen noise" R. Ranjan, D.C. Jiles, O. Buck and R.B. Thompson, Magnetism and Magnetic Materials Conference, 1986.
30. "Search for NDE methods to characterise the thermal history and mechanical properties of Al-Li alloys", D.J. Bracci, P. Garikepati, D.C. Jiles and O. Buck, Review of Progress in Quantitative Nondestructive Evaluation, 7, 1255, 1988
31. "Strain dependence of the magnetic properties of AISI 4130 and 4140 alloy steels", D.C. Jiles and D. Utrata, Review of Progress in Quantitative Nondestructive Evaluation, 7, 1455, 1988.
32. "Recent developments in the Ames magnetic testing facility", D.C. Jiles, Review of Progress in Quantitative Nondestructive Evaluation 7, 1715, 1988.
33. "The influence size and morphology of eutectoid carbides on the magnetic properties of carbon steels", D.C.Jiles, Magnetism and Magnetic Materials Conference, Chicago, 1987.

34. "Integrated on-line instrumentation for simultaneous automated measurement of magnetic field, induction, Barkhausen effect, magnetoacoustic emission and magnetostriction", D.C. Jiles, Magnetism and Magnetic Materials Conference, Chicago, 1987.
35. "A model for the effect of stress on the low frequency harmonic content of the magnetic induction in ferromagnetic materials", M.J. Sablik, G.L. Burkhardt, H. Kwun and D.C. Jiles, Magnetism and Magnetic Materials Conference, Chicago, 1987.
36. "Non destructive evaluation of stress in ferromagnetic materials from maximum differential permeability", D.C.Jiles. (Invited paper). SQUID NDE Workshop, Harper's Ferry, Virginia, April 13-15, 1988.
37. "Stress dependence of the magnetic properties of Ni-Cu and Ni-Co alloys. D.C.Jiles, T.T.Chang, D.R.Hougen and R.Ranjan, International Conference on Magnetism, Paris, France, 1988.
38. "Magneto acoustic emission and discontinuous magnetostriction in Dy-Tb-Fe", D.C.Jiles, J.E.Ostenson and C.V.Owen, International Conference on Magnetism, Paris, France, 1988.
39. "Barkhausen effect and discontinuous magnetostriction in Terfenol-D", D.C.Jiles, J.E.Ostenson and C.V.Owen, 4th Joint InterMag/Magnetism and Magnetic Materials Conference, Vancouver, British Columbia, July 11-15, 1988
40. "A model for hysteresis in magnetostriction", M.J.Sablik and D.C.Jiles, 4th Joint InterMag/Magnetism and Magnetic Materials Conference, Vancouver, British Columbia, July 11-15, 1988.
41. "Theory of ferromagnetic hysteresis: evaluation of stress from hysteresis curves", P. Garikepati, T.T.Chang and D.C.Jiles, 4th Joint InterMag/Magnetism and Magnetic Materials Conference, Vancouver, British Columbia, July 11-15, 1988.
42. "Advance indications of incipient failure modes using magnetic inspection", D.C.Jiles. Workshop on NDE measurement technology to assess material properties and property cahanges related to aging, Gaithersburg, Maryland, October 27-28th, 1988.
43. "Determination of selected mechanical properties of aged Al-Li alloys using NDE methods", L.J.H.Brasche, D.J.Bracci, O.Buck, D.C.Jiles and J.Snodgrass. Review of Progress in Quantitative NDE, 8B, 1717, 1989.
44. "Detection of expended fatigue life of AISI 4140 steels from magnetic measurements". P.Garikepati, D.C.Jiles, J.B.Thoelke and D.Utrata. Review of Progress in Quantitative NDE, 8B, 2061, 1989.
45. "Evaluation of residual stress in 300M and AISI 4140 steels using hysteresis loss and differential permeability measurements". D.C.Jiles, P.Garikepati, and D.D.Palmer. Review of progress in Quantitative NDE, 8B, 2081, 1989.
46. "Detection stress in steels from maximum differential susceptibility" (Invited paper), D.C.Jiles, P.Garikepati, in "Non Destructive Characterization of Materials", Ed. P.Holler, p.524, (Springer-Verlag) 1989.
47. "A multiparameter magnetic inspection system for NDE of ferromagnetic materials" (Invited paper), D.C.Jiles, in "Non Destructive Characterization of Materials", Ed. P.Holler, p.715, (Springer-Verlag) 1989.
48. "NDE methods for the determination of thermal history and mechanical properties of aluminum-lithium alloys", O.Buck, D.J.Bracci, L.J.H.Brasche and D.C.Jiles. TMS Annual Spring Meeting, Las Vegas, March 1989.
49. "Theory of ferromagnetic hysteresis: determination of model parameters from experimental hysteresis loops", D.C.Jiles and J.B.Thoelke, International Magnetism Conference, Washington DC, April 1989.

50. "The effects of stress on magnetic Barkhausen activity in ferromagnetic steels", D.C.Jiles, , International Magnetism Conference, Washington DC, April 1989.
51. "First principles calculation of the hysteretic magnetostriction as a function of stress", M.J.Sablik and D.C.Jiles. American Physical Society, Solid State Physics Meeting, St. Louis, March 20-24, 1989.
52. "A model for magabsorption as an NDE tool for stress measurement", M.J.Sablik, W.L.Rollwitz and D.C.Jiles. In "Proceedings of the 17th Symposium on NDE", San Antonio, Texas , April 17-20, p.212. Published by Southwest Research Institute, San Antonio, Texas, 1990.
53. "Fatigue induced changes in the magnetic properties of ferritic rail steel", D.C.Jiles and D.Utrata. In "Proceedings of the 17th Symposium on NDE", San Antonio, Texas , April 17-20, p313. Published by Southwest Research Institute, San Antonio, Texas, 1990.
54. "Theory of ferromagnetic hysteresis and its applications to modelling of components for circuit simulation (Invited paper)", D.C.Jiles. Symposium on non linear ferromagnetic hysteresis, Rosenheim, West Germany, 23rd-24th May, 1989.
55. "Microstructure and stress dependence of the magnetic properties of steel", D.C.Jiles, Review of Progress in Quantitative NDE, 9B, 1821, 1990.
56. "Nondestructive methods for the determination of mechanical properties of materials", L.J.H.Brasche, D.C.Jiles and O.Buck, Review of Progress in Quantitative NDE, 9B, 1581, 1990.
57. "Pulse height spectrum analysis of Barkhausen emissions in the frequency range 15kHz-250kHz", D.C.Jiles and S.Hariharan, 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Mass., November 1989
58. "First principles approach to magnetostrictive hysteresis", M.J.Sablik and D.C.Jiles, 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Mass., November 1989
59. "Interpretation of the magnetisation mechanism in Terfenol-D using Barkhausen pulse height analysis and irreversible magnetostriction", D.C.Jiles and S.Hariharan, 34th Annual Conference on Magnetism and Magnetic Materials, Boston, Mass., November 1989
60. "Development and characterization of the highly magnetostrictive alloy Terfenol-D for use in sensors and actuators", D.C.Jiles, in "New Materials and their Applications", p.365, edited by D.Holland, Institute of Physics, London, 1990.
61. "Domain magnetisation distribution calculation in stressed and unstressed Terfenol-D", D.C.Jiles and J.B.Thoelke. International Magnetism Conference, Brighton, England, April 17-20th 1990
63. "Magnescope : A portable magnetic inspection system for evaluation of steel structures and components", D.C.Jiles, S.Hariharan and M.K.Devine, International Magnetism Conference, Brighton, England, April 17-20th 1990
63. "Development of magnetic inspection techniques for evaluation of fatigue damage and stress in low alloy steels", M.K.Devine, S.Hariharan and D.C.Jiles, Review of Progress in Quantitative NDE 10, 2021, 1991.
64. "Detection of temper embrittlement in steels using magnetic inspection methods", D.C.Jiles, J.B.Thoelke, W.G.Clark, J.N.Iyer and R.DeNale, Review of Progress in Quantitative NDE 10, 2015, 1991.

65. "Evaluation of materials properties using magnetic measurements and computer modelling", D.C.Jiles, (Invited paper). ASM Materials Week Conference, Detroit, Michigan, October 8th-11th, 1990.
66. "A three dimensional anisotropic rotation model for magnetization and magnetostriction in Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke. 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, California, October 31st-November 3rd, 1990.
67. "Estimation of remaining lifetime in ferritic steels using magnetic methods", D.C.Jiles, (Invited paper). Materials Technology Conference, San Francisco, February 5th-7th, 1991.
68. "A magnetostrictive diode laser magnetometer", R.Chung, R.Weber and D.C.Jiles. 5th Joint Intermag/MMM Conference, Pittsburgh, Pennsylvania, June 18th-21st, 1991.
69. "Modelling of the combined effects of stress and magnetic field on the magnetostriction of Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke. 5th Joint Intermag/MMM Conference, Pittsburgh, Pennsylvania, June 18th-21st, 1991.
70. "Micromagnetic surface studies of materials for NDE", L.B.Sipahi and D.C.Jiles. Review of Progress in Quantitative NDE, 11, 1791, 1992.
71. "Magnetic NDE techniques for detecting mechanical changes in materials", M.K.Devine, D.C.Jiles, D.A.Kaminski and D.Chandler, Review of Progress in Quantitative NDE, 11, 1771, 1992.
72. "Effects of irradiation, aging and prestraining on the magnetic properties of ASTM-533B steels", D.C.Jiles, M.K.Devine, J.Apostol and P.K.Liaw. Review of Progress in Quantitative NDE, 11, 1777, 1992.
73. "Detection of incipient failure of steels from magnetic property measurements (Invited paper)", D.C.Jiles. Third Fossil Plant Inspection Conference, Baltimore, Maryland, August 13th-15th, 1991.
74. "Angular dependence of the magnetic properties of polycrystalline iron under the action of uniaxial stress", D.A.Kaminski, D.C.Jiles and M.J.Sablik, International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991
75. "Interpretation of the frequency dependence of Barkhausen emissions for investigating the depth dependence of magnetic properties", L.B.Sipahi and D.C.Jiles, International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991.
76. "Model calculation for determining local energy minima in the orientation of magnetic domains in terbium-dysprosium-iron single crystals", J.B.Thoelke and D.C.Jiles, International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991.
77. "In situ determination of the magnetic properties of soft magnetic materials using an automated magnetic measuring system", A.R.Eichmann, D.C.Jiles and M.K.Devine, International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991.
78. "Highly magnetostrictive rare earth iron intermetallic for a magnetostrictive magnetometer", R.Chung, R.Weber and D.C.Jiles, International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991.
79. "Effects of cyclic stress on the magnetic hysteresis parameters of polycrystalline iron", M.K.Devine, D.C.Jiles and S.Hariharan. International Conference on Magnetism, Edinburgh, Scotland, September 2nd-6th, 1991.
80. "Magnetic inspection techniques for NDE", D.C.Jiles. Gordon Research Conference on NDE, Oxnard, California, January 20-24th, 1992.

81. "The effect of stress on hysteresis loss", M.J.Sablik, D.A.Kaminski, D.C.Jiles and S.B.Biner. American Physical Society Meeting, Indianapolis, 16-20th March, 1992.
82. "Modelling coercivity as a function of stress in steel", M.J.Sablik, S.W.Rubin, D.A.Kaminski, D.C.Jiles and I.J.Garshelis. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992.
83. "Micromagnetic Barkhausen emission analysis of Tb-Dy-Fe under the action of an alternating field excitation", L.B.Sipahi, M.P.Schulze, D.C.Jiles and R.D.Greenough. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992.
84. "Variation of strain amplitude and phase in a cylindrical specimen of Tb-Dy-Fe in an ac magnetic field", M.P.Schulze, R.Chung, J.Greenough, R.Greenough, D.C.Jiles and R.Weber. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992.
85. "Effects of high temperature creep on the magnetic properties of steels", M.K.Devine and D.C.Jiles. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992.
86. "New procedures for in situ measurement of the magnetic properties of materials: applications of the Magnescope", A.R.Eichmann, M.K.Devine and D.C.Jiles,. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992.
87. "A self consistent generalized model for the calculation of minor loop excursions in the theory of hysteresis", D.C.Jiles. International Magnetics Conference, St.Louis, Missouri, April 13-16th 1992,
88. "Nondestructive evaluation research at Iowa State University", D.C.Jiles. International Conference on Monitoring and Predictive Maintenance of Plants and Structures, Florence, Italy, May 17-20th, 1992.
89. "Magnetic property changes in various steel structures due to irradiation", M.K.Devine, D.C.Jiles, P.K.Liaw, R.D.Rishel and D.S.Drinon. Review of Progress in Quantitative NDE, 12, 1815, 1993.
90. "Stress detection in steels through variation in magnetic properties", D.A.Kaminski, D.C.Jiles, S.B.Biner and M.J.Sablik. Review of Progress in Quantitative NDE, 12, 1831, 1993.
91. "Evaluation of fatigue damage in steel structural components by a new magnetic measurement technique", M.R.Govindaraju, A.Strom, D.C.Jiles and S.B.Biner. Review of Progress in Quantitative NDE, 12, 1839, 1993.
92. "Barkhausen emission technique for evaluating shot peening quality in high strength steels", L.B.Sipahi, M.K.Devine, D.C.Jiles and D.D.Palmer. Review of Progress in Quantitative NDE, 12, 1847, 1993.
93. "Angular dependence of the magnetic properties of steels under the action of uniaxial stress", D.A.Kaminski, D.C.Jiles, S.B.Biner and M.J.Sablik. Materials Research Society Fall Meeting, Boston, Massachusetts, November, 1992.
94. "Life prediction and nondestructive evaluation of materials properties in the power plant industry", P.K.Liaw, W.G.Clark Jr., R.Rishel, D.Drinon, M.K.Devine and D.C.Jiles, Proceeding of the First International Conference on microstructures and mechanical properties of aging materials, Chicago, November 1992, p.345. Edited by P.K.Liaw, R.Viswanathan, K.L.Murty, D.Freear and E.P.Simonen.
95. "Enhanced differential magnetostrictive response in annealed Terfenol-D", N.Galloway, R.D.Greenough, M.Schulze, D.C.Jiles, J.D.Verhoeven and P.Pulvirenti. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.

96. "Evaluation of fatigue in steel structural components by magnetoelastic Barkhausen noise technique", M.R.Govindaraju, D.C.Jiles, A.Strom and S.B.Biner. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
97. "Physical interpretation of the hysteresis parameters in the theory of hysteresis", D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
98. "The magnetostrictive laser diode magnetometer for personal magnetic field dosimetry", R.Chung, R.Weber and D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
99. "Analytic model calculation of magnetic fields in a magnetic half space due to surface magnetic charge", Z.J.Chen M.R.Govindaraju, D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
100. "Magnescope: applications in nondestructive evaluation", D.C.Jiles, A.R.Eichmann and M.K.Devine. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
101. "A model for hysteretic behavior in ferromagnets subject to non collinear applied stress and field", M.J.Sablik, S.W.Rubin, D.A.Kaminski, D.C.Jiles and S.B.Biner. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
102. "Comprehensive analysis of Barkhausen emission spectra using pulse height analysis, frequency spectrum and pulse waveform analysis", L.B.Sipahi, D.Chandler and D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
103. "Modelling of micromagnetic Barkhausen activity using a stochastic process extension to the theory of hysteresis", L.B.Sipahi, D.C.Jiles and G.Williams. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
104. "Measurements of magnetic circuit characteristics for comprehension of intrinsic magnetic properties of materials from surface inspection", Z.J.Chen, M.K.Devine and D.C.Jiles. 37th Annual Magnetism & Magnetic Materials Conference, Houston, December 1-4, 1992.
105. "Frequency dependence of hysteresis curves in non conducting magnetic materials", D.C.Jiles. International Magnetism Conference, Stockholm, Sweden, April 13-16th, 1993.
106. "Micromagnetic surface measurements for evaluation of surface modifications due to cyclic stress", Z.J.Chen, A.Strom and D.C.Jiles. International Magnetism Conference, Stockholm, Sweden, April 13-16th, 1993.
107. "Modelling of reversible domain wall motion under the action of magnetic field and localized defects", Z.J.Chen and D.C.Jiles. International Magnetism Conference, Stockholm, Sweden, April 13-16th, 1993.
108. "Modelling of magnetization using the theory of hysteresis", D.C.Jiles. Proceedings of the Workshop on Computational Techniques in Power Engineering, p.40-56, Royal Institute of Technology, Stockholm, Sweden, 17th April 1993.
109. "Evaluation of steel bridges by magnetic hysteresis measurements", M.K.Devine, A.Strom, D.C.Jiles and D.Utrata. Review of Progress in Quantitative NDE, 13B, 1777, 1994.

110. "Magnetic Barkhausen effect studies in the evaluation of neutron irradiation degradation in nuclear pressure vessel steels", L.B.Sipahi, M.R.Govindaraju, D.C.Jiles, P.K.Liaw and D.S.Drinon. Review of Progress in Quantitative NDE, 13B, 1801, 1994.
111. "Neural network prediction of creep damage based on magnetic properties in power plant piping", M.Negley, M.R.Govindaraju and D.C.Jiles. Review of Progress in Quantitative NDE, 13B, 1817, 1994.
112. "Modelling of the frequency dependence of major and minor hysteresis loops in magnetic materials using a self consistent approach", D.C.Jiles. ASM Materials Week Conference, Pittsburgh, 18th-21st October 1993.
113. "Nondestructive evaluation of radiation degradation in nuclear pressure vessel steels using magnetic Barkhausen signal analysis", M.R.Govindaraju, L.B.Sipahi, D.C.Jiles P.K.Liaw and D.S.Drinon. TMS Materials Week Conference, Pittsburgh, 18th-21st October, 1993. Published in "Nondestructive evaluation and materials properties II", p.121. Edited by P.K.Liaw, O.Buck, R.J.Arsenault and R.E.Green Jr., The Metallurgical Society, Warrendale, Pennsylvania, 1994.
114. "SEM investigation of fatigue induced microstructural changes and the resulting effect on magnetic properties of structural steels", M.R.Govindaraju, Z.J.Chen, A.Strom and D.C.Jiles. TMS Materials Week Conference, Pittsburgh, 18th-21st October, 1993. Published in "Nondestructive evaluation and materials properties II", p.133, edited by P.K.Liaw, O.Buck, R.J.Arsenault and R.E.Green Jr., The Metallurgical Society, Warrendale, Pennsylvania, 1994.
115. "Applications of micromagnetic Barkhausen emissions as noninvasive material characterization technique", L.B.Sipahi and D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993.
116. "Frequency dependence of hysteresis curves in conducting magnetic materials", D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993.
117. "Modelling of the effects of stress on magnetization in ferromagnetic materials", D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993..
118. "Measurements of intrinsic magnetic properties of materials from surface inspection", Z.J.Chen and D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993.
119. "Estimation of fatigue exposure from magnetic hysteresis parameters", Z.J.Chen, J.Kameda and D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993.
120. "Monitoring neutron embrittlement in nuclear pressure vessel steels using micromagnetic Barkhausen emissions", L.B.Sipahi, M.R.Govindaraju and D.C.Jiles, 38th Conference on Magnetism & Magnetic Materials, Minneapolis, Minnesota, November 15th-18th, 1993.
121. "Improving the energy efficiency characteristics of magnetic metallic glasses through excimer laser treatment", S.Patri, P.Molian, A.Ray, P.Ilavarasan, A.Parakka, D.C.Jiles and M.R.Govindaraju. Proceedings of the ICALEO Conference, Orlando, Florida, October 1993.
122. "Stochastic process theory for modelling micromagnetic effects in materials", Institute of Physics, Condensed Matter and Materials Physics Conference, Leeds, United Kingdom, December 20-22, 1993.
123. "Detection of creep damage using magnetic Barkhausen technique", L.B.Sipahi, D.A.Kaminski, S.B.Biner and D.C.Jiles. Materials Research Society, Spring Meeting, San Francisco, April 4-8th, 1994.

124. "Modelling the effects of eddy current losses on frequency dependent hysteresis in electrically conducting media", D.C.Jiles. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 1994.
125. "Recent developments in modelling of the stress derivative of magnetization in ferromagnetic materials", D.C.Jiles and M.K.Devine. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
126. "Effects of surface stress on computer simulation of Barkhausen effect emissions: model predictions and comparison with X ray diffraction studies", D.C.Jiles and L.Suominen. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
127. "Magneprobe: a portable system for detection and characterization of Barkhausen signals for in situ nondestructive testing of ferromagnetic materials", A.Parakka and D.C.Jiles. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
128. "Improvements in the energy efficiency characteristics of metallic glass ribbons by a laser scribing process", M.R.Govindaraju, A.Parakka, D.C.Jiles and P.Molian. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
129. "Assessment of creep damage in ferromagnetic materials using magnetic inspection", Z.J.Chen, M.R.Govindaraju, D.C.Jiles, S.B.Biner and M.J.Sablik. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
130. "Imaging surface conditions of ferromagnetic steel using Barkhausen techniques", M.A.Negley and D.C.Jiles. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
131. "Variation of coercivity of ferromagnetic material during cyclic stressing", Z.Gao, Z.J.Chen, D.C.Jiles and S.B.Biner. Presented at the 6th joint Intermag/Magnetism & Magnetic Materials Conference, Albuquerque, June 20-23, 1994.
132. "Magneprobe: a computerized portable system for nondestructive evaluation of surface condition in ferritic components", A.P.Parakka and D.C.Jiles. Review of Progress in Quantitative NDE, 14, 2325, 1995.
133. "Magnetic property evaluation of creep damaged Cr-Mo steel components used in fossil power plants", A.Mitra, Z.J.Chen and D.C.Jiles. Review of Progress in Quantitative NDE, 14, 1733, 1995.
134. "Detection of creep damage in Cr-Mo steel by magnetic hysteresis measurement", Z.J.Chen, A.Mitra, J.Kameda, S.B.Biner and D.C.Jiles. Review of Progress in Quantitative NDE, 14, 1701, 1995.
135. "Magnetic Barkhausen noise studies in the evaluation of hydrogen embrittlement in steels", L.B.Sipahi and D.C.Jiles. Presented at the Review of Progress in Quantitative NDE, Aspen, Colorado, August 1-5, 1994.
136. "Effects of magnetoelastic anisotropy on hysteresis and Barkhausen emissions in amorphous metals", A.Mitra, L.B.Sipahi, M.R.Govindaraju and D.C.Jiles. Presented at the International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994.
137. "Effect of structural inhomogeneities induced by cyclic stress on the magnetic properties of iron based alloys", Z.J.Chen and D.C.Jiles. Presented at the International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994.

138. "The law of approach as a means of modelling the effect of time dependent stress on magnetization in hysteretic systems", D.C.Jiles and M.K.Devine. International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994.
139. "Magneprobe: a portable system for detection and characterization of Barkhausen signals for nondestructive testing of ferromagnetic materials", A.P.Parakka and D.C.Jiles. International Conference on Magnetism, Warsaw, Poland, August 22-26, 1994.
140. "A magnetic coupling gel for improvement of magnetic interface coupling for nondestructive evaluation", Z.J.Chen, M.Negley and D.C.Jiles, International Magnetics Conference, San Antonio, Texas, April 18-21, 1995.
141. "Influence of microstructure on micromagnetic Barkhausen emissions in AISI 4140 steel", A.Mitra, M.R.Govindaraju and D.C.Jiles, International Magnetics Conference, San Antonio, Texas, April 18-21, 1995.
142. "Effects of tensile stress on magnetic Barkhausen parameters in 2605CO amorphous alloys", A.Mitra and D.C.Jiles, International Magnetics Conference, San Antonio, Texas, April 18-21, 1995.
143. "Theory of frequency dependent hysteresis in electrically conducting magnetic materials", D.C.Jiles. Institute of Physics, Condensed Matter and Materials Physics Conference, University of Warwick, United Kingdom, December 19-21, 1994.
144. "Theory and modelling of permeability changes in ordered magnetic materials subjected to time dependent magnetic fields", D.C.Jiles. American Physical Society March Meeting, San Jose, California, March 20-24, 1995.
145. "Magnetic nondestructive evaluation techniques for inspection of railroad bridges", M.R.Govindaraju, M.K.Devine, S.B.Biner and D.C.Jiles. Proceedings of the Research-into-Practice Conference, p. 177-186, 1995.
146. "Estimation of grinding burn damage using Barkhausen and X ray measurements", A.P.Parakka, D.C.Jiles and H.Gupta, Review of Progress in Quantitative NDE, 15, 1547, 1996.
147. "Imaging of creep damaged CrMo steel piping using magnetic parameter variations", M.Negley and D.C.Jiles, Review of Progress in Quantitative NDE, 15, 925, 1996.
148. "Modelling of hysteresis in magnetic materials (Invited paper)", D.C.Jiles and Z.Gao, Sixth European Magnetic Materials and Applications Conference, Vienna, Austria, September 4-8, 1995.
149. "Modelling the magnetic properties of materials for circuit simulator applications (Invited paper)", D.C.Jiles and Z.Gao, "Non-linear electromagnetic systems", p.365-373, edited by A.J.Moses and A.Basak, IOS Press, Amsterdam, The Netherlands, 1996.
150. "Application of Barkhausen effect measurements for detection of near surface stress", D.A.Kaminski and D.C.Jiles. 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.
151. "The magnetomechanical effect in electrolytic iron", M.K.Devine and D.C.Jiles. 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.
152. "Enhancement of the piezomagnetic response of highly magnetostrictive rare earth - iron alloys at KHz frequencies", P.Pulvirenti, D.C.Jiles, R.D.Greenough and I.M.Reed, 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.
153. "Hydrogen charging in metals and its effect on magnetic properties", A.Ramesh, M.R.Govindaraju, D.C.Jiles and S.B.Biner, 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.

154. "Effects of surface condition on Barkhausen emissions in steel", A.Parakka, D.C.Jiles, H.Gupta and S.Jalics, 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.
155. "The dependence of energy dissipation on annealing temperature of melt spun NdFeB permanent magnet materials", Z.Gao, D.C.Jiles, D.J.Branagan and R.W.McCallum, 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.
156. "Modelling of permanent magnets: interpretation of parameters from the Jiles-Atherton hysteresis model", L. Henderson Lewis, D.O.Welch, Z.Gao and D.C.Jiles, 40th Conference on Magnetism and Magnetic Materials, Philadelphia, November 6-9, 1995.
157. "Magnetostriction and magnetic Gruneisen parameters in pseudo-binary rare earth transition metal alloys", P.P.Pulvirenti and D.C.Jiles. International Magnetism Conference, Seattle, Washington, April 9-12, 1996.
158. "Magnetic property variations in nickel caused by non-magnetic inclusions", A.Ramesh, M.R.Govindaraju, D.C.Jiles and S.B.Biner. International Magnetism Conference, Seattle, Washington, April 9-12, 1996.
159. "A model of anisotropic anhysteretic magnetization", A.Ramesh, D.C.Jiles and J.Roderick. International Magnetism Conference, Seattle, Washington, April 9-12, 1996.
160. "Composition dependence between magnetomechanical effect and magnetostriction", M.K.Devine and D.C.Jiles. International Magnetism Conference, Seattle, Washington, April 9-12, 1996.
161. "Magnetic measurements for in situ monitoring of component of nuclear systems", D.A.Kaminski, Y.Bi, M.R.Govindaraju and D.C.Jiles. International Magnetism Conference, Seattle, Washington, April 9-12, 1996.
162. "Finite element simulation of magnetic detection of creep damage at seam welds", M.J.Sablik, S.W.Rubin, D.C.Jiles, D.A.Kaminski and Y.Bi. International Magnetism Conference, Seattle, Washington, April 9-12, 1996.
163. "Applications of magnetic materials", D.C.Jiles, NATO Advanced Study Institute on Magnetic Hysteresis in Novel Magnetic Materials, Mykonos, Greece, July 12, 1996.
164. "Effects of stress on the magnetic properties of steels", D.C.Jiles, Review of Progress in Quantitative NDE, 16, 1739, 1997.
165. "Micromagnetic changes in steel due to surface modification", A.P.Parakka, D.C.Jiles, H.Gupta and M.Zhang, Review of Progress in Quantitative NDE, 16, 1459, 1997.
166. "Parametric imaging of surface hardness using Barkhausen technique", A.P.Parakka and D.C.Jiles, Review of Progress in Quantitative NDE, 16, 1517, 1997.
167. "Evaluation of shot peening in high strength steels", D.C.Jiles, R.Kern and W.A.Theiner, Proceedings of the Sixth Conference on Shot Peening, San Francisco, September 2-6, 1996.
168. "Magnetic nondestructive evaluation of nuclear pressure vessel steels for fatigue damage (Invited paper)", Y.Bi, M.R.Govindaraju, S.B.Biner and D.C.Jiles, in "Nondestructive evaluation and materials properties III", p. 115, Edited by P.K.Liaw, O.Buck, R.J.Arsenault and R.E.Green Jr., The Metallurgical Society, Warrendale, Pennsylvania, 1996.
169. "Magnetoelastic properties of Terfenol composites", K.Dennis, M.R.Govindaraju, D.C.Jiles, M.Linde and R.W.McCallum. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996.

170. "Magnetomechanical effect in nickel and cobalt", M.K.Devine and D.C.Jiles. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996.
171. "Generalization of hysteresis modeling to anisotropic and textured materials", A.Ramesh and D.C.Jiles. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996.
172. "Barkhausen effect in steels and its dependence on surface condition", A.P.Parakka, D.C.Jiles and H.Gupta. 41st Magnetism and Magnetic Materials Conference, Atlanta, November 12-15, 1996.
173. "Magnetic measurement of creep damage: modeling and measurement", M.J.Sablik and D.C.Jiles. Conference on Nondestructive Evaluation of Utilities and Pipelines, Scottsdale, Arizona, December 4-5, 1996. Society of Photo-Optical Instrumentation Engineers, SPIE Proceedings No.2947, 166, 1996.
174. "A generalized three dimensional, anisotropic model for describing magnetic properties of materials", D.C.Jiles and A.Ramesh, Institute of Physics Condensed Matter and Materials Physics Conference, York, UK, December 17-19, 1996.
175. "Anisotropic three dimensional model for describing magnetization processes and magnetic properties of materials", D.C.Jiles, A.Ramesh and Y.M.Shi, American Physical Society, March Meeting, Kansas City, March 19, 1997.
176. "Application of the anisotropic extension of the theory of hysteresis to the magnetization curves of crystalline and textured magnetic materials", D.C.Jiles, A.Ramesh and Y.Shi, . International Magnetics Conference, New Orleans, April 1-4, 1997.
177. "The dependence of magnetic properties on fatigue behavior in A533B nuclear pressure vessel steels", Y.Bi, M.R.Govindaraju and D.C.Jiles, . International Magnetics Conference, New Orleans, April 1-4, 1997.
178. "Evaluation of creep in nickel and nickel alloys from magnetic measurements", X.Fang, M.Govindaraju, S.B.Biner and D.C.Jiles. International Magnetics Conference, New Orleans, April 1-4, 1997.
179. "Effect of surface mechanical changes on magnetic Barkhausen emissions", A.P.Parakka, J.Batey, D.C.Jiles, M.Zhang and H.Gupta. . International Magnetics Conference, New Orleans, April 1-4, 1997.
180. "Effect of stress and microstructural changes on magnetic properties of nickel-alumina composites", M.Govindaraju, X.Fang, S.B.Biner and D.C.Jiles. International Conference on Magnetism (ICM), Cairns, Australia, July 27-August 1, 1997.
181. "Magnetic properties of ferrites under biaxial fields", Y.Bi, D.C.Jiles, A.P.Parakka. International Conference on Magnetism (ICM), Cairns, Australia, July 27-August 1, 1997.
182. "Finite element modeling of the effect of creep damage on a magnetic detector signal for seam welded steel pipes", M.J.Sablik, D.C.Jiles and M.R.Govindaraju, Review of Progress in Quantitative NDE, 17, 1493, 1998.
183. "Detection of fatigue crack propagation in steel using magnetic measurements", Y.Bi and D.C.Jiles, Review of Progress in Quantitative NDE, 17, 1509, 1998.
184. "Finite element simulation of creep damage effects on magnetic detector signal for a seam weld/HAZ region in steel pipe", M.J.Sablik, D.C.Jiles and M.R.Govindaraju. Presented at the EPRI Conference NDE for Damage Assessment, La Jolla, California, October 6-8, 1997.

185. "Effects of radiation damage on the magnetic properties of ferromagnetic structural materials (Invited paper)", D.C.Jiles, Special Invited Symposium on NDE of irradiation embrittlement of aging reactor components, MRS Fall Meeting, Boston, Massachusetts, December 1-5, 1997.
186. "A general procedure for monitoring core loss improvements in laser scribed metallic glass ribbons", V.R.V.Ramanan, D.C.Jiles and M.J.Johnson. Proceedings of the 1998 NSF Design and Manufacturing Grantees Conference, Monterrey, Mexico, January 5-8, 1998.
187. "Domain wall motion in a random potential and hysteresis modelling", M.Pasquale, V.Basso, G.Bertotti, D.C.Jiles and Y.Bi. 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998
188. "Finite Element analysis of the influence of fatigue cracks on magnetic properties of steels", Y.M.Shi and D.C.Jiles. 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998
189. "Dependence of magnetic properties on crack size in steels", Y.Bi and D.C.Jiles, 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998
190. "Modeling of hysteresis in isotropic magnetic materials under orthogonal bias fields", Y.Bi and D.C.Jiles, 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998.
191. "Modeling of magnetic properties of heat treated Dy-doped NdFeB particles bonded in isotropic and anisotropic arrangements", X.Fang, D.C.Jiles and Y.Shi. 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998
192. "Finite element modelling of creep damage effects on a magnetic detector signal for a seam weld/HAZ-region in steel pipe", M.J.Sablik, D.C.Jiles and M.R.Govindaraju. 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998
193. "Modeling the effects of torsional stress on hysteretic magnetization", M.J.Sablik and D.C.Jiles, 7th Joint InterMag/MMM Conference, San Francisco, January 6-9, 1998
194. "Effect of matrix on magnetostriction of terfenol based composites", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, D.K.Falzgraf, R.W.McCallum and D.C.Jiles. American Physical Society, March Meeting, Los Angeles, March 16-20, 1998.
195. "Composite Magnetostrictive Materials for Advanced Automotive Sensors", J. E. Snyder, Y. Chen, D. C. Jiles, R. W. McCallum, K. W. Dennis, C. Schwichtenberg, D. K. Falzgraf, 17th Annual Conference on Properties and Applications of Magnetic Materials, Chicago, May 1998.
196. "Evaluation of crack area of steels using magnetic measurements", Y.Bi and D.C.Jiles. Review of Progress in Quantitative NDE, Snowbird, Utah, July 1998.
197. "Nondestructive evaluation of fatigue damage using magnetic measurement techniques", C.C.H.Lo, F.Tang, Y.Shi, D.C.Jiles and S.B.Biner. Presented at the Review of Progress in Quantitative NDE, Snowbird, Utah, July 1998. Review of Progress in Quantitative NDE, 18, 1787, 1999.
198. "Improved measurements of case depth by the application of signal processing algorithms to Barkhausen effect data", H.Cao, M.J.Johnson, S.Fung and D.C.Jiles. Review of Progress in Quantitative NDE, Snowbird, Utah, July 1998. Review of Progress in Quantitative NDE, 18, 1725, 1999.

199. "Microstructure and magnetic properties of as-quenched and heat treated (NdDy)FeB powders produced by high pressure gas atomization", J.E.Snyder, C.C.H.Lo, X.Fang, B.Kriegermeier and D.C.Jiles. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 9-12, 1998.
200. "Core loss reduction in electrical steels through materials processing", B.Verbrugge and D.C.Jiles. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 9-12, 1998.
201. "Application of Preisach and Jiles-Atherton models to the simulation of hysteresis in soft magnetic alloys", M.Pasquale, G.Bertotti, D.C.Jiles and Y.Bi. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 9-12, 1998.
202. "Monitoring fatigue damage in materials using magnetic measurement techniques", C.C.H.Lo, F.Tang, Y.Shi, D.C.Jiles and S.B.Biner. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 9-12, 1998.
203. "Effect of creep on the structure and magnetic properties of nickel and nickel alloys", B.Kriegermeier, X.Fang, D.C.Jiles and S.B.Biner. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 9-12, 1998.
204. "Measurement of magnetoelastic effects under strain in iron, nickel and cobalt", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, R.W.McCallum and D.C.Jiles. 43rd Annual Conference on Magnetism and Magnetic Materials Conference, Miami, November 9-12, 1998.
205. "Magnetoelastic generalization of the Landau-Lifschitz-Gilbert model", D.C.Jiles and R.Chen. American Physical Society, Centennial Meeting, Atlanta, Georgia, March 20-26, 1999.
206. "Low coercivity magnetostrictive material with giant piezomagnetic d_{33} ", J.E.Snyder, K.E.Dennis, Y.Chen, R.W.McCallum and D.C.Jiles. American Physical Society, Centennial Meeting, Atlanta, Georgia, March 20-26, 1999.
207. "Metal bonded Co- ferrite composites for magnetostrictive torque sensor applications", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, R.W.McCallum and D.C.Jiles. InterMag Conference, Seoul, Korea, May 18-21, 1999.
208. "Reducing core losses in amorphous Fe₈₀B₂Si₈ ribbons by laser induced domain refinement", M.J.Johnson, R.Chen and D.C.Jiles. InterMag Conference, Seoul, Korea, May 18-21, 1999.
209. "Finite element modeling of an electrically variable inductor", Y.Bi and D.C.Jiles. InterMag Conference, Seoul, Korea, May 18-21, 1999.
210. "Measurements and modeling of hysteresis in magnetic materials under the action of an orthogonal bias field", Y.Bi and D.C.Jiles. InterMag Conference, Seoul, Korea, May 18-21, 1999.
211. "Evaluation of fatigue damage using a magnetic measurement technique", C.C.H.Lo, F.Tang, D.C.Jiles and S.B.Biner. InterMag Conference, Seoul, Korea, May 18-21, 1999.
212. "A new magnetoelastic torque sensor material for advanced automotive steering systems" J.E.Snyder, K.Dennis, Y.Chen, R.W.McCallum and D.C.Jiles. Eighteenth Conference on Properties and Applications of Magnetic Materials, Chicago, April 26-28, 1999.
213. "Determination of wear induced material loss from case hardened steel", M.J.Johnson, J.Zhou, B.Zhu, N.Nakagawa and D.C.Jiles, Review of Progress in Quantitative NDE, 19, 1465, 2000.

214. "Dynamical assessment of magnetic Barkhausen signals", V.Garcia, D.Clatterbuck, C.C.H.Lo, M.J.Johnson and D.C.Jiles, Review of Progress in Quantitative NDE, 19, 781, 2000.
215. "Modeling the magnetic Barkhausen effect", D.Clatterbuck, M.J.Johnson, D.C.Jiles and V.Garcia, Review of Progress in Quantitative NDE, 19, 1533, 2000.
216. "Modified law of approach for the magnetomechanical model", M.J.Sablik, Y.Chen and D.C.Jiles, Review of Progress in Quantitative NDE, 19, 1565, 2000.
217. "Structural characterization and magnetic properties of steels subjected to fatigue", F.Tang, C.C.H.Lo, D.C.Jiles and S.B.Biner, Review of Progress in Quantitative NDE, 19, 1597, 2000.
218. "Magnetoelastic effects in materials and their applications in nondestructive evaluation of stress", (Invited paper), D.C.Jiles. Proceedings of the Fifth International Workshop on Electromagnetic Nondestructive Evaluation, Des Moines, August 1-3, 1999.
219. "Nondestructive characterization of case hardened steel", M.J.Johnson, J.Zhou, N.Nakagawa, D.C.Jiles and B.Zhu. Proceedings of the Fifth International Workshop on Electromagnetic Nondestructive Evaluation, Des Moines, August 1-3, 1999. Published in "Electromagnetic Nondestructive Evaluation IV", p.127, IOS Press, Amsterdam, 2000.
220. "An extended model of the magnetic Barkhausen effect based on the ABBM model", D.Clatterbuck, V.Garcia, M.J.Johnson and D.C.Jiles. 44th Annual Conference on Magnetism and Magnetic Materials, San Jose, November 15-18, 1999.
221. "Temperature dependence of the magneto-mechanical effect in metal bonded cobalt ferrite composites under torsional strain" Y.Chen, J.E.Snyder, K.Dennis, R.W.McCallum and D.C. Jiles. 44th Annual Conference on Magnetism and Magnetic Materials, San Jose, November 15-18, 1999.
222. "Effects of fatigue induced changes in microstructure and stress on domain structure and magnetic properties", C.C. Lo, F.Tang, S.B.Biner and D.C. Jiles. 44th Annual Conference on Magnetism and Magnetic Materials, San Jose, November 15-19, 1999.
223. "The Matteucci effect and the law of approach in cobalt ferrite composite magnets", Y.Chen and D.C.Jiles. Institute of Physics Condensed Matter and Materials Physics Conference, Leicester, UK, December 20-22, 1999.
224. "Influence of nitrogen on the magnetic properties and microstructure of sputtered FeSiAl(N) films", J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer, D.C.Jiles, M.T.Kief, American Physical Society March Meeting, Minneapolis, March 20-24, 2000.
225. "Theory and modeling of the Matteucci effect using the law of approach ", Y.Chen and D.C.Jiles, American Physical Society March Meeting, Minneapolis, March 20-24, 2000.
226. "A non-linear model for the Barkhausen effect", D.C.Jiles and S.J.Lee, American Physical Society March Meeting, Minneapolis, March 20-24, 2000.
227. "Modeling and simulation of a permanent magnet array in elliptical configurations" S.J.Lee and D.C.Jiles, p.668, Proceedings of the Third International Conference on Modeling and Simulation of Microsystems (MSM 2000), San Diego, March 27-29, 2000.

228. "The magnetomechanical effect under torsional stress and the law of approach in a Co ferrite composite" Y. Chen and D.C. Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000.
229. "Application of Preisach analysis to detection of fatigue damage" Y.Y.Melikhov, C.C.H.Lo, D.C.Jiles, I.Tomáš, J.Kadlecová, O.V.Perevertov. International Magnetics Conference, Toronto, Canada, April 9-13, 2000.
230. "Modeling hysteretic magnetic properties with changing torsion and constant magnetic field in steel", M.J.Sablik and D.C.Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000.
231. "Magnetic measurement of material loss in case-hardened steel using a new Barkhausen effect system", B.Zhu, M.J.Johnson and D.C.Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000.
232. "Geometrical enhancements to permanent magnet flux sources: applications to energy efficient magnetocaloric refrigeration systems", S.J.Lee and D.C. Jiles. International Magnetics Conference, Toronto, Canada, April 9-13, 2000.
233. "Enhanced magnetic flux density from geometrical variations of permanent magnet arrays", S.J.Lee and D.C.Jiles. Presented at the Nineteenth Conference on Properties and Applications of Magnetic Materials, Chicago, May 22-24, 2000.
234. "The future of magnetoelectronic devices" (Invited), D.C.Jiles. Workshop on Preparation, Properties and Applications of Thin Ferromagnetic Films, Vienna, June 15-16, 2000.
235. "Preparation and properties of magnetic films with enhanced properties for ultra-thin magnetic shield layers", (Invited), J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer, D.C.Jiles and M.Kief. Workshop on Preparation, Properties and Applications of Thin Ferromagnetic Films, Vienna, June 15-16, 2000.
236. "Evaluation of fatigue damage in steels using Preisach model analysis of magnetic hysteresis measurements", C.C.H.Lo, Y.Y.Melikhov, I.Tomas and D.C.Jiles. Review of Progress in Quantitative NDE, 20B, 1451, 2001.
237. "Derivation of non-linear ABBM model for the Barkhausen effect", S.J.Lee, D.M.Clatterbuck, B.Zhu, C.C.H.Lo and D.C.Jiles. Review of Progress in Quantitative NDE, 20B, 1797, 2001.
238. "The effects of aging time, temperature and creep damage on the magnetic properties of nickel alloys", M.J.Johnson, B.Zhu, C.C.H.Lo, D.C.Jiles and R.E.Shannon. Review of Progress in Quantitative NDE, 20B, 1429, 2001.
239. "The Effect of Nitrogen on the Microstructure, Stress, and Magnetic Properties of RF-Sputtered Fe-Si-Al(-N) Thin Films", J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer and D.C.Jiles. International Conference on Magnetism, Recife, Brazil, August 7-11, 2000.
240. "Magnetization reversal in sputtered FeSiAl(N) films with a stripe domain structure", C.C.H.Lo, J.E.Snyder, J.Leib, R.Chen, B.Kriegermeier, M.J.Kramer and D.C.Jiles. International Conference on Magnetism, Recife, Brazil, August 7-11, 2000.
241. "The Barkhausen effect in Fe-C and a non-linear model incorporating hysteresis loop", S.J.Lee, B.Zhu, C.C.H.Lo, D.M.Clatterbuck and D.C.Jiles. International Conference on Magnetism, Recife, Brazil, August 7-11, 2000.
242. "Hysteresis measurements and modeling of thin permalloy films with uniaxial anisotropy", H.Hauser, P.Fulmek, D.C.Jiles and B.Zhu. Proceedings of the 6th International Workshop on One and Two Dimensional Magnetic Measurements and Testing, Bad Gastein, p.220, September 20-21, 2000.

243. "Performance of hysteresis simulation for two dimensional particle assemblies", H.Hauser, P.Fulmek, P.Andrei, L.Stoleriu, D.C.Jiles and B.Zhu. Proceedings of the 6th International Workshop on One and Two Dimensional Magnetic Measurements and Testing, Bad Gastein, p.225, September 20-21, 2000.
244. "New magnetostrictive composite material for high performance automotive torque sensor applications (Invited)", D.C.Jiles, K.W.Dennis, R.W.McCallum, and J.E.Snyder. ASM Materials Conference, St.Louis, October 9-12, 2000.
245. "Indication of Ferromagnetic Steel Fatigue by Preisach Analysis of Magnetization Processes", I. Tomáš, Ye. Melikhov, O. Perevertov, J. Kadlecová, C.C.H. Lo and D.C. Jiles. Presented at Japan-Central Europe Workshop, Brno, Czech Republic, November 2000.
246. "Micromagnetic modeling of the magnetomechanical effect", B.Zhu, C.C.H.Lo, S.J.Lee and D.C.Jiles. .8th Joint MMM/InterMag Conference, San Antonio, January 7-11, 2001.
247. "Application of non-linear Barkhausen model incorporating anhysteretic susceptibility to annealed iron", S.J.Lee, B.Zhu, C.C.H.Lo, D.M.Clatterbuck and D.C.Jiles. 8th Joint MMM/InterMag Conference, San Antonio, January 7-11, 2001.
248. "Magnetization reversal in CoFeHfO films", C.C.H.Lo, J.E.Snyder, J.Leib, D.Wang, Z.Qian, J.M.Daughton and D.C.Jiles. 8th Joint MMM/InterMag Conference, , San Antonio, January 7-11, 2001.
249. "Composite magnetostrictive materials for advanced automotive magnetomechanical sensors", R.W.McCallum, K.W.Dennis, D.C.Jiles, J.E.Snyder and Y.H.Chen. in "Modern trends in Magnetostriction: Study and Application", NATO Science Series II, p.283, Edited by M.R.J.Gibbs, Kluwer, Amsterdam, 2000. also appeared in Low Temperature Physics (Translation of Fizika Nizkikh Temperatur (Kiev)) 27(4), 266-274. 2001.
250. "Observation of magneto mechanical phase transformation in $Gd_5(Si_xGe_{1-x})_4$ with magnetic force microscopy (MFM)", J.E.Snyder, P.Xi, J.Leib, C.C.Lo, S.J.Lee and D.C.Jiles. American Physical Society, March Meeting Seattle, March 12-16, 2001.
251. "Relationship between magnetomechanical effect, magnetostriction and anisotropy in magnetoelastic materials", D.C.Jiles, Y.Chen, B.K.Kriegermeier-Sutton, J.E.Snyder, K.W.Dennis and R.W.McCallum. American Physical Society, March Meeting Seattle, March 12-16, 2001.
252. "Stress determination and magnetization reversal detection in FeSiAl(N) films using magnetic force microscopy with in-plane magnetic field capability", J.E. Snyder, C.C.H. Lo, J. Leib, R. Chen, B. Kriegermeier, M.J. Kramer, D.C. Jiles and M.T. Kief^c American Physical Society, March Meeting Seattle, March 12-16, 2001.
253. "Anhysteretic mean field superparamagnetic magnetization equation in two dimensions", S.J.Lee, D.C.Jiles, J.Kenkel and K. L. Metlov. American Physical Society, March Meeting Seattle, March 12-16, 2001.
254. "Modeling stress effects in magnetostrictive films", S.J.Lee, B.Zhu, C.C.H.Lo, J.E.Snyder and D.C.Jiles. Fourth International Conference on Modeling and Simulation of Microsystems, Hilton Head, South Carolina, March 19-21, 2001. Published in "Computational Nanoscience", Vol.1, p.149, 2001.
255. "Vertically integrated engineering design for combined research and curriculum development in materials engineering and nondestructive evaluation" D.C.Jiles, M.Akinc, S.B.Biner, K.Constant, J.N.Gray, M.Huba, S.W.Martin, L.W.Schmerr and R.B.Thompson. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. Review of Progress in Quantitative NDE 21, 2035, 2002.

256. “Magnetic field gradient measurement on magnetic cards with magnetic force microscopy” C.C.H. Lo, J. Leib and D.C. Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. Review Of Progress In Quantitative NDE 21, 999, 2002.
257. “Studies on the effects of pulsed-magnetic field treatment on magnetic materials” M.J. Johnson, C.C.H. Lo, J.E. Snyder, J. Leib, S.J. Lee, M. Mina and D.C. Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. Review of Progress in Quantitative NDE 21, 1569, 2002.
258. “Magnetic NDE measurements on 410 stainless steel: an on site and laboratory evaluation”, M. J. Johnson, D.C.Jiles, C.C.H. Lo, P.Zombo and B. Zhu. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. Review of Progress in Quantitative NDE 21, 1591, 2002
259. “Experimental and modeling studies of Barkhausen effect in steels and nickel”, C.C.H.Lo, B. Zhu, L.C. Kerdus and D.C.Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 29-August 3, 2001. Review Of Progress In Quantitative NDE 21, 1577, 2002.
260. “Hysteresis models: non-linear magnetism on length scales from the atomistic to the macroscopic” (Invited), Joint European Magnetic Symposia, Grenoble, France, August 28 – September 1, 2001.
261. “Magnetic Force Microscopy Characterization of an Order-Disorder transition with hysteresis: the Magnetic-Martensitic Phase Transformation in $Gd_5(Si_xGe_{1-x})_4$ ”, J.Leib, C.C.H. Lo, J.E. Snyder, J.A. Paulsen, P. Xi and D.C. Jiles. 46th Magnetism and Magnetic Materials Conference, Seattle, Washington, November 12-16, 2001.
262. “Permanent magnet array for the magnetic refrigerator”, S J Lee, J Kenkel, V K Pecharsky, and D C Jiles. 46th Magnetism and Magnetic Materials Conference, Seattle, Washington, November 12-16, 2001.
263. “Examination of the relationship between the parameters of Barkhausen effect model and microstructure of magnetic materials”, C. C. H. Lo, S.J. Lee, L.C. Kerdus and D. C. Jiles. 46th Magnetism and Magnetic Materials Conference, Seattle, Washington, November 12-16, 2001.
264. “Matteucci effect in axially polarized nickel rods”, D.C. Jiles, Y.P. Shen, C.C.H. Lo, A.P. Ring and J.E. Snyder. American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.
265. “Magnetocrystalline anisotropy in giant magnetocaloric $Gd(Si_xGe_{1-x})_4$ alloys”, D.C. Jiles, J. Leib, C.C. H. Lo and J.E. Snyder, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.
266. “Effect of magnetic field applied along the a-axis on the thermal expansion and first-order transition temperature of single crystal $Gd_5(Si_2Ge_2)$ ”, M.G.Han, D.C. Jiles, J.A. Paulsen, J.E. Snyder and S.J.Lee, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.
267. “Magnetocaloric effect: permanent magnet array for generation of high magnetic fields”, S.J. Lee, J.M. Kenkel, and D.C. Jiles, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.
268. “Recent investigations of non-linear magnetoelastic effects under variable stress, field and temperature: the limits of effective field theory”, D.C. Jiles and L. Li, American Physical Society, March Meeting, Indianapolis, March 18-22, 2002.
269. “Modeling stress dependent experimental anhysteretic magnetization curves”, J.M. Kenkel, S.J. Lee, C.C.H. Lo, D.C. Jiles, K.M. Koo, and D.H. Ng. International Magnetism Conference, Amsterdam, Netherlands, April 28 – May 2, 2002.

270. "Design of permanent magnet flux source for a rotary magnetic refrigerating system", S.J. Lee, J. Kenkel, and D.C. Jiles, International Magnetics Conference, Amsterdam, Netherlands, April 28 – May 2, 2002.
271. "Magnetic force microscopy characterization of unusual magnetic coupling in an extraordinarily responsive magnetic material", J. Leib, C.C. H. Lo, J.E. Snyder and D.C. Jiles, International Magnetics Conference, Amsterdam, Netherlands, April 28 – May 2, 2002.
272. "Thermal expansion of single crystal $Gd_5(Si_2Ge_2)$ showing unusual first-order phase transformation", M.Han, J.A. Paulsen, J.E. Snyder, D.C. Jiles. International Magnetics Conference, Amsterdam, Netherlands, April 28 – May 2, 2002.
273. "Modeling of stress effects on magnetic hysteresis and Barkhausen emission using an integrated hysteretic-stochastic model" C.C.H. Lo, S.J. Lee, L. Li, L.C. Kerdus and D.C. Jiles, International Magnetics Conference, Amsterdam, Netherlands, April 28 – May 2, 2002.
274. "The role of new materials in the development of magnetic sensors and actuators (Invited)", D.C.Jiles and C.C.H.Lo, Plenary Lecture, European Magnetic Sensors and Actuators Conference, Athens, Greece, July 3-5, 2002.
275. "Recent progress in undergraduate vertically integrated engineering design projects in nondestructive evaluation", D.C.Jiles, M.Akinc, S.B.Biner, K.Constant, J.N.Gray, M.Huba, L.W.Schmerr and R.B.Thompson, Review of Progress in Quantitative NDE, Bellingham, Washington, July 14-19, 2002.
276. "Development of Modeling and Simulation for Magnetic Particle Inspection Using Finite Element Method", J. Y. Lee, S.J.Lee and D.C.Jiles. Review of Progress in Quantitative NDE, 22, 915, 2003.
277. "Development of a Magnetic NDE Imaging System Using Magnetoresistive Sensors", C. C. H. Lo, J.A.Paulsen and D.C.Jiles. Review of Progress in Quantitative NDE, 22, 931, 2003.
278. "A New Model Equation for Interpreting the Magnetomechanical Effect Using a Generalization of the Rayleigh Law by L. Li and D.C.Jiles. Review of Progress in Quantitative NDE, 22, 1539, 2003.
279. "Recent developments in rare earth based magnetostrictive materials and their applications (Invited)", D.C.Jiles, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. 27th Rare Earth Magnets Workshop, University of Delaware, Newark, Delaware, August 19-22, 2002
280. "The effects of stress on magnetic properties and the use of magnetic measurements for evaluation of materials (Invited)". D.C. Jiles, S.J. Lee and C.C.H. Lo, Conference on Resurgence of Metallic Materials, Institute of Engineers of India, Jamshedpur, October 25, 2002. Edited by D.Bhattacharya.
281. "Design of high-magnetic field gradient sources for magnetically-induced flow of ferrofluids", W. He, S. J Lee, and D. C. Jiles, D. H. Schmidt, M. D. Porter, and R. Shinar. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002.
282. "Microelectromagnetic device for a ferrofluidic actuator", Y. Melikhov, S. J. Lee, D. C. Jiles, D. H. Schmidt, M. D. Porter and R. Shinar. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002.
283. "In-situ applied field imaging of a magnetic tunnel junction using magnetic force microscopy", J. Leib, C.C.H. Lo, J.E. Snyder and D.C. Jiles. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002.

284. "Thermal expansion studies on the unusual first order transition of $\text{Gd}_5\text{Si}_{2.09}\text{Ge}_{1.91}$ made from high purity and commercial Gd metals", M. Han, D.C. Jiles, J.E. Snyder, C.C.H. Lo and J.A. Paulsen. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002.
285. "Theory of the magnetomechanical effect: application of the Rayleigh law to the stress domain", L.Li and D.C. Jiles. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002.
286. "Modeling the interrelating effects of plastic deformation and stress on magnetic hysteresis and Barkhausen emission", C. C. H. Lo, E. Kinser and D. C. Jiles. 47th Magnetism and Magnetic Materials Conference, Tampa, Florida November 11-15, 2002.
287. "Non-linear magnetism and hysteresis on length scales from the atomistic to the macroscopic", D.C. Jiles, APS Topical Group on Magnetism Newsletter, 11, 5, 2002.
288. "Extraordinary magnetomechanical coupling as a result of a combined magnetic/structural transition in a new class of rare earth compound (Invited)", D.C.Jiles, S.J.Lee, M.Han, C.C.H.Lo, J.E.Snyder, K.A.Gschneidner, V.K.Pecharsky, A.O.Pecharsky, T.Lograsso and D.Schlagel, Annual Conference of the Korean Magnetism Society, Yong Pyeong, Korea, December 11, 2002.
289. "Curie Temperature of Silicon Doped Cobalt Ferrite for Use as a Stress Sensor", C. C. H. Lo, J. A. Paulsen, A. P. Ring, J. E. Snyder, and D. C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
290. "Modeling Spin-Dependent Magnetic Junction Behavior", B.J. Baker, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
291. "Optical properties of single crystalline $\text{Gd}_5\text{Si}_2\text{Ge}_2$ ", S.J. Lee, J.M. Park, J.E. Snyder, T.A. Lograsso, D.L. Schlagel, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
292. "Equivalent Magnetic Field due to Matteucci Effect in nickel", D.C. Jiles, Y. Shen, J.E. Snyder, A. Ring, and J.A. Paulsen. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
293. "An Extension to the Theory of the Magnetomechanical Effect: Modified Law of Approach to the Stress Domain", D.C. Jiles, and L. Li. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
294. "The Domain Structures of a Magnetic Tunnel Junction with in-situ Applied Field", J.S. Leib, B.J. Baker, Y. Shen, J.E. Snyder, T. Kawaguchi, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
295. "Angular dependence of the unusual first order transition temperature in $\text{Gd}_5(\text{Si}_{0.5}\text{Ge}_{0.5})_4$ ", M. Han, D. C. Jiles, S. J. Lee, J. E. Snyder, T. A. Lograsso, and D. L. Schlagel. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
296. "Magnetic Relaxation and Indirect Exchange in a Complex Rare Earth Magnetic Material", J.S. Leib, J.E. Snyder, T.A. Lograsso, D.L. Schlagel, and D.C. Jiles. American Physical Society, March Meeting, Austin, Texas, March 3-7, 2003.
297. "Simultaneous magnetic force microscopy and magnetoresistance characterization of a magnetic tunnel junction with in situ applied field", J.S.Leib, B.J.Baker, Y.P.Shen, J.E.Snyder, T.Kawaguchi and D.C.Jiles. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.

298. "A magnetic imaging system for evaluation of material conditions using magnetoresistive devices", C.C.H.Lo, J.A.Paulsen and D.C.Jiles. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.
299. "Angular dependence of the unusual first order transition temperature in $Gd_5(Si_xGe_{1-x})_4$ ", M.Han D.C.Jiles, S.J.Lee, J.E.Snyder, T.A.Lograsso and D.L.Schlagel. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.
300. "Study of Curie temperature of cobalt ferrite based composites for stress sensors applications" J.A.Paulsen, J.E.Snyder, A.P.Ring, J.S.Leib, C.C.H.Lo and D.C.Jiles. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.
301. "Modified law of approach for the magnetomechanical model: application of the Rayleigh law to the stress domain", L.Li and D.C.Jiles. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.
302. "Experimental and modeling studies of the effects of shear stress on magnetization in nickel", J.A.Paulsen, C.C.H.Lo, J.E.Snyder, A.Ring, Y.Shen and D.C.Jiles. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.
303. "Sensitivity analysis of simulations for magnetic particle inspection using finite element method", J.Y.Lee, S.J.Lee, D.C.Jiles, M.Garton, R.Lopez and L.Brasche. International Magnetism Conference, Boston, Massachusetts, March 30 - April 3, 2003.
304. "Development of new materials for magnetic sensors and actuators (Invited) ", C.C.H.Lo and D.C.Jiles. 22nd Conference on Properties and Applications of Magnetic Materials, Chicago, May 12-14, 2003.
305. "The Effect Of Magnetic Field On The First Order Curie Point Transition Of $Gd_5(Si_xGe_{1-x})_4$ ", M. Han, D. C. Jiles, J. E. Snyder. International Conference on Magnetism, Rome, Italy, July 28-August 1, 2003.
306. "Ampere's Circuital Law Analog For The Matteucci -Wiedemann Effect In Magnetoelastic Materials", J. A. Paulsen, C. C. H. Lo, J. E. Snyder, S.J. Lee and D. C. Jiles. International Conference on Magnetism, Rome, Italy, July 28-August 1, 2003.
307. "Magnetic Relaxation And Indirect Exchange Associated With The First Order Magnetic/Martensitic Curie Point Transition In $Gd_5(Ge_xSi_{1-x})_4$ ", J. Leib, J.E. Snyder, T.A. Lograsso, D. Schlagel, D.C. Jiles. International Conference on Magnetism, Rome, Italy, July 28-August 1, 2003.
308. "New Magnetostrictive Materials for Use as a Magnetic Stress Sensor for Non-destructive Evaluation", J.A. Paulsen, A.P. Ring, C.C.H. Lo, J. Snyder, D.C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.
309. "A new approach to the magnetomechanical effect model", L. Li and D.C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.
310. "Evaluation of stress distribution in magnetic materials using a magnetic imaging system", C. C. H. Lo, J.A. Paulsen and D. C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.
311. "Magnetic nondestructive investigation of ferromagnetic alloys subjected to stress and fatigue", Y. Melikhov, C.C.H. Lo, D.C. Jiles. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.

312. "BEM-FEM coupling method and small-flaw approximation in NDE", Y.Melikhov, S.J.Lee, J.Y.Lee, D.C.Jiles, M.Garton, L.Brasche, R.Lopez. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.
313. "Incorporation of Hysteresis Effects into Finite Element Modeling", J. Y. Lee, S. J. Lee, Y. Melikhov, D. C. Jiles, M. Garton, R. Lopez, and L. Brasche. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.
314. "Modeling of Magnetic Forces for Investigation of Magnetic Particles around a Defect", J. Y. Lee, S. J. Lee, Y. Melikhov, D. C. Jiles, M. Garton, R. Lopez, and L. Brasche. Review of Progress in Quantitative NDE, Green Bay, Wisconsin, July 28-August 1, 2003.
315. "New highly magnetostrictive, soft magnetic, metal bonded cobalt ferrite composites for stress detection" (Invited). D.C.Jiles, C.C.H.Lo, J.A.Paulsen, A.P.Ring and J.E.Snyder. Presented at the 16th Soft Magnetic Materials Conference, Dusseldorf, Germany, September 9-12, 2003.
316. "The role of new materials" (Invited), D.C.Jiles and C.C.H.Lo. Magnetics Sensors Roadmap Workshop, NIST, Gaithersburg, November 7, 2003.
317. "Quantitative evaluation of stress distribution in magnetic materials by Barkhausen effect and magnetic hysteresis measurements", C.C.H.Lo, J.A.Paulsen, E.Kinser and D.C.Jiles. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.
318. "A Model for Spin-Dependent Magnetic Junction Behavior", B.Baker, J.E.Snyder and D.C.Jiles. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.
319. "Giant Magnetostriction Behavior around the Curie Temperature of Single Crystal $Gd_5(Si_{0.5}Ge_{0.5})_4$ ", M. Han, D. C. Jiles, J. E. Snyder, T. A. Lograsso, and D. L. Schlager. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.
320. "Dynamics of the Magnetic Field-Induced First Order Magnetic-Structural Phase Transformation of $Gd_5(Si_{0.5}Ge_{0.5})_4$ ", J.S.Leib, J.E.Snyder, D.C.Jiles, D.L.Schlager and T.A.Lograsso. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.
321. "A new approach to modeling the magnetomechanical effect", L.Li and D.C.Jiles. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.
322. "Finite element method incorporating the hysteresis effect for modeling and simulation of magnetic particle inspection", S.J.Lee, J.Y.Lee, Y.Melikhov and D.C.Jiles. Presented at the 9th Joint MMM/InterMag Conference, Anaheim, California, January 5-9, 2004.
323. "Curie Temperature and Magnetostriction of Manganese doped Cobalt Ferrite Magnetostrictive Material", J. A. Paulsen, A. P. Ring, C. C. H. Lo, J. E. Snyder and D. C. Jiles. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.
324. "Effects of anisotropy and stress on the non-linear magnetic susceptibility of ferromagnets", Y. Melikhov, H. Hauser, L. Li, D.C. Jiles and R.Grossinger. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.
325. "Giant magnetostriction and thermal expansion in the germanium rich range of $Gd_5(Si_xGe_{1-x})_4$ ", M. Han, D. C. Jiles, J. E. Snyder, A. O. Pecharsky. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.

326. "Thermal Expansion and Magnetostriction in $\text{Pr}_5\text{Ni}_{1.9}\text{Si}_3$ ", B. J. Baker, S.H.Song, J.A. Paulsen, J.E. Snyder, D.C. Jiles and A.O. Pecharsky. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.
327. "Nonlinear Hysteretic Model for the Magnetomechanical Effect", L. Li, D.C. Jiles and C.C.H. Lo. American Physical Society, March Meeting, Montreal, Quebec, March 22-26, 2004.
328. "Magnetic measurement techniques for nondestructive evaluation of materials (Invited)", UK Magnetics Society Workshop on "Magnetic Standards and Measurements", Cardiff University, UK, March 30, 2004
329. "Extraordinary magnetostriction and thermal expansion behavior in a new class of rare earth compound as a result of a first order combined magnetic/structural transition, D. C. Jiles, M. Han, J. E. Snyder, T. A. Lograsso, D. L. Schlagel. Condensed Matter and Materials Physics Conference, Warwick, UK, 4-7 April 2004.
330. "A new magnetoelastic material with selectable Curie temperature and magnetostrictive strain amplitude for use in sensors and actuators (Invited)", D.C.Jiles, UK Magnetics Society Workshop on "Novel Electromagnetic Sensors and Actuators", Defence Research Agency, Farnborough, June 9, 2004.
331. "Magnetic Measurement Techniques for Nondestructive Evaluation of Materials (Invited Keynote Address)", D.C.Jiles, Magnetic Measurements Conference, Prague, Czech Republic, June 28-30, 2004.
332. "Frequency dependence of magnetostriction for magnetic actuators", P.P.Thant, A.J.Moses and D.C.Jiles. , Magnetic Measurements Conference, Prague, Czech Republic, June 28-30, 2004.
333. "New Rare Earth Intermetallic Compound for Sensors and Actuators", D.C. Jiles, M. Han, C.C.H. Lo, J.E. Snyder, K.A. Gschneidner, V.K. Pecharsky, A.O. Pecharsky, T.A. Lograsso and D.L. Schlagel. European Magnetic Sensors and Actuators Conference, Cardiff, Wales, July 5-7, 2004.
334. "Manganese Doped Cobalt Ferrite Materials for Magnetostrictive Sensor Applications", J. A. Paulsen, A. P. Ring, C. C. H. Lo, J. E. Snyder and D. C. Jiles. European Magnetic Sensors and Actuators Conference, Cardiff, Wales, July 5-7, 2004.
335. "A New Adaptive Automated Feedback System for Barkhausen Signal Measurement", H.V. Patel, S. Zurek, T. Meydan and D.C. Jiles. European Magnetic Sensors and Actuators Conference, Cardiff, Wales, July 5-7, 2004.
336. "Applications of various magnetic measurement techniques to the evaluation of residual stress (Invited)", D.C.Jiles and C.C.H.Lo. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.
337. "An Improved model description of the effects of stress on ferromagnetic materials", L. Li, D.C. Jiles and C.C.H. Lo. Review of progress in Quantitative NDE, Golden ,Colorado, July 25-30, 2004.
338. "Analytical Approach to Simulation of Magnetic Particle Inspection of Defects with Various Shapes and Sizes", Y. Melikhov, S.J. Lee, D.C. Jiles, M. Garton, R. Lopez, and L. Brasche. Review of progress in Quantitative NDE, Golden, Colorado, July 25-30, 2004.
339. "Modeling and Simulation of the Effects of AC and DC Excitation Currents on Magnetic Particles Inspection Using an extended 3D Finite Element Model", S. J. Lee, Y. Melikhov, D. C. Jiles. Review of progress in Quantitative NDE, Golden, Colorado, July 25-30, 2004.
340. "AC modulated magneto-optic sensor for remote investigation of surface deformation", S. J. Lee, S.H. Song, D. C. Jiles. Review of progress in Quantitative NDE, Golden, Colorado, July 25-30, 2004.

341. "New Magnetostrictive Sensor Materials based on Manganese-doped Cobalt Ferrite for Nondestructive Evaluation Applications", J. A. Paulsen, C. C. H. Lo, J. E. Snyder, A. P. Ring and D. C. Jiles. Review of progress in Quantitative NDE, Golden, Colorado, July 25-30, 2004.
342. "Magnetostriction, thermal expansion, and magnetization investigation of polycrystalline $Gd_5(Si_3Ge_1)$ ", Han, M., Snyder, J. E., Pecharsky, A. O., Jiles, D. C. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.
343. "Anisotropy studies and magnetic transitions of single crystal $Tb_5(Si_{2.2}Ge_{1.8})$ ", Han, M., Snyder, J. E., Tang, W., Lograsso, T. A., Schlagel, D., Jiles, D. C. 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.
344. "Thermal Expansion and Gruneisen Parameters in Pr-Ni-Si Compounds", S. H. Song, A. O. Pecharsky, D. Wu, K. W. Dennis, V. K. Pecharsky, J. E. Snyder, D. C. Jiles, T. A. Lograsso and R. W. McCallum. 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.
345. "Magnetic and magnetomechanical properties of manganese-substituted cobalt ferrite materials for magnetostrictive stress sensor applications", C. C. H. Lo, J. E. Snyder, J. A. Paulsen, A. P. Ring, K. W. Dennis and D. C. Jiles. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.
346. "Application of magneto-optic sensor for the evaluation of non-magnetic and non-conducting surfaces", S.J. Lee, S.H. Song, D.C. Jiles, and H. Hauser. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.
347. "A model description of the stress effects on ferromagnetic materials", L. Li, D.C. Jiles and C.C.H. Lo. Presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida, November 8-11, 2004.
348. "Anisotropy of Manganese-Substituted Cobalt Ferrite", Y. Melikhov, C.C. Lo, J.E. Snyder, D.C. Jiles, J.A. Paulsen, A.P. Ring. APS March Meeting, Los Angeles, March 21-25, 2005.
349. "Improvements in magnetomechanical properties of highly magnetostrictive ferrites due to magnetic annealing", C. C. H. Lo, A. P. Ring, J. E. Snyder, D. C. Jiles. APS March Meeting, Los Angeles, March 21-25, 2005.
350. "Magnetic Properties and Phase Transitions In Single-Crystal $Tb_5Si_{22}Ge_{1.8}$ ", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, D. C. Jiles. APS March Meeting, Los Angeles, March 21-25, 2005.
351. "Thermal Expansion and Magnetostriction in $Pr_5Ni_2Si_3$ Single crystal", S.H. Song, J.E. Snyder, D. Wu, T. A. Lograsso, K. W. Dennis, R. W. McCallum, Y. Janssen, D.C. Jiles. APS March Meeting, Los Angeles, March 21-25, 2005.
352. "Spectroscopic ellipsometry study of optical anisotropy in $Gd_5Si_2Ge_2$ and comparison with reflectance difference spectra", S.J. Lee, J.M. Park, J.E. Snyder, D.C. Jiles, T. A. Lograsso, D.L. Schlagel, A. O. Pecharsky, and D. W. Lynch. APS March Meeting, Los Angeles, March 21-25, 2005.
353. "Improvement of magnetomechanical properties of cobalt ferrite by magnetic annealing", C.C.H.Lo, A.P.Ring, J.E.Snyder and D.C.Jiles. Presented at the International Magnetism Conference, Nagoya, Japan, April 4-8, 2005.
354. "Analytical Approach For Fast Computation Of Magnetic Flux Leakage Due To Surface Defects", Y. Melikhov, S. J. Lee, D. C. Jiles, R. Lopez, and L. Brasche. Presented at the International Magnetism Conference, Nagoya, Japan, April 4-8, 2005.

355. "Thermal Expansion and Magnetostriction in $\text{Pr}_5\text{Ni}_2\text{Si}_3$ Compounds", S.H. Song, D.C. Jiles and J.E. Snyder. Presented at the International Magnetism Conference, Nagoya, Japan, April 4-8, 2005.
356. "Modeling microstructural effects on Barkhausen effect signals in surface modified magnetic materials", C.C.H.Lo, A.J.Barsic, E.R.Kinser and D.C.Jiles. Presented at the International Magnetism Conference, Nagoya, Japan, April 4-8, 2005.
357. "Phase Transitions In Single-Crystal $\text{Tb}_5\text{Si}_{2.2}\text{Ge}_{1.8}$ ", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder and D. C. Jiles. Presented at the International Magnetism Conference, Nagoya, Japan, April 4-8, 2005.
358. "Analysis of a New Magneto-Optic Angular Displacement Sensor using Jones Matrix Approach", Y. Melikhov, S. J. Lee, S. H. Song, H. Hauser, and D. C. Jiles. 28th International Spring Symposium on Electronics Technology, Wiener Neustadt, Austria, May 19-22, 2005.
359. "Magnetic Particle Inspection Improvements for Aerospace Applications", S.J. Lee, Y. Melikhov, D.C. Jiles, L.J.H.Brasche and R.Lopez. Review of Progress in Quantitative NDE, Brunswick, Maine, July 31 - August 5, 2005
360. "Improvement of Magnetomechanical Properties of Cobalt Ferrite for Stress Sensor Applications", C. C. H. Lo, J. E. Snyder, A. P. Ring, Y.Melikhov, P.Matlage and D.C. Jiles. Review of Progress in Quantitative NDE, Brunswick, Maine, July 31 - August 5, 2005
361. "Applications of Barkhausen Emission Measurements for Characterization of Surface-Modified Materials", D. C. Jiles, C.C.H. Lo, E.R. Kinser, A.J. Barsic and Y. Melikhov. Review of Progress in Quantitative NDE, Brunswick, Maine, July 31 - August 5, 2005
362. "Recent developments in highly magnetostrictive materials", D.C.Jiles, J.E.Snyder, C.C.H.Lo, K.A.Gschneidner Jr. and V.K.Pecharsky. 17th Conference on Soft Magnetic Materials, Bratislava, Slovakia, September 7-9, 2005.
363. "Improved modeling of the magneto-optic angular displacement sensor", Y.Melikhov, S.J.Lee, D.C.Jiles, C.M.Park and H.Hauser. International Symposium on Electromagnetism (ISEM), Bad Gastein, Austria, September 12-14, 2005.
364. "Magnetic measurement techniques for nondestructive evaluation of materials", D.C.Jiles, Universal Network for Magnetic Nondestructive Evaluation, Vienna, Austria, September 15-16, 2005.
365. "Temperature Dependence of Magnetic Anisotropy in Mn-Substituted Cobalt Ferrite", Y. Melikhov, C. C. H. Lo, J. E. Snyder, J. A. Paulsen, A. P. Ring, K. W. Dennis, and D. C. Jiles. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.
366. "Magneto-Optic Linear Displacement Sensor with High Spatial-Resolution and Low Noise", S. Lee, Y. Melikhov, D. C. Jiles, C. Park, H. Hauser. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.
367. "Theoretical Calculation of Magnetic Structure Variation in $\text{Pr}_5\text{Ni}_2\text{Si}_3$ Compounds", S. H. Song, J. E. Snyder and D. C. Jiles. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.

368. “Non-contact Magnetoelastic Stress Sensors Based on Substituted Cobalt Ferrite”, P. N. Matlage, C. C. Lo, J. E. Snyder, Y. Melikhov, A. Ring and D. C. Jiles. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.
369. “Analysis of Barkhausen effect signals in surface-modified magnetic materials using a hysteretic-stochastic model”, C. C. H. Lo, E. R. Kinser, A. J. Barsic and D. C. Jiles. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.
370. “Variation of Magnetostriction with Temperature in Tb₅Si_{2.2}Ge_{1.8} Single Crystal”, A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, and D. C. Jiles. 50th Annual Conference on Magnetism and Magnetic Materials, San Jose, California, October 31-November 3, 2005.
371. “Hysteresis modeling in magnetic materials” (Invited), D.C.Jiles, X.Fang, W.Zhang in “Handbook of Advanced Magnetic Materials. Volume 2: Characterization and Simulation,” p. 372-406, edited by Y. Liu, D.J.Sellmyer and D.Shindo, Springer Science Publishers, New York, (2006)
372. “Exploitation of technical magnetization processes for nondestructive evaluation of materials”, Workshop on Electromagnetic NDE Methods for Materials Characterization, National Metallurgical Laboratory, Jamshedpur, India, January 10, 2006
373. “Magnetic Anisotropy of Cr-Substituted Cobalt Ferrite”, Y. Melikhov, J.E Snyder, C.C.H. Lo, P. Matlage, S.H. Song, K. Dennis, and D.C. Jiles. American Physical Society, March Meeting, Baltimore, March 13-17, 2006.
374. “Reversible Magnetostriction with Temperature in Tb₅Si_{2.2}Ge_{1.8} Single Crystal”, A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, D. C. Jiles. American Physical Society, March Meeting, Baltimore, March 13-17, 2006.
375. “Magnetic Domain Wall Motion for Sensor Application”, S. J. Lee and Melikhov, C. M. Park, H. Hauser, D.C. Jiles. American Physical Society, March Meeting, Baltimore, March 13-17, 2006.
376. “Magnetoelastic and Magnetic Properties of Chromium substituted Cobalt Ferrite”, C. C. H. Lo, P. N. Matlage, Y. Melikhov, J. E. Snyder, S. H. Song, and D. C. Jiles. International Magnetism Conference, San Diego, May 8-12, 2006.
377. “The effect of chromium substitution on the magnetic anisotropy and its temperature dependence in Cr – substituted cobalt ferrite”, Y. Melikhov, J. E. Snyder, C. C. H. Lo, P. N. Matlage, S. H. Song, K. W. Dennis and D. C. Jiles. International Magnetism Conference, San Diego, May 8-12, 2006.
378. “Analysis of a Remote Magneto-Optic Linear Displacement Sensor using Jones Matrix Approach” S. J. Lee, Y. Melikhov, C. M. Park, H. Hauser, and D.C. Jiles. International Magnetism Conference, San Diego, May 8-12, 2006. International Magnetism Conference, San Diego, May 8-12, 2006.
379. “Evaluation of Deformation Behaviour of HSLA-100 Steel using Magnetic Hysteresis Techniques”, A.K. Panda, S.K. Das, A. Mitra, D.C. Jiles and C.C.H. Lo. International Magnetism Conference, San Diego, May 8-12, 2006.
380. “Measurement and modeling of B-H loops and losses in high silicon non-oriented steels”, S.Zirka, Y.I.Moroz, P.Marketos, A.J.Moses and D.C.Jiles. International Magnetism Conference, San Diego, May 8-12, 2006.
381. “Soft Magnetic Properties of a High Temperature CoFeSiBNb Nanocrystalline Alloy”, A.K.Panda, O.Mohanta, A.Mitra, D.C.Jiles, C.C.H. Lo, Y.Melikhov. Joint European Magnetism Symposia, San Sebastian, Spain, June 26-30, 2006.

382. "Origin, measurement and application of the Barkhausen effect in magnetic steel", A.J.Moses and D.C.Jiles. 11th International Workshop on Electromagnetic Nondestructive Evaluation, Iwate, Japan, June 14-16, 2006.
383. "Magnetoelastic properties of $R_5(\text{Si}_x\text{Ge}_{1-x})_4$ alloys", A.P.Ring, J. E. Snyder and D. C. Jiles. International Conference on Magnetism, Kyoto, Japan, August 20-25, 2006
384. "Magnetic structures in $\text{Pr}_6\text{Ni}_2\text{Si}_3$ and $\text{Pr}_5\text{Ni}_2\text{Si}_3$ homologous compounds using first principles calculations", S. H. Song, J. E. Snyder and D. C. Jiles. International Conference on Magnetism, Kyoto, Japan, August 20-25, 2006
385. "Effect of plastic deformation on the magnetic properties of 304 stainless steel during tensile loading", A.Mitra, J.N.Mohapatra, A.Das, N.Narasaiah and D.C.Jiles. European Conference on Nondestructive Testing, Berlin, Germany, September 25-29, 2006.
386. "Challenges in incorporating nonlinear hysteretic behaviour into modelling of magnetic materials" D.C.Jiles, IET Symposium on Challenges in the Modelling and Measurement of Electromagnetic Materials, London, October 25-26, 2006.
387. "Magnetic and Magnetoelastic Properties of Ga-substituted Cobalt Ferrite", S. H. Song, C. C. H. Lo, S. J. Lee, S. T. Aldini, J.E.Snyder and D. C. Jiles. 10th Joint Magnetism and Magnetic Materials/ InterMag Conference, Baltimore, Maryland, January 7-11, 2007.
388. "Magneto-optical Properties of $\text{CoFe}_{2-x}\text{Ga}_x\text{O}_4$ ", S. J. Lee, S. H. Song, C. C. H. Lo, S. T. Aldini and D. C. Jiles. 10th Joint Magnetism and Magnetic Materials/ InterMag Conference, Baltimore, Maryland, January 7-11, 2007.
389. "Irreversible Field-induced strain Magnetostriction at Temperatures above and below the Order-Disorder Transition in Single Crystal $\text{Tb}_5\text{Si}_{2.2}\text{Ge}_{1.8}$ ", A. P. Ring, T. Lograsso, D. Schlagel, J. E. Snyder and D. C. Jiles. 10th Joint Magnetism and Magnetic Materials/ InterMag Conference, Baltimore, Maryland, January 7-11, 2007.
390. "Magnetic and Magnetoelastic Properties of Substituted Cobalt Ferrites", S. J. Lee, J.E.Snyder, Y.Melikhov and D.C. Jiles, APS March Meeting, Denver, Colorado, March 5-9, 2007.
391. "Magneto-optic Properties of $\text{Co}_{1+x}\text{Ge}_x\text{Fe}_{2-2x}\text{O}_4$ ", S. J. Lee, S.H. Song, and D.C. Jiles, APS March Meeting, Denver, Colorado, March 5-9, 2007.
392. "Unusual Magnetomechanical Behavior in Single Crystal $\text{Tb}_5\text{Si}_{2.2}\text{Ge}_{1.8}$ ", A. P. Ring, H. L. Ziegler, J. E. Snyder, D. C. Jiles, T. Lograsso and D. Schlagel, APS March Meeting, Denver, Colorado, March 5-9, 2007.
393. "Nondestructive Evaluation of Steels using Magnetic Methods (Invited)", D.C.Jiles, International Symposium on Advances in Stainless Steel, Chennai, India, April 9-11, 2007.
394. "Phase Transitions in Nanostructured Ternary Rare Earth Compounds $\text{Gd}_5(\text{Si}_x\text{Ge}_{1-x})_4$ and $\text{Pr}_{(n+2)(n+1)}\text{Ni}_{n(n-1)+2}\text{Si}_{n(n+1)}$ (Invited)", D.C. Jiles, Y. Melikhov, J.E. Snyder and R.L. Hadimani. International Workshop on Amorphous and Nanostructured Magnetic Materials, Iasi, Romania, August 29-31, 2007.
395. "Lack of Magnetoacoustic Emissions in Iron with 6% Silicon", B. Augustyniak, M. Chmielewski, M. J. Sablik, F. J. G. Landgraf, D. C. Jiles and A. J. Moses. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007.
396. "Estimation of First Order and Second Order Phase Transition Temperatures in $\text{Gd}_5(\text{SixGe}_{1-x})_4$ ", R. Hadimani, D.C. Jiles, Y. Melikhov, J.E. Snyder. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007.

397. "Preisach Modelling of Magneto-Resistive Hysteresis Loops of Half-Metals" Y. Melikhov, V. N. Krivoruchko, Yu. F. Revenko, D. C. Jiles, V. N. Varyukhin. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007.
398. "Temperature Dependence of Magnetic Properties of Gallium-Substituted Cobalt Ferrite", N. Ranvah, Y. Melikhov, J. E. Snyder, D. C. Jiles, A. J. Moses, P. Williams. 18th Conference on Soft Magnetic Materials, Cardiff, Wales, UK, September 2-5, 2007.
399. "Determination of the Projected Second Order Phase Transition Temperature of the Orthorhombic Phase of $Gd_5(Si_xGe_{1-x})_4$ ", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.
400. "Preisach Modelling of Magneto-resistive Hysteresis of Half-Metallic Ferromagnets", Y. Melikhov, V.N. Krivoruchko, Yu.F. Revenko, V.N. Varyukhin and D.C. Jiles. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.
401. "Temperature dependence of magnetic anisotropy of Ga-substituted cobalt ferrite", Y. Melikhov, N. Ranvah, S. H. Song, D. C. Jiles, J. E. Snyder, A. J. Moses and P.I.Williams. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.
402. "Variation of Magnetoelastic Properties of $CoGa_xFe_{2-x}O_4$ with Temperature", .S.H.Song, N.Ranvah, Y.Melikhov, J.E.Snyder and D.C.Jiles. Presented at the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 5-9, 2007.
403. "Magnetic and magnetoelastic properties of Ge-substituted cobalt ferrite", N.Ranvah, I.Nlebedim, Y.Melikhov, J.E.Snyder, D.C.Jiles, A.J.Moses and P.I.Williams. APS March Meeting, New Orleans, Louisiana, March 10-14, 2008.
404. "Magnetostriction close to the phase transition in $Gd_5(Si_xGe_{1-x})_4$ ", R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. APS March Meeting, New Orleans, Louisiana, March 10-14, 2008.
405. "Recent developments in nanostructured magnetoelastic and magnetocaloric materials", D.C. Jiles. International Meeting on Nanostructured Advanced Materials, Jamshedpur, India, March 27-29, 2008.
406. "Temperature dependence of magnetostriction of $Co_{1+x}Ge_xFe_{2-2x}O_4$ for magnetostrictive sensor and actuator applications", N. Ranvah, I.C. Nlebedim, S.H. Song, Y. Melikhov, J.E. Snyder, D.C. Jiles, A.J. Moses, P.I. Williams and F.Anayi, Presented at the International Magnetics Conference, Madrid, Spain, May 4-8, 2008.
407. "Enhancement of magnetoelastic properties of highly magnetostrictive cobalt ferrite through control of sintering conditions I.C. Nlebedim, N. Ranvah, A.J. Moses, D.C. Jiles, P.I. Williams, Y. Melikhov, J.E. Snyder and F. Anayi, International Magnetics Conference, Madrid, Spain, May 4-8, 2008.
408. "Fine structure observation near the critical temperature in $Gd_5Si_{1.95}Ge_{2.05}$ R. L. Hadimani, Y. Melikhov, J.E. Snyder, D.C. Jiles, International Magnetics Conference, Madrid, Spain, May 4-8, 2008.
409. "Temperature Induced Colossal Magnetostriction in $Gd_5(Si_xGe_{1-x})_4$ for Actuator Applications", R.L.Hadimani, P.A.Bartlett, Y.Melikhov, J.E.Snyder and D.C.Jiles. Presented at the European Magnetic Sensors and Actuators Conference, Caen, France, 30 June 2008.

410. "Field Induced Phase Transitions in $Gd_5(Si_xGe_{1-x})_4$ at High Magnetic Field Strengths", R.L.Hadimani, Y. Melikhov, J.E.Snyder, D.C.Jiles. 10th International Workshop on 1&2 Dimensional Magnetic Measurement and Testing, Cardiff, September 1-3, 2008.
411. "Development of a Model for Interpretation of Magnetostriction Measurements", N. Ranvah, A. Kumar, J. E. Snyder, A. J. Moses and D. C. Jiles. 10th International Workshop on 1&2 Dimensional Magnetic Measurements and Testing, Cardiff, September 1-3, 2008.
412. "Measurement and modelling of magnetic properties of electrical steels at high flux densities", A.E. Umenei, Y. Melikhov, S. Zurek, D.C. Jiles. 10th International Workshop on One and Two Dimensional Magnetic Measurements and Testing, Cardiff, September 1-3, 2008.
413. "Preisach modelling of magnetic and magneto-resistive hysteresis", Y. Melikhov, V. N. Krivoruchko, Y.F. Revenko and D. C. Jiles, Joint European Magnetics Symposium, Dublin, Ireland, September 14-19, 2008.
414. "Field induced structural phase transition at temperatures above the Curie point in $Gd_5(SixGe1-x)4$ ", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Presented at the 53rd Annual Magnetism and Magnetic Materials Conference, Austin, Texas, November 10-14, 2008.
415. "Comparison of Alternative Techniques for Characterization of Magnetostriction and Inverse Magnetostriction in Magnetic Thin Films", A. Raghunathan, D. C. Jiles, and J. E. Snyder. Presented at the 53rd Annual Magnetism and Magnetic Materials Conference, Austin, Texas, November 10-14, 2008.
416. "Temperature dependence of magnetic anisotropy of germanium/cobalt co-substituted cobalt ferrite", N. Ranvah, I. Nlebedim, Y. Melikhov, D. C. Jiles, J. E. Snyder, A. J. Moses, P. I. Williams, F. Anayi. Presented at the 53rd Annual Magnetism and Magnetic Materials Conference, Austin, Texas, November 10-14, 2008.
417. "Modeling and analytic approximation of magnetic properties at high magnetic fields in electrical steel cores", A.E. Umenei, Y. Melikhov, S. Zurek, D.C. Jiles. Presented at the 53rd Annual Magnetism and Magnetic Materials Conference, Austin, Texas, November 10-14, 2008.
418. "Variation of magnetic H field in closed loop magnetic circuits: problems with the standard equation", A.E. Umenei, Y. Melikhov, D.C. Jiles. Presented at the American Physical Society March Meeting, Pittsburgh, March 16-20, 2009.
419. "Magnetic and magnetoelastic properties of Ge/Co co-substituted cobalt ferrite", N. Ranvah, Y. Melikhov, D. C. Jiles, J. E. Snyder. Presented at the American Physical Society March Meeting, Pittsburgh, March 16-20, 2009.
420. "Examination of the Coupled Magnetic-Structural Phase Transition in Gadolinium-Silicon-Germanium Magnetocaloric alloys at temperatures well above T_c ", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Presented at the American Physical Society March Meeting, Pittsburgh, March 16-20, 2009.
421. "Modeling the Temperature Dependence of Hysteresis based on Jiles-Atherton Theory", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. Presented at the International Magnetics Conference, Sacramento, California, May 4-8, 2009.
423. "Anomalous behaviour in electrical transport properties in single crystal $Gd_5Si_{1.8}Ge_{2.2}$ and polycrystalline $Gd_5Si_{2.09}Ge_{1.91}$ ", R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. Presented at the International Magnetics Conference, Sacramento, California, May 4-8, 2009.

423. "Temperature dependence of magnetic properties of $\text{CoAl}_x\text{Fe}_{2-x}\text{O}_4$ for magnetostrictive sensor and actuator applications", N. Ranvah*, I. Nlebedim*, Y. Melikhov*, J. E. Snyder*, A. J. Moses*, P. I. Williams*, D. C. Jiles. Presented at the International Magnetism Conference, Sacramento, California, May 4-8, 2009
424. "Magnetic and Magnetomechanical Properties of $\text{CoAl}_x\text{Fe}_{2-x}\text{O}_4$ for Stress Sensor and Actuator Applications", I. Nlebedim, N. Ranvah, P.I. Williams, Y. Melikhov, J.E. Snyder, A.J. Moses and D.C. Jiles. Presented at the International Magnetism Conference, Sacramento, California, May 4-8, 2009.
425. "Design and Modeling of Improved Functionality of Switching Inductive Devices using Non-linear behavior of Core Materials", A.E. Umenei, Y. Melikhov, and D. C. Jiles. Presented at the International Magnetism Conference, Sacramento, California, May 4-8, 2009.
426. "Magnetic Materials and related Research at Cardiff University", (**Invited**), at the Materials Network Wales, Symposium on Materials Research at Welsh Universities, Cwmbran, May 14th, 2009.
427. "Effect of Heat Treatment on Cation Distribution in Magnetostrictive CoFe_2O_4 ", I. C Nlebedim, N. Ranvah, Y. Melikhov, P.I. Williams, J.E. Snyder, A. J. Moses and D.C. Jiles. Presented at the 8th Pacific Rim Conference on Ceramics and Glass Technology, American Ceramics Society, Vancouver, Canada, May 31- June 5, 2009.
428. "Development of Magnetic Stimulation Devices for Medical Applications", P.I. Williams, P. Marketos, E. Umenei, D.C. Jiles and J. Starzewski. International Society for Magnetic Resonance in Medicine, 15th Annual Meeting, Cardiff, Wales, 2-4, September, 2009.
429. "Irreversible resistivity response of half-metallic ferromagnets", Y. Melikhov, V.N. Krivoruchko, M.A. Marchenko and D.C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.
430. "Generalized form of anhysteretic magnetization function for Jiles-Atherton theory of hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.
431. "Investigation of the dependence of sensitivity of magnetostriction of cobalt ferrite to applied field on cation ratio and processing parameters", I. C. Nlebedim, N. Ranvah, P. I. Williams, Y. Melikhov, J. E. Snyder, A. J. Moses, D. C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.
432. "Modeling of improvement in impedance transfer for inductive switching devices, using high permeability soft materials", A. E. Umenei, Y. Melikhov, D.C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.
433. "Measurement of electrical steels with direct field determination", O. Stupakov, R. Wood, Y. Melikhov, D.C. Jiles. 19th Conference on Soft Magnetic Materials, Turin, Italy, September 7-9, 2009.
434. "Anomalous behaviour in electrical transport properties of single crystal $\text{Gd}_5\text{Si}_{1.8}\text{Ge}_{2.2}$ ", R. L. Hadimani and D.C. Jiles. European Congress and Exhibition on Advanced Materials and Processes, (EUROMAT), Glasgow, Scotland, September 7-10, 2009.
435. "Magnetic Barkhausen Effect Method for Nondestructive Evaluation of Surface Microstructure and Stress", (**Invited Plenary Address**), D.C. Jiles, L. Mierczak and P.I. Williams. 14th International Symposium on Applied Electromagnetics and Mechanics (ISEM), Xian, China, September 20-24, 2009.
436. "AC magnetic property measurements on cobalt ferrite for sensor applications", N. Ranvah, I. C. Nlebedim, Y. Melikhov, J. E. Snyder, A. J. Moses, P. I. Williams, and D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.

437. "Detection of Damage in Ground Steel Components using Magnetic Barkhausen Noise", L. Mierczak, Y. Melikhov and D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.
438. "Improved Model for Inductive Switching Devices in Power Systems", A. Umenei, E. Melikhov and D.C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.
439. "Growth of Crystalline Cobalt ferrite Thin Films at Lower Temperatures using Pulsed-laser Deposition Technique", A. Raghunathan, I. C. Nlebedim, J. E. Snyder and D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.
440. "Theoretical Model of Temperature Dependence of Hysteresis based on Mean Field Theory", A. Raghunathan, Y. Melikhov, J. E. Snyder and D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.
441. "Resistivity Recovery in $Gd_5(Si_xGe_{1-x})_4$ ", R. L. Hadimani and D. C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.
442. "Effect of Temperature Variation on the Magnetostrictive Properties of $CoAl_xFe_{2-x}O_4$ ", I. Nlebedim, N. Ranvah, Y. Melikhov, P.I. Williams, J.E. Snyder, A.J. Moses and D.C. Jiles. Presented at the 11th Joint MMM/InterMag Conference, Washington DC, January 18-22, 2010.
443. "Magnetocrystalline anisotropy in single crystal $Gd_5Si_{2.7}Ge_{1.3}$ ". R.L.Hadimani and D.C.Jiles. APS March Meeting, Portland, Oregon, March 15-19, 2010.
444. "Deriving a functional form of anhysteretic magnetization function for Jiles-Atherton theory of hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. APS March Meeting, Portland, Oregon, March 15-19, 2010.
445. "Pulsed-laser deposition of crystalline cobalt ferrite thin films at lower temperatures", A. Raghunathan, I. C. Nlebedim, D. C. Jiles, and J. E. Snyder. APS March Meeting, Portland, Oregon, March 15-19, 2010.
446. "Effect of Chemical substitution on magnetoelastic properties of cobalt ferrite", D.C.Jiles, N.Ranvah, I.Nlebedim, Y.Melikhov, J.E.Snyder, A.J.Moses and P.I.Williams. APS March Meeting, Portland, Oregon, March 15-19, 2010.
447. "Detection of Surface Condition in Ground Steel Components using Magnetic Barkhausen Measurements" (**Invited Keynote Address**), D. C. Jiles, L. Mierczak and Y. Melikhov, 15th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 15), Szczecin, Poland, 13–16 June 2010.
448. "Development of Field Coils for Diagnostic Applications of Transcranial Magnetic Stimulation", D. C. Jiles, P.I. Williams, E. Umenei, P. Marketos, L. Crowther, J. Starzewski, A. Thomas and G.A.Thomas. 15th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 15), Szczecin, Poland, 13–16 June 2010.
449. "A new way of determining the depth dependence of residual stress using the magnetic Barkhausen effect", L.Mierczak and D.C.Jiles. Review of Progress in Quantitative NDE, San Diego, California, July 18-23, 2010.
450. "Thermodynamic aspects of hysteresis for half metallic ferromagnets", Y.Melikhov, V.N.Krivoruchko and D.C.Jiles. Presented at the Joint European Magnetism Symposia, Krakow, Poland, August 23 - 28, 2010.

451. "Modelling of two-phase magnetic materials based on J-A theory", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. Presented at the Joint European Magnetics Symposia, Krakow, Poland, August 23 - 28, 2010.
452. "Transcranial Magnetic Stimulation: improved coil design for deep brain investigation", L.J. Crowther, P.I. Williams, Y. Melikhov, D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.
453. "Modeling ,Validation and Implementation of Non-Linear Magnetic Switching for Device Applications", A.E. Umenei, Y. Melikhov, D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.
454. "Influence of Reactive Atmosphere on Properties of Cobalt ferrite Thin Films Prepared using Pulsed-laser Deposition", A. Raghunathan, J.E.Snyder and D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.
455. "Dependence of Magnetomechanical Performance of Ga-Substituted Cobalt Ferrite on Temperature Variation", I.C. Nlebedim, Y. Melikhov, J.E. Snyder, A.J. Moses and D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.
456. "Reconstructing Residual Stress Depth Profiles using Magnetic Barkhausen Noise Method", L. Mierczak, Y. Melikhov, D.C. Jiles. Presented at the Magnetism and Magnetic Materials Conference, Atlanta, Georgia, November 15 -18, 2010.
457. "Magnetic NDE for damage assessment of structural materials", (**Invited paper**), Workshop on Advanced Nondestructive Evaluation for Structural Integrity Assessment, December 7, 2010, Science City Convention Center, Kolkata, India.
458. "Modeling of Micromagnetic NDT", (**Invited paper**), Symposium on Signal Analysis, Simulation and Modeling, December 8, 2010, Science City Convention Center, Kolkata, India.
459. "NDE for Life Cycle Management in Power Generation", (Invited Keynote Address), National Seminar on Non-Destructive Testing & Evaluation, Science City Auditorium, Kolkata, India, 9-11 December, 2010.
460. "Theoretical Modelling for Interpretation of Magnetic Nondestructive Evaluation Measurements" (**Invited**) D.C. Jiles. 16th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2011), Chennai, India, March 10-12, 2011.
461. "Deep Brain Stimulation using Magnetic Fields", D.C.Jiles, P.I.Williams and L.J.Crowther. Presented at the APS March Meeting, Dallas, Texas, March 21-25, 2011.
462. "Stress and Depth Dependence of Stochastic Processes in the Barkhausen Effect", L. Mierczak, Y. Melikhov, D.C. Jiles. Presented at the APS March Meeting, Dallas, Texas, March 21-25, 2011.
463. "Magnetic modelling - breaking through the materials barrier" (**Invited Keynote Address**) D.C.Jiles, Eighth International Conference on Computation in Electromagnetics, Wroclaw, Poland, 11-14 April 2011.
464. "Magnetic Annealing and Inverse Magnetostrictive Effects in Cobalt Ferrite Thin Films", A. Raghunathan, D. C. Jiles, and J. E. Snyder. Presented at the International Magnetics Conference, Taipei, Taiwan, April 25-29, 2011.
465. "Coil design optimization using structurally detailed head model for Transcranial Magnetic Stimulation", L.J. Crowther and D.C. Jiles. Presented at the International Magnetics Conference, Taipei, Taiwan, April 25-29, 2011.

466. “Applications of the Barkhausen effect”, (**Invited Plenary Address**), Workshop on Large Fluctuations and Collective Phenomena in Disordered Materials, University of Illinois, Urbana- Champaign, May 18, 2011.
467. “Improved Designs for Field Generation for Non Invasive Transcranial Magnetic Stimulation”, L. Crowther and D. C. Jiles. Review of Progress in Quantitative NDE, Vermont, July 18-22, 2011.
468. “Depth profiling in prestressed load bearing components”, L. Mierczak, O. Kypris, I. Nlebedim and D.C. Jiles, Review of Progress in Quantitative NDE, Vermont, July 18-22, 2011.
469. "Residual stress depth profiling using Magnetic Barkhausen Noise method ", L. Mierczak, Y. Melikhov, D. C. Jiles. Presented at the British Institute of Non-Destructive testing conference on Materials Testing, The International Centre, Telford, Shropshire, UK September 13-15, 2011.
470. “Effect of deviation from stoichiometric composition on structural and magnetic properties of cobalt ferrite, $\text{Co}_x\text{Fe}_{3-x}\text{O}_4$ ($x = 0.2$ to 1.0)”, I. C. Nlebedim, J. E. Snyder, A. J. Moses, and D. C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.
471. “Description of Magnetic Two-phase Materials in the Theory of Hysteresis”, A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.
472. “A more robust method for parameter determination for Jiles-Atherton Theory of Hysteresis”, A. Raghunathan, Y. Melikhov, and D. C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.
473. “Developments in Deep Brain Stimulation using Time Dependent Magnetic Fields”, L. J. Crowther, I. C. Nlebedim and D. C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.
474. “Depth Profiling of Stress for Non-Destructive Testing using Magnetic Barkhausen Noise Signals”, O. Kypris, L. Mierczak, I. C. Nlebedim and D.C. Jiles. Presented at the 56th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.
475. “Depth dependence of mechanical properties from micromagnetic emissions”, L. Mierczak, Y. Melikhov, O. Kypris and D.C. Jiles. Presented at the 55th Conference on Magnetism and Magnetic Materials, Scottsdale, Arizona, October 31- November 4, 2011.
476. “Frequency dependent magnetic measurements for depth profiling of properties in steels”, D.C. Jiles, O. Kypris, L. Mierczak and Y. Melikhov, National Seminar on Nondestructive Testing & Evaluation, Indian Society for Nondestructive Testing, Chennai, India, December 8-10, 2011.
477. “Determination of Second Order Phase Transition Temperature of Monoclinic Phase of $\text{Gd}_5(\text{Si}_x\text{Ge}_{1-x})_4$ ” R. Hadimanin, D.C. Jiles and Y. Melikhov. American Physical Society March Meeting, Boston, Massachusetts, March 2012.
478. “The Origin of Secondary Hematite Phase in Non-stoichiometric Co-ferrite Samples Prepared by Ceramic Method”, D.C. Jiles, I. Nlebedim and A..J. Moses. American Physical Society March Meeting, Boston, Massachusetts, March 2012.

479. "Calculation of Lorentz Forces on Coils for Transcranial Magnetic Stimulation", L. J. Crowther, R. L. Hadimani, D. C. Jiles. Presented at the International Magnetics Conference, Vancouver, Canada, May 7-11, 2012.
480. "Mapping Stress along Depth at the Surface of Steel Structures using a frequency dependent Magnetic Barkhausen Noise Technique", O. Kypris, I.C. Nlebedim and D.C. Jiles. Presented at the International Magnetics Conference, Vancouver, Canada, May 7-11, 2012.
481. "Study of the second order phase transition temperature of monoclinic phase in mixed phase region of $Gd_5(Si_xGe_{1-x})_4$ ", R. L. Hadimani, Y. Melikhov and D. C. Jiles. Presented at the International Magnetics Conference, Vancouver, Canada, May 7-11, 2012.
482. "Magnetocrystalline anisotropy in single crystal $Gd_5Si_{2.7}Ge_{1.3}$ ", R. L. Hadimani, Y. Melikhov, M. Han and D. C. Jiles. Presented at the International Magnetics Conference, Vancouver, Canada, May 7-11, 2012.
483. "Anisotropy and Magnetostrictive Properties of Non-stoichiometric Co-Ferrite", I. C. Nlebedim, J. E. Snyder, A. J. Moses and D. C. Jiles. Presented at the International Magnetics Conference, Vancouver, Canada, May 7-11, 2012.
484. "Growth and Characterization of Magnetocaloric $Gd_5(Si_xGe_{1-x})_4$ Thin Films", R.L.Hadimani, Y.Melikhov and D.C.Jiles. Presented at the 12th Joint Magnetism and Magnetic Materials / International Magnetics Conference, Chicago, Illinois, January 14-18, 2013.
485. "Magnetic and Thermoelectric Properties of Cobalt Ferrite", I.C.Nlebedim, R.L.Hadimani, R.Prozorov and D.C.Jiles. Presented at the 12th Joint Magnetism and Magnetic Materials / International Magnetics Conference, Chicago, Illinois, January 14-18, 2013.
486. "Structural, Magnetic and Magnetoelastic Properties of Magnesium Substituted Cobalt Ferrite", I. C Nlebedim, R. Hadimani, R. Prozorov and D. C. Jiles. Presented at the 12th Joint Magnetism and Magnetic Materials / International Magnetics Conference, Chicago, Illinois, January 14-18, 2013.
487. "Experimental verification of the linear relationship between stress and the reciprocal of the peak Barkhausen voltage in ASTM A36 steel", O. Kypris, I.C. Nlebedim, D.C. Jiles. Presented at the 12th Joint Magnetism and Magnetic Materials / International Magnetics Conference, Chicago, Illinois, January 14-18, 2013.
488. "Stress - depth profiling for non-destructive evaluation using a frequency-dependent model of Barkhausen emissions", O. Kypris, I.C. Nlebedim, D.C. Jiles. Presented at the 12th Joint Magnetism and Magnetic Materials / International Magnetics Conference, Chicago, Illinois, January 14-18, 2013.
489. "Realistically modeled TMS-coils for stress and Lorentz force calculations during MRI", L.J.Crowther, K.Porzig, R.L.Hadimani, H.Brauer and D.C. Jiles. Presented at the 12th Joint Magnetism and Magnetic Materials / International Magnetics Conference, Chicago, Illinois, January 14-18, 2013.
490. "Magnetoelectric properties of $GaCoFeO/BaTiO_3$ composite", Y.Ni, I.C.Nlebedim, H.Xu and D.C.Jiles. Presented at the 24th Annual Conference on Fundametal Physics of Ferroelectrics and Related Materials, Ames, Iowa, January 27-30, 2013.
491. "Magnetostrictive cation substituted cobalt ferrite for magnetoelectric applications", I.C.Nlebedim and D.C.Jiles. Presented at the 24th Annual Conference on Fundametal Physics of Ferroelectrics and Related Materials, Ames, Iowa, January 27-30, 2013.

492. "Ferroelectric and ferromagnetic properties of $Ga_x CoFe_{2-x}O_4 / BaTiO_3$ ", Y. Ni, C.Nlebedim and D.C.Jiles.. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
493. "How Magnesium Substitution Changes the Magnetostrictive Properties of Cobalt Ferrite", I.C.Nlebedim, and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
494. "The Effect of Variation of Permittivity and Conductivity on Induced Electric Field in the Brain during Transcranial Magnetic Stimulation" L.Crowther, R.L.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
495. "First successful growth of thin films of meta-stable monoclinic phase of $Gd_5(Si_xGe_{1-x})_4$ ", R.L.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
496. "Anisotropy and Magnetostriction in Cobalt-Modified Magnetite: A Crystal Field Approach", I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
497. "Computation of the modified magnetostriction coefficient b' corresponding to different depth ranges in ferromagnetic specimens by using a frequency dependent model for magnetic Barkhausen emissions", O.Kypris, I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
498. "Verification of modified Jiles-Atherton model for determination of hysteresis behavior of materials with two magnetic phases", N. Prabhu Gaunkar and D.C.Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
499. "Improved transcranial magnetic stimulation coil design with realistic head modeling", L. J. Crowther, R. L. Hadimani, D. C. Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
500. "Effect of Transcranial Magnetic Stimulation on Neuronal Networks", A. H. Unsal, R. L. Hadimani and D. C. Jiles. Presented at the American Physical Society March Meeting, Baltimore, Maryland, March 18-22, 2013.
501. "Realistically modeled TMS-coils for stress and Lorentz force calculations during MRI", K. Porzig, L. J. Crowther, R. L. Hadimani, H. Brauer, J. Haueisen, H. Toepfer, D. C. Jiles, Presented at the 5th International Conference on Non-Invasive Brain Stimulation, Leipzig, Germany, 19-21 March, 2013.
502. "The Effect of Variation of Permittivity and Conductivity on Induced Electric Field in the Brain during Transcranial Magnetic Stimulation", K. Porzig, R. L. Hadimani, L. J. Crowther, H. Brauer, J. Haueisen, H. Toepfer, D. C. Jiles. Presented at the 5th International Conference on Non-Invasive Brain Stimulation, Leipzig, Germany, 19-21 March, 2013.
503. "Theory and modeling of the Barkhausen effect", D.C.Jiles. Presented at the Symposium on Crackling Noise and Intermittency in Condensed Matter, Göttingen, Germany, 22- 24 May, 2013.
504. "The Barkhausen effect: modeling and application to NDE of stress" (Plenary Address), D.C.Jiles, International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.

505. “MBN Techniques for Quantitative Determination of Stress”, Y. Melikhov, L. Mierczak, D.C. Jiles. International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.
506. “Applicability of modified J-A model for improved interpretation of hysteresis measurements for evaluation of ferromagnetic materials and components”, N. Prabhu Gaunkar, I. C. Nlebedim and D.C. Jiles. International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.
507. “Calculation of a universal stress-depth calibration profile using a white noise approximation to the magnetic Barkhausen noise spectrum”, O. Kypris, I.C. Nlebedim and D.C. Jiles, International Conference on Barkhausen Measurements, Review of Progress in Quantitative NDE, Baltimore, Maryland, July 22-26, 2013.
508. “Development of Deep Brain and Focused Transcranial Magnetic Stimulation Coil for Mice”, R. L. Hadimani, S. D. March, S. McAtee, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther and D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
509. “Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models”, L. J. Crowther, R. L. Hadimani, A. G. Kanthasamy, D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
510. “Growth and Characterization of Pt-protected Gd₅Si₄ thin films”, R. L. Hadimani, Y. Mudryk, T. E. Prost, V. K. Pecharsky, K. A. Gschneidner, and D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
511. “Evolution of Griffiths Phase in La_{0.4}Bi_{0.6}Mn_{1-x}Ti_xO₃ Perovskite Oxide”, V. Dayal, K.V. Punith, R. L. Hadimani and D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
512. “Influence of Initial Particle Size Distribution on Magnetostrictive Properties of Cobalt Ferrite”, I. C. Nlebedim and D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
513. “Effect of Ti⁴⁺/Co²⁺ Co-substitution on the Structural and Magnetic Properties of Cobalt Ferrite”, I. C. Nlebedim, K. W. Dennis, R. W. McCallum and D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
514. “Magnetocaloric effect in GdCo_xAl_{2-x} system for 0.15 ≤ x ≤ 1 compositions”, H. Fu, R. L. Hadimani, M. H. Wang; B. H. Teng and D. C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
515. “A Comparative Study of Probe Designs for Detection of Magnetic Barkhausen Emissions”, N. Prabhu Gaunkar, I.C. Nlebedim and D.C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.
516. “Barkhausen spectroscopy: Non-destructive characterization of magnetic materials as a function of depth”, O. Kypris, I.C. Nlebedim, D.C. Jiles. Presented at the 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013.

517. “Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models”, L. J. Crowther, R. L. Hadimani, A. Kanthasamy and D. C. Jiles. Submitted to IEEE Transactions on Biomedical Engineering.
518. “A Numerical Dosimetry Study for Pediatric Transcranial Magnetic Stimulation”, L. J. Crowther, R. L. Hadimani, and D. C. Jiles. Presented at the 6th International IEEE EMBS Conference on Neural Engineering, San Diego, November 6-8, 2013.
519. “Focused and Deep Brain Magnetic Stimulation Using New Coil Design in Mice”, S. D. March, S. Stark, M. Senter, K. Spoth, D. R. Stiner, L. J. Crowther, R. L. Hadimani, D. C. Jiles. Presented at the 6th International IEEE EMBS Conference on Neural Engineering, San Diego, November 6-8, 2013.
520. “New coil designs for deep brain Transcranial Magnetic Stimulation using Halo Coil Configurations”, R. Kaul, B. N. Hogan, R. L. Hadimani, L. J. Crowther, D. C. Jiles. Presented at the 6th International IEEE EMBS Conference on Neural Engineering, San Diego, November 6-8, 2013.
521. “Increased efficiency of a permanent magnet synchronous generator through optimization of NdFeB magnet arrays”, H. Khazdozian, R.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
522. “Effect of titanium substitution on the structural and magnetic properties of cobalt ferrite”, I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
523. “Design considerations for a high sensitivity Barkhausen noise sensor”, N. Prabhu Gaunkar., O.Kypris, C. Nlebedim and D.C. Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
524. “Development of a new magnetic Barkhausen spectroscopy method for the nondestructive characterization of magnetic materials”, O.Kypris, I.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
525. “Pulsed laser deposition of thin films of binary compounds of Gd and Si using a femto-second laser”, R.L.Hadimani Y.Mudryk, T.Prost, V.Pecharsky, K.A.Gschneidner and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
526. “Treatment for traumatic brain injury in mice using transcranial magnetic stimulation : a preliminary study”, A.Carr, g. Zenitsky, L.Crowther, R.Hadimani, V.Anantharam, A.Kanthasamy and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
527. “High frequency magnetic properties of FeCoSiB thin films”, R.Hadimani, M.Han and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
528. “Enhanced surface state of topological insulators by optimal magnetic doping”, Y.Ni, N.Meyer, X.Che, Z.Zhang, C.Nlebedim, R.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
529. “Effect of particle size distribution on the magnetostrictive properties of cobalt ferrite”, I.C.Nlebedim and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
530. “Numerical dosimetry of transcranial magnetic stimulation coils”, L.Crowther, R.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.

531. “Novel transcranial magnetic stimulation coil for mice”, S. March, S.Stark, L.Crowther, R.Hadimani and D.C.Jiles. Presented at the American Physical Society March Meeting, Denver, Colorado, March 3-7, 2014.
532. “Relating ferromagnetic hysteresis and Barkhausen noise in two-phase magnetic materials”, N. Prabhu Gaunkar, I. C. Nlebedim, D. C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.
533. “Enhanced Surface State of Topological Insulators by Optimal Magnetic Doping”, Z.Zhang, Y.Ni, X.Che, N.Meyer, C.Nlebedim, R.Hadimani, G.Tuttle and D.C.Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.
534. “Effect of brain development on induced electric field during transcranial magnetic stimulation”, L. J. Crowther, R. L. Hadimani and D. C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.
535. “Estimation of sub-surface stresses using a new model for the Barkhausen frequency spectrum”, O. Kypris, C.I. Nlebedim and D.C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.
536. “Suitability of Cation Substituted Cobalt Ferrite Materials for Magnetoelastic Sensor Applications”, I. C. Nlebedim and D. C. Jiles. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.
537. “Thin film $R_5(\text{Si},\text{Ge})_4$ compound displaying magnetostructural transition: a pathway towards magnetic refrigeration and magnetostrictive devices at nanoscale”, R. L. Hadimani, J. H. B. Silva, A. M. Pereira, D. L. Schlager, T. A. Lograsso, Y. Ren, X. Zhang, D. C. Jiles, and J. P. Araujo. Presented at the International Magnetics Conference, Dresden, Germany, May 4-8, 2014.
538. “Thermal Effects on the Magnetic Properties of Titanium Modified Cobalt Ferrite”. C.I. Nlebedim and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
539. “ Fabrication and characterization of nanoparticles of Gd_5Si_4 ”, R.L. Hadimani, S. Gupta, V.K. Pecharsky and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
540. “Second order phase transition temperature of single crystal samples of $\text{Gd}_5(\text{Si}_x\text{Ge}_{1-x})_4$ in the mixed phase region of $0.3 \leq x \leq 0.41$ ”, R.L. Hadimani, Y. Melikhov, D.L. Schlager, T.A. Lograsso, K.W. Dennis, R.W. McCallum and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
541. “Enhanced Surface State of Topological Insulators by Optimal Magnetic Doping”. Z. Zhang, Y. Ni, C.I. Nlebedim, R.L. Hadimani, G. Tuttle and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
542. “Signal analysis and control of ringing in pulsed NMR circuits”. N. Prabhu Gaunkar, N.Y. Bouda, I.C. Nlebedim, R.L. Hadimani, K. Ganesan, I. Bulu, Y. Song, R. Weber, M. Mina and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.

543. “Influence of Ga-Concentration on the Electrical and Magnetic Properties of Magnetoelectric BaTiO₃/CoGa_xFe_{2-x}O₄ Composite”. Y. Ni, C.I. Nlebedim, Z. Zhang and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
544. “Quantitative comparison between constant stress along depth and a stress-depth gradient using frequency domain Barkhausen noise statistics”. O. Kypris, C.I. Nlebedim and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
545. “Tuning the magnetism in low-dimensional Ising Fe-doped CoNb₂O₆ with a strongly ferrimagnetic system”. C.I. Nlebedim and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
546. “Effect of coil orientation and gyral folding pattern on induced electric fields during transcranial magnetic stimulation”. L.J. Crowther, R.L. Hadimani and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
547. “Thermal and mechanical stability of adjustable ‘Halo’ coil for transcranial magnetic stimulation”. Y. Meng, R.L. Hadimani, J. Qu, Z. Xu, L.J. Crowther and D.C. Jiles. Presented at the 59th Annual Conference on Magnetism & Magnetic Materials, Honolulu, Hawaii, USA, November 4-8, 2014.
548. “Unusual Phase Transitions in Single Crystals of Gd₅Si_{1.3}Ge_{2.7} and Gd₅Si_{1.4}Ge_{2.6}”, American Physical Society March Meeting, March 2-6, 2015.
549. “Control of proliferation rate of N27 dopaminergic neurons using Transcranial Magnetic Stimulation orientation”, American Physical Society March Meeting, March 2-6, 2015.
550. “Strong effect of low-dimensional Fe-doped cobalt niobate on a strongly ferrimagnetic system”, American Physical Society March Meeting, March 2-6, 2015.
551. “Enhancement of Magnetoelectric Coupling in CoGa_xFe_{2-x}O₄/BaTiO₃ Composite”, American Physical Society March Meeting, March 2-6, 2015.
552. “Changes in magnetic properties of cobalt-iron-titanium oxide due to temperature variations”, American Physical Society March Meeting, March 2-6, 2015.
553. “Size Reduction Techniques for Large Scale Permanent Magnet Generators in Wind Turbines”, American Physical Society March Meeting, March 2-6, 2015.
554. “Correlating valence state, site preference and co-substitution to the magnetoelastic properties of cobalt ferrite”, American Physical Society March Meeting, March 2-6, 2015.
555. “Growth and Characterization of Large Scale (Sb_{1-x}Bi_x)₂Te₃ Thin Films on Mica”, American Physical Society March Meeting, March 2-6, 2015.
556. “Study of parameters for designing Barkhausen noise sensing elements using finite element analysis”, American Physical Society March Meeting, March 2-6, 2015.
557. “Application of Barkhausen noise and ferromagnetic hysteresis for magnetic non-destructive evaluation of multiphase composites and structures”, American Physical Society March Meeting, March 2-6, 2015.
558. “Critical Mechanism of Magnetic Doped Cr_xBi_{2-x}Te₃ Topological Insulator Thin Films”, American Physical Society March Meeting, March 2-6, 2015.

559. “Comparison of Coil Designs for Transcranial Magnetic Stimulation on Mice”, American Physical Society March Meeting, March 2-6, 2015.
560. “Determination of stimulation focality in heterogeneous head models during transcranial magnetic stimulation (TMS)”, American Physical Society March Meeting, March 2-6, 2015.
561. “First Successful Fabrication of Nanoparticles of magnetocaloric Gd₅Si₄”, American Physical Society March Meeting, March 2-6, 2015.

20. REFEREED JOURNAL PUBLICATIONS

1. "Ultrasonic study of the magnetic structure of rare earth metals", S.B. Palmer, C. Isci and D.C. Jiles, *Journal de Physique* 40-C5, 33, 1979.
2. "Magnetoelastic effects in gadolinium", D.C. Jiles and S.B. Palmer, *J. Phys. F (Metal Physics)* 10, 2857, 1980.
3. "Magnetoelastic effects in erbium", D.C. Jiles and S.B. Palmer, *J. Phys. F (Metal Physics)* 11, 45, 1981.
4. "Magnetoelastic effects in terbium", D.C. Jiles, G.N. Blackie and S.B. Palmer, *J. Mag. Mater.* 24, 75, 1981.
5. "Third order elastic constants of erbium", D.C. Jiles and S.B. Palmer, *J. Appl. Phys.* 52, 1113, 1981.
6. "Hydrostatic pressure derivatives of the elastic moduli of terbium, dysprosium and erbium", D.C. Jiles and S.B. Palmer, *Phil. Mag.* 44, 447, 1981.
7. "Interpretation of anomalies in the magnetoelastic properties of gadolinium by domain phase theory", D.J. Martin, S.B. Palmer and D.C. Jiles, *J. Mag. Mater.* 29, 87, 1982.
8. "Hydrostatic pressure derivatives of the elastic constants of dysprosium over the range 0-100 MPa.", D.C. Jiles, S.B. Palmer and G.A. Saunders, *Phys. Letts.* 87A, 297, 1982.
9. "Performance studies of a high speed ultrasonic sing around system", D.C. Jiles, S.B. Palmer and D.G. Whitehead, *IEEE Transactions on Instrumentation & Measurement* 31, 280, 1982.
10. "Ferromagnetic hysteresis", D.C. Jiles and D.L. Atherton, *IEEE Transactions on Magnetics*, 19, 2183, 1983.
11. "Effects of stress on the magnetisation of steel", D.C. Jiles and D.L. Atherton, *IEEE Transactions on Magnetics*, 19, 2021, 1983.
12. "Stress-induced magnetisation changes in steel pipes (1) - laboratory tests", D.L. Atherton, L.W. Coathup, D.C. Jiles, L. Longo, C. Welbourn and A. Teitsma, *IEEE Transactions on Magnetics* 19, 1564, 1983.
13. "Piezo optic properties of aluminium", D.C. Jiles and M.P. Staines, *Solid State Communications* 47, (1), 37, 1983.
14. "Optical properties of the heavy rare earths: piezoreflectance of gadolinium, dysprosium and erbium", D.C. Jiles and M.P. Staines, *Physical Review B*, 28, 5746, 1983.
15. "Theory of ferromagnetic hysteresis", D.C. Jiles and D.L. Atherton, *Journal of Applied Physics* 55, 2115, 1984.
16. "Piezo optic properties of nickel and platinum", D.C. Jiles and M.P. Staines, *J. Phys. Chem. Sol.* 45, 151, 1984.
17. "Effects of alloying on the band structure of gold: piezoreflectance measurements on some AuCo and AuV alloys", D.C. Jiles, P.W. Gilberd, M.P. Staines and A. Bittar, *J. Phys. Chem. Sol.* 45, 595, 1984.
18. "Ferromagnetic hysteresis and the effects of stress on magnetisation", D.C. Jiles, *Review of Progress in Quantitative Nondestructive Evaluation* 4, 1141, 1984.
19. "Pseudopotential coefficients for the electron band structure of aluminum and their deformation potentials from piezoreflectance measurements", D.C. Jiles, *Solid State Comms.* 51, 327, 1984.

20. "Theory of the magnetisation process in ferromagnets and its application to the magnetomechanical effect", D.C. Jiles and D.L. Atherton, *J. Phys. D (Applied Phys)* 17, 1265, 1984.
21. "A microcomputer based system for control of applied uniaxial stress and magnetic field", D.C. Jiles, D.L. Atherton, H.E. Lassen, D. Noble and T.Astle, *Review of Scientific Instruments*, 55, 1843, 1984.
22. "Magnetoelastic properties of high-purity single crystal terbium", D.C. Jiles, S.B. Palmer, D.W. Jones, S.P. Farrant and K.A. Gschneidner Jr., *J. Phys. F (Metal Physics)*, 14, 3061, 1984.
23. "Stress induced magnetization changes in steel pipes (2)", D.L.Atherton, C.Welbourn, D.C.Jiles, L.Reynolds and J.Scott Thomas, *IEEE Transactions on Magnetics*, 20, 2129, 1984.
24. "Dependence of the anhysteretic magnetisation on stress in steel", L.G. Dobranski, D.C. Jiles and D.L. Atherton, *Journal of Applied Physics* 57, 4229, 1985.
25. "Influence of chemical composition and heat treatment on the magnetic properties of steel", S.Habermehl, D.C.Jiles and C.M.Teller. *IEEE Transactions on Magnetics*, 21, 1909, 1985.
26. "Effects of stress on magnetization", D.L.Atherton and D.C.Jiles, *NDT International*, 19, 15, 1986.
27. "Theory of ferromagnetic hysteresis", D.C.Jiles and D.L.Atherton, *Journal of Magnetism and Magnetic Materials*, 61, 48, 1986.
28. "Magnetoacoustic emission, magnetisation and Barkhausen effect in decarburised steel", R. Ranjan, D.C. Jiles and P.K. Rastogi, *IEEE Transactions on Magnetics*, 22, 511, 1986.
29. "A model for the effect of tensile & compressive stress on ferromagnetic hysteresis", M.J. Sablik, H. Kwun, G.L. Burkhardt and D.C. Jiles, *Journal of Applied Physics*, 61, 3799, 1987.
30. "Grain size measurements using magnetic & acoustic Barkhausen noise" R. Ranjan, D.C. Jiles, O. Buck and R.B. Thompson, *Journal of Applied Physics*, 61, 3199, 1987.
31. "Magnetic properties of decarburised steels: an investigation of the effects of grain size and carbon content", R. Ranjan, D.C. Jiles and P.K. Rastogi, *IEEE Trans. Mag.* 23, 1869, 1987.
32. "Review of magnetic methods for nondestructive evaluation", D.C. Jiles. *NDT International*, 21, 311, 1988.
33. "Magnetic properties and microstructure of AISI 1000 series carbon steels", D.C. Jiles, *J. Phys. D (Applied Physics)*, 21, 1186, 1988.
34. "The effect of compressive plastic deformation on the magnetic properties of AISI 4130 steels with various microstructures", D.C. Jiles, *J. Phys. D (Applied Physics)*, 21, 1196, 1988.
35. "Magnetic properties of porous iron compacts", D.C. Jiles, C.V. Owen and W.A. Spitzig, *Journal of NDE*, 6, 119, 1988.
36. "Effects of tensile plastic deformation on the magnetic properties of AISI 4140 steel", D.C. Jiles and D. Utrata, *Journal of NDE*. 6, 129, 1988.
37. "The influence size and morphology of eutectoid carbides on the magnetic properties of carbon steels", D.C.Jiles, *Journal of Applied Physics*, 63, 2980, 1988.

38. "Integrated on-line instrumentation for simultaneous automated measurement of magnetic field, induction, Barkhausen effect, magnetoacoustic emission and magnetostriction", D.C. Jiles, *Journal of Applied Physics*, 63, 3946, 1988.
39. "A model for the effect of stress on the low frequency harmonic content of the magnetic induction in ferromagnetic materials", M.J. Sablik, G.L. Burkhardt, H. Kwun and D.C. Jiles, *Journal of Applied Physics*, 63, 3930, 1988.
40. "Variation of the magnetic properties of AISI 4140 steels with plastic strain", D.C. Jiles, *Physica Status Solidi*, 108, 417, 1988.
41. "The stress dependence of the magnetic properties of some Ni-Cu and Ni-Co alloys", D.C.Jiles, R.Ranjan and D.R.Hougen, *Journal of Applied Physics*, 64, 3620, 1988.
42. "Stress dependence of the magnetic properties of Ni-Cu and Ni-Co alloys. D.C.Jiles, T.T.Chang, D.R.Hougen and R.Ranjan, *J. de Physique* 49-C8, 1937, 1988.
43. "Magneto acoustic emission and discontinuous magnetostriction in Dy-Tb-Fe", D.C.Jiles, J.E.Ostenson and C.V.Owen, *J. de Physique* 49-C8, 1939, 1988.
44. "Barkhausen effect and discontinuous magnetostriction in Terfenol-D", D.C.Jiles, J.E.Ostenson and C.V.Owen, *Journal of Applied Physics* 64, 5417, 1988.
45. "A model for hysteresis in magnetostriction", M.J.Sablik and D.C.Jiles, *Journal of Applied Physics*, 64, 5402, 1988.
46. "Theory of ferromagnetic hysteresis: evaluation of stress from hysteresis curves", P. Garikepati, T.T.Chang and D.C.Jiles, *IEEE Trans. Mag.* 24, 2922, 1988.
47. "A pressure cell for magnetostrictive measurements", J.E.Ostenson, D.C.Jiles and D.K.Finnemore, *Review of Scientific Instruments* 60, 278, 1988.
48. "Ultrasonic and magnetic analysis of porosity in iron compacts", W.A.Spitzig, R.B.Thompson and D.C.Jiles, *Metallurgical Transactions* 20A, 571, 1989.
49. "Electrical and mechanical properties of precipitation hardened Al-Li alloys", D.J.Bracci, L.J.H.Brasche, O.Buck, and D.C.Jiles, *Materials Science & Engineering*, A119, 7, 1989.
50. "Non destructive detection of the T1 phase in Al-Li alloys." O.Buck, L.J.H.Brasche, J.E.Shield, D.J.Bracci, D.C.Jiles and L.S.Chumbley, *Scripta Metallurgica*, 23, 183, 1989.
51. "Theory of ferromagnetic hysteresis: determination of model parameters from experimental hysteresis loops", D.C.Jiles and J.B.Thoelke, *IEEE Trans. Mag.* 25, 3928, 1989.
52. "The effects of stress on magnetic Barkhausen activity in ferromagnetic steels", D.C.Jiles, *IEEE Trans. Mag.* 25, 3455, 1989.
53. "Review of Magnetic Methods for Nondestructive Evaluation (Part 2 : Flux Leakage and related Methods)", D.C. Jiles, *NDT International* 23, 83, 1990.
54. "Interpretation of the magnetisation mechanism in Terfenol-D using Barkhausen pulse height analysis and irreversible magnetostriction", D.C.Jiles and S.Hariharan, *Journal of Applied Physics* 67, 5013, 1990.

55. "Magnescope : A portable magnetic inspection system for evaluation of steel structures and components", D.C.Jiles, S.Hariharan and M.K.Devine, IEEE Transaction on Magnetics, 26, 2577, 1990.
56. "The effects of temper embrittlement on the magnetic and mechanical properties of nickel chromium steels", D.C.Jiles, J.B.Thoelke, W.G.Clark and R.DeNale. Nondestructive Testing and Evaluation, 6, 75, 1991.
57. "Determination of theoretical parameters for modelling bulk magnetic hysteresis properties using the theory of ferromagnetic hysteresis", D.C.Jiles, J.B.Thoelke and M.K.Devine. IEEE Trans.Mag. 28, 27, 1992.
58. "A magnetostrictive diode laser magnetometer", R.Chung, R.Weber and D.C.Jiles, IEEE Transactions on Magnetics, 27, 5358, 1991.
59. "Modelling of the combined effects of stress and magnetic field on the magnetostriction of Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke, IEEE Transactions on Magnetics, 27, 5352, 1991.
60. "Angular dependence of the magnetic properties of polycrystalline iron under the action of uniaxial stress", D.A.Kaminski, D.C.Jiles and M.J.Sablik, Journal of Magnetism & Magnetic Materials, 104, 382, 1992.
61. "Interpretation of the frequency dependence of Barkhausen emissions for investigating the depth dependence of magnetic properties", L.B.Sipahi and D.C.Jiles, Journal of Magnetism & Magnetic Materials, 104, 385, 1992.
62. "Model calculation for determining local energy minima in the orientation of magnetic domains in terbium-dysprosium-iron single crystals", J.B.Thoelke and D.C.Jiles, Journal of Magnetism & Magnetic Materials, 104, 1453, 1992.
63. "In situ determination of the magnetic properties of soft magnetic materials using an automated magnetic measuring system", A.R.Eichmann, D.C.Jiles and M.K.Devine, Journal of Magnetism & Magnetic Materials, 104, 375, 1992.
64. "Highly magnetostrictive rare earth iron intermetallic for a magnetostrictive magnetometer", R.Chung, R.Weber and D.C.Jiles, Journal of Magnetism & Magnetic Materials, 104, 1455, 1992.
65. "Effects of cyclic stress on the magnetic hysteresis parameters of polycrystalline iron", M.K.Devine, D.C.Jiles and S.Hariharan, Journal of Magnetism & Magnetic Materials, 104, 377, 1992.
66. "Detection of fatigue in structural steels by magnetic property measurements", M.K.Devine, D.A.Kaminski, L.B.Sipahi and D.C.Jiles, J. Mater. Eng. & Perf., 1, 249, 1992.
67. "Micromagnetic Barkhausen emission analysis of Tb-Dy-Fe under the action of an alternating field excitation", L.B.Sipahi, M.P.Schulze, D.C.Jiles and R.D.Greenough, IEEE Trans. Mag. 28, 3153, 1992.
68. "Variation of strain amplitude and phase in a cylindrical specimen of Tb-Dy-Fe in an ac magnetic field", M.P.Schulze, R.Chung, J.Greenough, R.Greenough, D.C.Jiles and R.Weber, IEEE Trans. Mag., 28, 3162, 1992.
69. "Effects of high temperature creep on the magnetic properties of steels", M.K.Devine and D.C.Jiles, IEEE Trans. Mag., 28, 2465, 1992.
70. "New procedures for in situ measurement of the magnetic properties of materials: applications of the Magnescope", A.R.Eichmann, M.K.Devine and D.C.Jiles, IEEE Trans. Mag., 28, 2462, 1992.
71. "A self consistent generalized model for the calculation of minor loop excursions in the theory of hysteresis", D.C.Jiles, IEEE Trans. Mag., 28, 2603, 1992.

72. "An investigation of various procedures for analysis of micromagnetic Barkhausen signals for nondestructive evaluation of steels", L.B.Sipahi and D.C.Jiles, *Nondestructive Testing & Evaluation*, 10, 183, 1992.
73. "Evaluation of fatigue in steel structural components by magnetoelastic Barkhausen noise technique", M.R.Govindaraju, D.C.Jiles, A.Strom and S.B.Biner.. *Journal of Applied Physics*, 73, 6165, 1993.
74. "Analytic model calculation of magnetic fields in a magnetic half space due to surface magnetic charge", Z.J.Chen M.R.Govindaraju, D.C.Jiles. *Journal of Applied Physics*, 73, 6858, 1993.
75. "Magnescope: applications in nondestructive evaluation", D.C.Jiles, A.R.Eichmann and M.K.Devine. *Journal of Applied Physics*, 73, 5617, 1993.
76. "A model for hysteretic behavior in ferromagnets subject to non collinear applied stress and field", M.J.Sablik, S.W.Rubin, D.A.Kaminski, D.C.Jiles and S.B.Biner. *Journal of Applied Physics*, 73, 6178, 1993. (Abstract only).
77. "Comprehensive analysis of Barkhausen emission spectra using pulse height analysis, frequency spectrum and pulse waveform analysis", L.B.Sipahi, D.Chandler and D.C.Jiles. *Journal of Applied Physics*, 73, 5623, 1993.
78. "Modelling of micromagnetic Barkhausen activity using a stochastic process extension to the theory of hysteresis", L.B.Sipahi, D.C.Jiles and G.Williams *Journal of Applied Physics*, 73, 5830, 1993.
79. "Measurements of magnetic circuit characteristics for comprehension of intrinsic magnetic properties of materials from surface inspection", Z.J.Chen, M.K.Devine and D.C.Jiles. *Journal of Applied Physics*, 73, 5620, 1993.
80. "Evaluation of surface modifications in high strength steels", D.C.Jiles, R.Kern and W.A.Theiner. *Nondestructive Testing & Evaluation*, 10, 317, 1993.
81. "Coupled magnetoelastic theory of magnetic and magnetostrictive hysteresis", M.J.Sablik and D.C.Jiles, *IEEE Trans. Mag.*, 29, 2113, 1993.
82. "Frequency dependence of hysteresis curves in non conducting magnetic materials", D.C.Jiles. *IEEE Trans. Mag.* 29, 3490, 1993.
83. "Micromagnetic surface measurements for evaluation of surface modifications due to cyclic stress", Z.J.Chen, A.Strom and D.C.Jiles. *IEEE Trans. Mag.* 29, 3031, 1993.
84. "Modelling of reversible domain wall motion under the action of magnetic field and localized defects", Z.J.Chen and D.C.Jiles. *IEEE Trans. Mag.* 29, 2554, 1993.
85. "A model for hysteretic magnetic properties under the application of non-coaxial stress and field", M.J.Sablik, S.W.Rubin, L.A.Riley, D.C.Jiles, D.A.Kaminski and S.B.Biner. *Journal of Applied Physics*, 74, 480, 1993.
86. "Enhanced differential magnetostrictive response in annealed Terfenol-D", N.Galloway, M.P.Schulze, R.D.Greenough and D.C.Jiles. *Applied Physics Letters*, 63, 842, 1993.
87. "Theoretical modelling of the effects of anisotropy and stress on the magnetization and magnetostriction of Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke. *Journal of Magnetism & Magnetic Materials*, 134, 143, 1994.
88. "The development of highly magnetostrictive rare earth iron alloys", D.C.Jiles. *Journal of Physics D (Applied Physics)*, 27, 1, 1994.

89. "Frequency dependence of hysteresis curves in conducting magnetic materials", D.C.Jiles, J. Appl. Phys. 76, 5849, 1994.
90. "Estimation of fatigue exposure from magnetic hysteresis parameters", Z.J.Chen, J.Kameda and D.C.Jiles, J. Appl. Phys. 75, 6975, 1994.
91. "Monitoring neutron embrittlement in nuclear pressure vessel steels using micromagnetic Barkhausen emissions", L.B.Sipahi, M.R.Govindaraju and D.C.Jiles, J. Appl. Phys. 75, 6981, 1994.
92. "Modelling the effects of eddy current losses on frequency dependent hysteresis in electrically conducting media", D.C.Jiles. IEEE Trans. Mag. 30, 4326, 1994.
93. "Recent developments in modelling of the stress derivative of magnetization in ferromagnetic materials", D.C.Jiles and M.K.Devine. J.Appl.Phys. 76, 7015, 1994.
94. "Effects of surface stress on computer simulation of Barkhausen effect emissions: model predictions and comparison with X ray diffraction studies", D.C.Jiles and L.Suominen. IEEE Trans. Mag. 30, 4924, 1994.
95. "Assessment of creep damage in ferromagnetic materials using magnetic inspection", Z.J.Chen, M.R.Govindaraju, D.C.Jiles, S.B.Biner and M.J.Sablik. IEEE Trans. Mag. 30, 4596, 1994.
96. "Imaging surface conditions of ferromagnetic steel using Barkhausen techniques", M.A.Negley and D.C.Jiles. IEEE Trans. Mag. 30, 4509, 1994.
97. "Variation of coercivity of ferromagnetic material during cyclic stressing", Z.Gao, Z.J.Chen, D.C.Jiles and S.B.Biner. IEEE Trans. Mag. 30, 4593, 1994.
98. "The law of approach as a means of modelling the effect of time dependent stress on magnetization in hysteretic systems", D.C.Jiles and M.K.Devine. Journal of Magnetism and Magnetic Materials, 140-144, 1881, 1995.
99. "Magneprobe: a portable system for detection and characterization of Barkhausen signals for nondestructive testing of ferromagnetic materials", Journal of Magnetism and Magnetic Materials, 140-144, 1841, 1995.
100. "Magnetization and magnetostriction in Tb-Dy-Fe", D.C.Jiles and J.B.Thoelke. Physica Status Solidi, 147, 535, 1995.
101. "Nondestructive magnetic measurements in weld and base metal of service exposed Cr-Mo steel", A.Mitra, Z.J.Chen and D.C.Jiles. NDT International, 28, 29, 1995.
102. "Effects of tensile stress on magnetic Barkhausen emissions in amorphous Fe-Si-B alloy", A.Mitra, L.B.Sipahi, M.R.Govindaraju and D.C.Jiles, Journal of Magnetism & Magnetic Materials 153, 231, 1995.
103. "A magnetic coupling gel for improvement of magnetic interface coupling for nondestructive evaluation", Z.J.Chen, M.Negley and D.C.Jiles, IEEE Trans.Mag., 31, 4029, 1995.
104. "Influence of microstructure on micromagnetic Barkhausen emissions in AISI 4140 steel", A.Mitra, M.R.Govindaraju and D.C.Jiles, IEEE Trans.Mag., 31, 4053, 1995.
105. "Effects of tensile stress on magnetic Barkhausen parameters in 2605CO amorphous alloys", A.Mitra and D.C.Jiles, IEEE Trans. Mag., 31, 4020, 1995.
106. "Theory of the magnetomechanical effect", D.C.Jiles. Journal of Physics D (Applied Physics), 28, 1537, 1995.

107. "The magnetomechanical effect in electrolytic iron", M.K.Devine and D.C.Jiles. *Journal of Applied Physics* 79, 5493, 1996.
108. "Enhancement of the piezomagnetic response of highly magnetostrictive rare earth - iron alloys at KHz frequencies", P.Pulvirenti, D.C.Jiles, R.D.Greenough and I.M.Reed, *Journal of Applied Physics* 79, 6219, 1996.
109. "Hydrogen charging in metals and its effect on magnetic properties", A.Ramesh, M.R.Govindaraju, D.C.Jiles and S.B.Biner, *Journal of Applied Physics* 79, 5453, 1996.
110. "Effects of surface condition on Barkhausen emissions in steel", A.Parakka, D.C.Jiles, H.Gupta and S.Jalics, *Journal of Applied Physics* 79, 6045, 1996.
111. "The dependence of energy dissipation on annealing temperature of melt spun NdFeB permanent magnet materials", Z.Gao, D.C.Jiles, D.J.Branagan and R.W.McCallum, *Journal of Applied Physics* 79, 5510, 1996.
112. "Modelling of permanent magnets: interpretation of parameters from the Jiles-Atherton hysteresis model", L. Henderson Lewis, D.O.Welch, Z.Gao and D.C.Jiles, *Journal of Applied Physics* 79, 6470, 1996.
113. "Magnetostriction and magnetic Gruneisen parameters in pseudo-binary rare earth transition metal alloys", P.P.Pulvirenti and D.C.Jiles. *IEEE Transactions on Magnetics*, 32, 4785, 1996.
114. "Magnetic property variations in nickel caused by non-magnetic inclusions", A.Ramesh, M.R.Govindaraju, D.C.Jiles and S.B.Biner. *IEEE Transactions on Magnetics*, 32, 4836, 1996.
115. "A model of anisotropic anhysteretic magnetization", A.Ramesh, D.C.Jiles and J.Roderick. *IEEE Transactions on Magnetics*, 32, 4234, 1996.
116. "Composition dependence between magnetomechanical effect and magnetostriction", M.K.Devine and D.C.Jiles. *IEEE Transactions on Magnetics*, 32, 4740, 1996.
117. "Finite element simulation of magnetic detection of creep damage at seam welds", M.J.Sablik, S.W.Rubin, D.C.Jiles, D.A.Kaminski and Y.Bi. *IEEE Transactions on Magnetics*, 32, 4290, 1996.
118. "Nondestructive evaluation of creep damage in power plant steam generators and piping by a new magnetic inspection technique", M.R.Govindaraju, D.A.Kaminski, S.B.Biner and D.C.Jiles. *Nondestructive Testing and Evaluation*, 30, 11, 1997.
119. "Magnetic Barkhausen emissions in as-quenched Fe-Si-B amorphous alloy", A.Mitra and D.C.Jiles. *Journal of Magnetism and Magnetic Materials*, 168, 169, 1997.
120. "Micromagnetic Barkhausen emissions in 2.25Cr-1Mo steel subjected to creep", A.Mitra, Z.J.Chen, F.Laabs and D.C.Jiles. *Philosophical Magazine*, 75, 847, 1997.
121. "Magnetomechanical effect in nickel and cobalt", M.K.Devine and D.C.Jiles. *Journal of Applied Physics*, 81, 5603, 1997.
122. "Generalization of hysteresis modeling to anisotropic and textured materials", A.Ramesh and D.C.Jiles. *Journal of Applied Physics*, 81, 5585, 1997.
123. "Barkhausen effect in steels and its dependence on surface condition", A.P.Parakka, D.C.Jiles and H.Gupta. *Journal of Applied Physics*, 81, 5085, 1997.

124. "Application of the anisotropic extension of the theory of hysteresis to the magnetization curves of crystalline and textured magnetic materials", D.C.Jiles, A.Ramesh and Y.Shi, IEEE Transactions on Magnetics 33, 3961, 1997.
125. "The dependence of magnetic properties on fatigue behavior in A533B nuclear pressure vessel steels", Y.Bi, M.R.Govindaraju and D.C.Jiles, IEEE Transactions on Magnetics 33, 3928, 1997.
126. "Effect of surface mechanical changes on magnetic Barkhausen emissions", A.P.Parakka, J.Batey, D.C.Jiles, M.Zhang and H.Gupta. IEEE Transactions on Magnetics 33, 4026, 1997.
127. "Generalization of hysteresis modeling to anisotropic and textured materials", Y.M.Shi, D.C.Jiles and A.Ramesh. Journal of Magnetism and Magnetic Materials, 187, 75, 1998.
128. "Modeling of magnetic properties of NdFeB particulate composites with different compacting processes", X.Fang and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 187, 79, 1998.
129. "Effect of stress and microstructural changes on magnetic properties of nickel-alumina composites", M.Govindaraju, X.Fang, S.B.Biner and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 177, 207, 1998.
130. "Domain wall motion in a random potential and hysteresis modelling", M.Pasquale, V.Basso, G.Bertotti, D.C.Jiles and Y.Bi. Journal of Applied Physics, 83, 6497, 1998.
131. "Finite Element analysis of the influence of fatigue cracks on magnetic properties of steels", Y.M.Shi and D.C.Jiles. Journal of Applied Physics, 83, 6353, 1998.
132. "Dependence of magnetic properties on crack size in steels", Y.Bi and D.C.Jiles, IEEE Trans. Mag., 34, 2021, 1998.
133. "Modeling of magnetic properties of heat treated Dy-doped NdFeB particles bonded in isotropic and anisotropic arrangements", X.Fang, D.C.Jiles and Y.Shi. IEEE Trans. Mag., 34, 1291, 1998.
134. "Finite element modelling of creep damage effects on a magnetic detector signal for a seam weld/HAZ-region in steel pipe", M.J.Sablik, D.C.Jiles and M.R.Govindaraju. IEEE Trans.Mag., 34, 2156, 1998.
135. "Modeling the effects of torsional stress on hysteretic magnetization", M.J.Sablik and D.C.Jiles, IEEE Transactions on Magnetics, 35, 498, 1999.
136. "Effect of matrix on magnetostriction of terfenol based composites", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, D.K.Falzgraf, R.W.McCallum and D.C.Jiles. Applied Physics Letters, 74, 1159, 1999.
137. "Microstructure and magnetic properties of as-quenched and heat treated (NdDy)FeB powders produced by high pressure gas atomization", J.E.Snyder, C.C.H.Lo, X.Fang, B.Kriegermeier and D.C.Jiles. J.Appl.Phys., 85, 5678, 1999.
138. "Core loss reduction in electrical steels through materials processing", B.Verbrugge and D.C.Jiles. J.Appl.Phys., 85, 4895, 1999.
139. "Application of Preisach and Jiles-Atherton models to the simulation of hysteresis in soft magnetic alloys", M.Pasquale, G.Bertotti, D.C.Jiles and Y.Bi. J.Appl.Phys., 85, 4373, 1999.
140. "Monitoring fatigue damage in materials using magnetic measurement techniques", C.C.H.Lo, F.Tang, Y.Shi, D.C.Jiles and S.B.Biner. J.Appl.Phys., 85, 4595, 1999.

141. "Metal bonded Co- ferrite composites for magnetostrictive torque sensor applications", Y.Chen, J.E.Snyder, C.R.Schwichtenberg, K.W.Dennis, R.W.McCallum and D.C.Jiles. IEEE Trans. Mag. 35, 3652, 1999.
142. "Reducing core losses in amorphous Fe₈₀B₂Si₈ ribbons by laser induced domain refinement", M.J.Johnson, R.Chen and D.C.Jiles. IEEE Trans. Mag. 35, 3865, 1999.
143. "Finite element modeling of an electrically variable inductor", Y.Bi and D.C.Jiles. IEEE Trans. Mag. 35, 3517, 1999.
144. "Measurements and modeling of hysteresis in magnetic materials under the action of an orthogonal bias field", Y.Bi and D.C.Jiles. IEEE Trans. Mag. 35, 3787, 1999.
145. "Evaluation of fatigue damage using a magnetic measurement technique", C.C.H.Lo, F.Tang, D.C.Jiles and S.B.Biner. IEEE Trans. Mag. 35, 3977, 1999.
146. "A modified Stoner Wohlfarth computational model for hysteretic magnetic properties of a ferromagnetic composite rod under torsion", M.J.Sablik and D.C.Jiles, J.Phys.D, 32, 1971, 1999.
147. "An extended model of the magnetic Barkhausen effect based on the ABBM model", D.Clatterbuck, V.Garcia, M.J.Johnson and D.C.Jiles. Journal of Applied Physics 87, 4771, 2000.
148. "Temperature dependence of the magneto-mechanical effect in metal bonded cobalt ferrite composites under torsional strain" Y.Chen, J.E.Snyder, K.Dennis, R.W.McCallum and D.C. Jiles. Journal of Applied Physics 87, 5798, 2000.
149. "Effects of fatigue induced changes in microstructure and stress on domain structure and magnetic properties", C.C. Lo, F.Tang, S.B.Biner and D.C. Jiles. Journal of Applied Physics 87, 6520, 2000.
150. "Dynamics of domain magnetization and the Barkhausen effect", D.C.Jiles. (Invited review), Czechoslovak Journal of Physics, 50, 893, 2000.
151. "Magnetic methods in nondestructive testing", D.C.Jiles, (Invited paper), Encyclopedia of Materials Science and Technology, p. 6021 Ed. K.H.J.Buschow et al., Elsevier Press, Oxford, September 2001.
152. "The magnetomechanical effect under torsional stress and the law of approach in a Co ferrite composite" Y. Chen and D.C. Jiles. IEEE Transactions on Magnetics, 37, 3069, 2001.
153. "Application of Preisach analysis to detection of fatigue damage" Y.Y.Melikhov, C.C.H.Lo, D.C.Jiles, I.Tomáš, J.Kadlecová, O.V.Perevertov. IEEE Transactions on Magnetics, 36, 3211, 2000.
154. "Modeling hysteretic magnetic properties with changing torsion and constant magnetic field in steel", M.J.Sablik and D.C.Jiles. IEEE Transactions on Magnetics, 36, 3248, 2000.
155. "Magnetic measurement of material loss in case-hardened steel using a new Barkhausen effect system", B.Zhu, M.J.Johnson and D.C.Jiles. IEEE Transactions on Magnetics, 36, 3602, 2000.
156. "Geometrical enhancements to permanent magnet flux sources: applications to energy efficient magnetocaloric refrigeration systems", S.J.Lee and D.C. Jiles. IEEE Transactions on Magnetics, 36, 3105, 2000.
157. "Modeling of magnetic properties of polymer bonded NdFeB magnets with surface modifications", J.Xiao, J.U.Otaigbe and D.C.Jiles, Journal of Magnetism and Magnetic Materials, 218, 60, 2000.

158. "Superparamagnetic magnetization equation in two dimensions", D.C.Jiles, S.J.Lee J.Kenkel and K.Metlov. Applied Physics Letters, 77, 1029, 2000.
159. "Multi-function magnetic Barkhausen emission measurement system", B.Zhu, M.J.Johnson, C.C.Lo and D.C.Jiles. IEEE Transactions on Magnetics, 37, 1095, 2001.
160. "The Effect of Nitrogen on the Microstructure, Stress, and Magnetic Properties of RF-Sputtered Fe-Si-Al(-N) Thin Films", J.E.Snyder, C.C.H.Lo, R.Chen, B.Kriegermeier, J.Leib, S.J.Lee, M.J.Kramer and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 226-230, 1669, 2001.
161. "Magnetic force microscopy study of magnetization reversal in sputtered FeSiAl(N) films", C.C.H.Lo, J.E.Snyder, J.Leib, R.Chen, B.Sutton, M.J.Kramer, D.C.Jiles and M.T.Kief. Journal of Applied Physics, 89, 2868, 2001.
162. "Magnetic measurements for NDE: background, implementation and applications", (Invited paper), M.J.Johnson, C.C.H.Lo, B.Zhu, H.Cao and D.C.Jiles. Journal of Nondestructive Evaluation, 20, 11, 2000.
163. "Micromagnetic modeling of the magnetomechanical effect", B.Zhu, C.C.H.Lo, S.J.Lee and D.C.Jiles. J. Appl. Phys., 89, 7009, 2001.
164. "Application of non-linear Barkhausen model incorporating anhysteretic susceptibility to annealed iron", S.J.Lee, B.Zhu, C.C.H.Lo, D.M.Clatterbuck and D.C.Jiles. IEEE Trans. Mag. 37, 2340, 2001.
165. "Magnetization reversal in CoFeHfO films", C.C.H.Lo, J.E.Snyder, J.Leib, D.Wang, Z.Qian, J.M.Daughton and D.C.Jiles. IEEE Trans. Mag. 37, 2337, 2001.
166. "Magnetic response to cyclic fatigue of low carbon Fe-based samples", Y.Melikhov, C.C.H.Lo, O.Perevertov, J.Kadlekova, D.C.Jiles, I.Tomas. Journal of Physics D. (Applied Physics), 35, 413, 2002.
167. "Investigation of sensitivity of Preisach analysis for NDT", Y.Melikhov, D.C.Jiles, I.Tomas, C.C.H.Lo, O.Perevertov, J.Kadlekova, IEEE Trans. Mag. 37, 3907, 2001.
168. "Magnetomechanical effects under torsional strain in iron, cobalt and nickel", Y.Chen, B.K.Kriegermeier-Sutton, J.E.Snyder, K.W.Dennis, R.W.McCallum and D.C.Jiles. Journal of Magnetism and Magnetic Materials, 236, 131, 2001.
169. "Hysteresis models: non-linear magnetism on length scales from the atomistic to the macroscopic", Journal of Magnetism and Magnetic Materials, 242-245, 116, 2002.
170. "Magnetic Force Microscopy Characterization of an Order-Disorder transition with hysteresis: the Magnetic-Martensitic Phase Transformation in $Gd_5(Si_xGe_{1-x})_4$ ", J.Leib, C.C.H. Lo, J.E. Snyder, J.A. Paulsen, P. Xi and D.C. Jiles. Journal of Applied Physics, 91, 8852, 2002.
171. "Permanent magnet array for the magnetic refrigerator", S J Lee, J Kenkel, V K Pecharsky, and D C Jiles. Journal of Applied Physics, 91, 8894, 2002.
172. "Examination of the relationship between the parameters of Barkhausen effect model and microstructure of magnetic materials", C. C. H. Lo, S.J. Lee, L.C. Kerdus and D. C. Jiles. Journal of Applied Physics, 91, 7651, 2002.

173. "Lorentz transmission electron microscopy and magnetic force microscopy characterization of NiFe / Al-oxide / Co films", A.C.C.Yu, C.C.H.Lo, A.K.Petford-Long, D.C.Jiles and T.Miyazaki, *J. Appl. Phys.*, 91, 780, 2002
174. "Design of permanent magnet flux source for a rotary magnetic refrigerating system", S.J. Lee, J. Kenkel, and D.C. Jiles, *IEEE Transactions in Magnetism* 38, 2991, 2002.
175. "Magnetic force microscopy characterization of unusual magnetic coupling in an extraordinarily responsive magnetic material", J. Leib, C.C. H. Lo, J.E. Snyder and D.C. Jiles, *IEEE Transactions in Magnetism* 38, 2447, 2002.
176. "Thermal expansion of single crystal $Gd_5(Si_2Ge_2)$ showing unusual first-order phase transformation", M.Han, J.A. Paulsen, J.E. Snyder, D.C. Jiles. *IEEE Transactions in Magnetism* 38, 3252, 2002.
177. "Modeling of stress effects on magnetic hysteresis and Barkhausen emission using an integrated hysteretic-stochastic model" C.C.H. Lo, S.J. Lee, L. Li, L.C. Kerduş and D.C. Jiles, *IEEE Transactions in Magnetism* 38, 2418, 2002.
178. "Evaluation of the effects of pulsed magnetic field treatment on magnetic materials", C.C.H.Lo, D.C.Jiles, M.Mina, M.J.Johnson, L.C.Kerduş and J.Leib. *Materials Evaluation* 60 (8), 971, 2002.
179. "The role of new materials in the development of magnetic sensors and actuators (Invited)", D.C.Jiles and C.C.H.Lo, *Sensors & Actuators: A. Physical Sensors*, 106, 3, 2003.
180. "Design of high-magnetic field gradient sources for magnetically-induced flow of ferrofluids", W. He, S. J Lee, and D. C. Jiles, D. H. Schmidt, M. D. Porter, and R. Shinar. *Journal of Applied Physics* 93, 7459, 2003.
181. "Microelectromagnetic device for a ferrofluidic actuator", Y. Melikhov, S. J. Lee, D. C. Jiles, D. H. Schmidt, M. D. Porter and R. Shinar. *Journal of Applied Physics* 93, 8438, 2003.
182. "In-situ applied field imaging of a magnetic tunnel junction using magnetic force microscopy", J. Leib, C.C.H. Lo, J.E. Snyder and D.C. Jiles. *Journal of Applied Physics* 93, 8537, 2003.
183. "Thermal expansion studies on the unusual first order transition of $Gd_5Si_{2.09}Ge_{1.91}$ made from high purity and commercial Gd metals", M. Han, D.C. Jiles, J.E. Snyder, C.C.H. Lo and J.A. Paulsen. *Journal of Applied Physics* 93, 8486, 2003.
184. "Theory of the magnetomechanical effect: application of the Rayleigh law to the stress domain", L.Li and D.C. Jiles. *Journal of Applied Physics* 93, 8480, 2003.
185. "Modeling the interrelating effects of plastic deformation and stress on magnetic hysteresis and Barkhausen emission", C. C. H. Lo, E. Kinser and D. C. Jiles. *Journal of Applied Physics* 93, 6626, 2003.
186. "Influence of nanostructure and nitrogen content on the optical and electrical properties of reactively sputtered FeAlSi(N) films", S.J.Lee, J.E.Snyder, C.C.H.Lo, K.M.Campos-Anderson, J.W.Andregg and D.C.Jiles. *Journal of Applied Physics*, 94, 2607, 2003.
187. "Simultaneous magnetic force microscopy and magnetoresistance characterization of a magnetic tunnel junction with in situ applied field", J.S.Leib, B.J.Baker, Y.P.Shen, J.E.Snyder, T.Kawaguchi and D.C.Jiles. *IEEE Transactions on Magnetism*, 39, 3456, 2003.
188. "A magnetic imaging system for evaluation of material conditions using magnetoresistive devices", C.C.H.Lo, J.A.Paulsen and D.C.Jiles. *IEEE Transactions on Magnetism*, 39, 3453, 2003.

189. "Angular dependence of the unusual first order transition temperature in $Gd_5(Si_xGe_{1-x})_4$ ", M.Han D.C.Jiles, S.J.Lee, J.E.Snyder, T.A.Lograsso and D.L.Schlagel. IEEE Transactions on Magnetics, 39, 3151, 2003.
190. "Study of Curie temperature of cobalt ferrite based composites for stress sensors applications" J.A.Paulsen, J.E.Snyder, A.P.Ring, J.S.Leib, C.C.H.Lo and D.C.Jiles. IEEE Transactions on Magnetics, 39, 3316, 2003.
191. "Modified law of approach for the magnetomechanical model: application of the Rayleigh law to the stress domain", L.Li and D.C.Jiles. IEEE Transactions on Magnetics, 39, 3037, 2003.
192. "Experimental and modeling studies of the effects of shear stress on magnetization in nickel", J.A.Paulsen, C.C.H.Lo, J.E.Snyder, A.Ring, Y.Shen and D.C.Jiles. IEEE Transactions on Magnetics, 39, 3417, 2003.
193. "Sensitivity analysis of simulations for magnetic particle inspection using finite element method", J.Y.Lee, S.J.Lee, D.C.Jiles, M.Garton, R.Lopez and L.Brasche. IEEE Transactions on Magnetics, 39, 3604, 2003.
194. "Recent advances and future directions in magnetic materials", (Invited), D.C.Jiles. Acta Materiala 51, 5907, 2003.
195. "Extraordinary magnetomechanical coupling as a result of a combined magnetic/structural transition in a new class of rare earth compound (Invited)", D.C.Jiles, S.J.Lee, M.Han, C.C.H.Lo, J.E.Snyder, K.A.Gschneidner, V.K.Pecharsky, A.O.Pecharsky, T.Lograsso and D.Schlagel, Journal of Magnetics, 8 (1), 1, 2003.
196. "Quantitative evaluation of stress distribution in magnetic materials by Barkhausen effect and magnetic hysteresis measurements", C.C.H.Lo, J.A.Paulsen, E.Kinser and D.C.Jiles. IEEE Transactions on Magnetics 40, 2173, 2004.
197. "Giant Magnetostriction Behavior around the Curie Temperature of Single Crystal $Gd_5(Si_{0.5}Ge_{0.5})_4$ ", M. Han, D. C. Jiles, J. E. Snyder, T. A. Lograsso, and D. L. Schlagel. Journal of Applied Physics, 95, 6945, 2004.
198. "Dynamics of the Magnetic Field-Induced First Order Magnetic-Structural Phase Transformation of $Gd_5(Si_{0.5}Ge_{0.5})_4$ ", J.S.Leib, J.E.Snyder, D.C.Jiles, D.L.Schlagel and T.A.Lograsso. Journal of Applied Physics, 95, 6915, 2004.
199. "A new approach to modeling the magnetomechanical effect", L.Li and D.C.Jiles. Journal of Applied Physics, 95, 7058, 2004.
200. "Reflectance anisotropy of $Gd_5Si_2Ge_2$ and $Tb_5Si_{2.2}Ge_{1.8}$ ", S.J.Lee, J.M.Park, J.E.Snyder, D.C.Jiles, D.L.Schlagel, T.A.Lograsso, A.O.Pecharsky and D.W.Lynch. Applied Physics Letters, 84, 1865, 2004.
201. "Ferromagnetic properties of deformation induced martensite transformation in AISI 304 stainless steel", A.Mitra, P.K.Srivastava, P.K.De, D.K.Bhattacharya and D.C. Jiles. Metallurgical Transactions 35A, 599, 2004.
202. "New Manganese substituted cobalt ferrite magnetostrictive materials for magnetic stress sensor applications", J.A.Paulsen, A.P.Ring, C.C.H.Lo, J.E.Snyder and D.C.Jiles. Journal of Applied Physics, 97, 44502, 2005.
203. "Dynamics of the magnetic field induced first order magnetic-structural phase transition in $Gd_5(Si_{0.5}Ge_{0.5})_4$ ", J.S.Leib, J.E.Snyder, D.C.Jiles, T.A.Lograsso, D.Schlagel. Journal of Applied Physics, 95, 6915, 2004
204. "Frequency dependence of magnetostriction for magnetic actuators", P.P.Thant, A.J.Moses and D.C.Jiles. Journal of Electrical Engineering, 55, 7, 2004.

205. "Anisotropy studies and magnetic transitions of single crystal Tb₅(Si_{2.2}Ge_{1.8})", Han, M., Snyder, J. E., Tang, W., Lograsso, T. A., Schlagel, D., Jiles, D. C. *Journal of Applied Physics*, 97, 10M313, 2005.
206. "Thermal Expansion and Gruneisen Parameters in Pr-Ni-Si Compounds", S. H. Song, A. O. Pecharsky, D. Wu, K. W. Dennis, V. K. Pecharsky, J. E. Snyder, D. C. Jiles, T. A. Lograsso and R. W. McCallum. *Journal of Applied Physics*, 97, 10M516, 2005.
207. "Thermal expansion and magnetostriction in Pr-Ni-Si compounds", D.C.Jiles, S.H.Song, J.E.Snyder, V.K.Pecharsky, T.A.Lograsso, D.Wu, A.O.Pecharsky, Y.Mudryk, K.W.Dennis and R.W.McCallum. *Journal of Magnetism and Magnetic Materials*, 299, 288, 2005.
208. "Spectroscopic ellipsometry study optical anisotropy in GdSiGe and its comparison with reflectance difference spectroscopy measurement", J.M.Park, S.J.Lee, J.E.Snyder, D.C.Jiles, D.L.Schlagel, T.A.Lograsso, A.O.Pecharsky and D.W.Lynch. *Physical Review B*, 73, 035110, 2006.
209. "Magneto-optic sensor for remote evaluation of surfaces", S.J. Lee, S.H. Song, D.C. Jiles, and H. Hauser, *IEEE Transactions on Magnetics*, 41, 2257, 2005.
210. "Improvement of magnetomechanical properties of cobalt ferrite by magnetic annealing", C.C.H.Lo, A.P.Ring, J.E.Snyder and D.C.Jiles. *IEEE Transactions on Magnetics*, 41, 3676, 2005.
211. "Thermal Expansion and Magnetostriction in Pr₅Ni₂Si₃ Compounds", S.H. Song, D.C. Jiles and J.E. Snyder. *IEEE Transactions on Magnetics*, 41, 3499, 2005.
212. "Modeling microstructural effects on Barkhausen effect signals in surface modified magnetic materials", C.C.H.Lo, A.J.Barsic, E.R.Kinser and D.C.Jiles. *IEEE Transactions on Magnetics*, 41, 3292, 2005.
213. "Temperature Dependence of Magnetic Anisotropy in Mn-Substituted Cobalt Ferrite", Y. Melikhov, C. C. H. Lo, J. E. Snyder, J. A. Paulsen, A. P. Ring, K. W. Dennis, and D. C. Jiles. *Journal of Applied Physics* 99, 08R102, 2006.
214. "Magneto-Optic Linear Displacement Sensor with High Spatial-Resolution and Low Noise", S. Lee, Y. Melikhov, D. C. Jiles, C. Park, H. Hauser. *Journal of Applied Physics* 99, 08B301, 2006.
215. "Theoretical Calculation of Magnetic Structure Variation in Pr₅Ni₂Si₃ Compounds", S. H. Song, J. E. Snyder and D. C. Jiles. *Journal of Applied Physics* 99, 08P304, 2006.
216. "Analysis of Barkhausen effect signals in surface-modified magnetic materials using a hysteretic-stochastic model", C. C. H. Lo, E. R. Kinser, A. J. Barsic and D. C. Jiles. *Journal of Applied Physics* 99, 08B705, 2006.
217. "Variation of Magnetostriction with Temperature in Tb₅Si_{2.2}Ge_{1.8} Single Crystal", A. P. Ring, H. L. Ziegler, T. Lograsso, D. Schlagel, J. E. Snyder, and D. C. Jiles. *Journal of Applied Physics* 99, 08R104, 2006.
218. "The effect of chromium substitution on the magnetic anisotropy and its temperature dependence in Cr-substituted cobalt ferrite", Y. Melikhov, J. E. Snyder, C. C. H. Lo, P. N. Matlage, S. H. Song, K. W. Dennis and D. C. Jiles. *IEEE Transactions on Magnetics*, 42, 2861, 2006.
219. "Analysis of a Remote Magneto-Optic Linear Displacement Sensor using Jones Matrix Approach" S. J. Lee, Y. Melikhov, C. M. Park, H. Hauser, and D.C. Jiles. *IEEE Transactions on Magnetics*, 42, 3273, 2006.

220. "Evaluation of Deformation Behaviour of HSLA-100 Steel using Magnetic Hysteresis Techniques", A.K. Panda, S.K. Das, A. Mitra, D.C. Jiles and C.C.H. Lo. IEEE Transactions on Magnetics, 42, 3264, 2006.
221. "Measurement and modeling of B-H loops and losses in high silicon non-oriented steels", S.Zirka, Y.I.Moroz, P.Marketos, A.J.Moses and D.C.Jiles. IEEE Transactions on Magnetics, 42, 3177, 2006.
222. "A new approach to modeling the dependence of magnetization on magnetic field in the high field regime". H.Hauser, D.C.Jiles, Y.Melikhov, L.Li and R.Grossinger. Journal of Magnetism and Magnetic Materials, 300, 273, 2006.
225. "Modelling of non-linear behavior and hysteresis in magnetic materials (Invited)", D.C.Jiles and Y.Melikhov, Handbook of Magnetism and Advanced Magnetic Materials, , Volume 2: Micromagnetism, p. 1059-1079, Editors H.Kronmuller and S.S.Parkin, John Wiley & Sons Scientific Publishers, 2007.
226. "Magnetic structures in $\text{Pr}_6\text{Ni}_2\text{Si}_3$ and $\text{Pr}_5\text{Ni}_2\text{Si}_3$ ", D.C.Jiles and S.H.Song. Journal of Applied Physics, 101, 023918, 2007.
227. "Magnetic and Magnetoelastic Properties of Ga-substituted Cobalt Ferrite", S. H. Song, C. C. H. Lo, S. J. Lee, S. T. Aldini, J.E.Snyder and D. C. Jiles. Journal of Applied Physics, 101, 09C517, 2007.
228. "Magneto-optical Properties of $\text{CoFe}_{2-x}\text{Ga}_x\text{O}_4$ ", S. J. Lee, S. H. Song, C. C. H. Lo, S. T. Aldini and D. C. Jiles. Journal of Applied Physics, 101, 09C502, 2007.
229. "Irreversible Field-induced strain Magnetostriction at Temperatures above and below the Order-Disorder Transition in Single Crystal $\text{Tb}_5\text{Si}_{2.2}\text{Ge}_{1.8}$ ", A. P. Ring, T. Lograsso, D. Schlagel, J. E. Snyder and D. C. Jiles. Journal of Applied Physics, 101, 09C527, 2007.
230. "Magnetic and Magnetoelastic Properties of Cr-substituted Cobalt Ferrite" S. J. Lee, C. C. H. Lo, P. N. Matlage, S. H. Song, Y. Melikhov, J.E.Snyder and D.C.Jiles. Journal of Applied Physics 102, 073910, 2007
231. "Examination of the equivalence of ferromagnetic hysteresis models describing the dependence of magnetization on magnetic field and stress". H.Hauser, D.C.Jiles, Y.Melikhov and L.Li. IEEE Transactions on Magnetics, 45 1940, 2009.
232. "Including effects of microstructure and anisotropy in theoretical models describing hysteresis in ferromagnetic materials", H.Hauser, D.C.Jiles, Y.Melikhov. Applied Physics Letters, 91, 172512, 2007.
233. "Generalization of the classical domain method for calculating dynamic hysteresis loops in grain oriented steels", S.E.Zirka, Y.I.Moroz, P.Marketos, A.J.Moses, D.C.Jiles and T.Matsuo. IEEE Transactions on Magnetics, 44, 2113, 2007.
234. "Origin, measurement and application of the Barkhausen effect in magnetic steel", A.J.Moses and D.C.Jiles. Electromagnetic Nondestructive Evaluation, p.4-8, Editors S.Takahashi and H.Kikuchi, IOS Press 2007.
235. "Relationship between Hysteretic Behaviour of Magnetisation and Magnetoresistance", V.N.Krivoruchko, Y. Melikhov, and D. C. Jiles. Physical Review B 77, 180406, 2008.
236. "Estimation of Second Order Phase Transition Temperature of the Orthorhombic Phase of $\text{Gd}_5(\text{Si}_x\text{Ge}_{1-x})_4$ using Arrott plots", R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. Journal of Applied Physics 103, 033906, 2008.
237. "Lack of Magnetoacoustic Emissions in Iron with 6% Silicon", B. Augustyniak, M. Chmielewski, M. J. Sablik, F. J. G. Landgraf, D. C. Jiles and A. J. Moses. Journal of Magnetism and Magnetic Materials, 320, 2530, 2008.

238. “Determination of Curie Temperature by Arrott plot Technique in $Gd_5(SixGe_{1-x})_4$ ”, R. Hadimani, D.C. Jiles, Y. Melikhov, J.E. Snyder. *Journal of Magnetism and Magnetic Materials*, 320, e696, 2008.
239. “Temperature dependence of magnetic anisotropy of Ga-substituted cobalt ferrite”, Y. Melikhov, N. Ranvah, S. H. Song, D. C. Jiles, J. E. Snyder, A. J. Moses and P.I. Williams. *Journal of Applied Physics* 103, 07E506, 2008.
240. “Temperature dependence of magnetostriction of $Co_{1+x}Ge_xFe_{2-2x}O_4$ for magnetostrictive sensor and actuator applications”, N. Ranvah, I.C. Nlebedim, S.H. Song, Y. Melikhov, J.E. Snyder, D.C. Jiles, A.J. Moses, P.I. Williams, and F. Anayi, *IEEE Transactions on Magnetics*, 44, 3013, 2008.
241. “Viscous Behavior of Ferromagnets in the Voltage and Current Driven Regimes”, S.E. Zirka, Y.I. Moroz, P. Marketos, A.J. Moses and D.C. Jiles, *IEEE Transactions on Magnetics*, 44, 3189, 2008.
242. “Field induced structural phase transition at temperatures above the Curie point in $Gd_5(SixGe_{1-x})_4$ ”, R.L.Hadimani, Y Melikhov, J.E.Snyder, D.C.Jiles. *Journal of Applied Physics*, 105, 07A927, 2009.
243. “Comparison of Alternative Techniques for Characterization of Magnetostriction and Inverse Magnetostriction in Magnetic Thin Films”, A. Raghunathan, D. C. Jiles, and J. E. Snyder. *IEEE Transactions on Magnetics*, 45, 3269, 2009.
244. “Temperature dependence of magnetic anisotropy of germanium/cobalt co-substituted cobalt ferrite”, N. Ranvah, I. Nlebedim, Y. Melikhov, D. C. Jiles, J. E. Snyder, A. J. Moses, P. I. Williams, F. Anayi. *J. Appl. Phys.* 105, 07A518, 2009.
245. “The Ferro I Phase and Gadolinium”, J.F.Collingwood, S.B.Palmer, M.R.Lees, C.Edwards, J.A.Santos, J.B.Sousa and D.C.Jiles. *Physical Review B*, 79, 104401, 2009.
246. “Influence of Vacuum Sintering on Microstructure and Magnetic Properties of Magnetostrictive Cobalt Ferrite”, I. C. Nlebedim, N. Ranvah, A. J. Moses, D. C. Jiles, P. I. Williams, Y. Melikhov, J. E. Snyder and F. Anayi. *Journal of Magnetism and Magnetic Materials* 321, 2528, 2009.
247. “Modeling the Temperature Dependence of Hysteresis based on Jiles-Atherton Theory”, A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. *IEEE Transactions on Magnetics*, 45, 3954, 2009
248. “Anomalous behaviour in electrical transport properties in single crystal $Gd_5Si_{1.8}Ge_{2.2}$ and polycrystalline $Gd_5Si_{2.09}Ge_{1.91}$ ”, R. L. Hadimani, Y. Melikhov, J. E. Snyder, D. C. Jiles. *IEEE Transactions on Magnetics*, 45, 4368, 2009
249. “Temperature dependence of magnetic properties of $CoAl_xFe_{2-x}O_4$ for magnetostrictive sensor and actuator applications”, N. Ranvah*, I. Nlebedim*, Y. Melikhov*, J. E. Snyder*, A. J. Moses*, P. I. Williams*, D. C. Jiles. *IEEE Transactions on Magnetics*, 45, 4261, 2009
250. “Magnetic and Magnetomechanical Properties of $CoAl_xFe_{2-x}O_4$ for Stress Sensor and Actuator Applications”, I. Nlebedim, N. Ranvah, P.I. Williams, Y. Melikhov, J.E. Snyder, A.J. Moses and D.C. Jiles. *IEEE Transactions on Magnetics*, 45, 4120, 2009
251. “A generalized form of anyhysteretic magnetization for Jiles Atherton theory of hysteresis”, A.Raghunathan, Y.Melikhov, J.E.Snyder and D.C.Jiles. *Applied Physics Letters*, 95, 172510, 2009.
252. “Measurement of electrical steels with direct field determination”, O. Stupakov, R. Wood, Y. Melikhov, D.C. Jiles. *IEEE Transactions on Magnetics*, 46, 298, 2010.

253. "Theory of Irrecoverable and Recoverable Resistivity in $Gd_5(Si_xGe_{1-x})_4$ ", R. L. Hadimani and D. C. Jiles, *Magnetics Letters*, 1, 6000104, 2010.
254. "Growth of Crystalline Cobalt ferrite Thin Films at Lower Temperatures using Pulsed-laser Deposition Technique", A. Raghunathan, I. C. Nlebedim, J. E. Snyder and D. C. Jiles. *Journal of Applied Physics*, 107, 09A516, 2010.
255. "Theoretical Model of Temperature Dependence of Hysteresis based on Mean Field Theory", A. Raghunathan, Y. Melikhov, J. E. Snyder and D. C. Jiles. *IEEE Transactions on Magnetics*, 46, 1507, 2010.
256. "Resistivity Recovery in $Gd_5(Si_xGe_{1-x})_4$ ", R. L. Hadimani and D. C. Jiles. *Journal of Applied Physics*, 107, 09C501, 2010.
257. "Effect of Temperature Variation on the Magnetostrictive Properties of $CoAl_xFe_{2-x}O_4$ ", I. Nlebedim, N. Ranvah, Y. Melikhov, P.I. Williams, J.E. Snyder, A.J. Moses and D.C. Jiles. *Journal of Applied Physics*, 107, 09A936, 2010.
258. "Effect of Heat Treatment on the Magnetic and Magnetoelastic Properties of Cobalt Ferrite", I. C. Nlebedim, N. Ranvah, A. J. Moses, D. C. Jiles, P. I. Williams, Y. Melikhov, J. E. Snyder and F. Anayi. *Journal of Magnetism and Magnetic Materials*, 322, 1929, 2010
259. "A New Method for Evaluation of Mechanical Stress Using the Reciprocal Amplitude of Magnetic Barkhausen Noise", L. Mierczak, D. C. Jiles and G. Fantoni, *IEEE Transactions on Magnetics*, 47, 459, 2011.
260. "Analytic solution for variation of magnetic fields around closed circuits: an examination of deviations from the standard Ampere's law equation", A.E.Umenei, Y.Melikhov and D.C.Jiles. *IEEE Transactions on Magnetics*, 47, 734, 2011.
261. "Models for extrapolation of magnetization data on magnetic cores to high fields", A.E.Umenei, Y.Melikhov and D.C.Jiles. *IEEE Transactions on Magnetics*, 47, 4707, 2011.
262. "Transcranial Magnetic Stimulation: improved coil design for deep brain investigation", L.J. Crowther, P.I. Williams, Y. Melikhov, D.C. Jiles. *Journal of Applied Physics*, 109, 07B314, 2011.
263. "Influence of Reactive Atmosphere on Properties of Cobalt ferrite Thin Films Prepared using Pulsed-laser Deposition", A. Raghunathan, J.E.Snyder and D.C. Jiles. *Journal of Applied Physics*, 109, 083922, 2011.
264. "Dependence of Magnetomechanical Performance of Ga-Substituted Cobalt Ferrite on Temperature Variation", I.C. Nlebedim, Y. Melikhov, J.E. Snyder, A.J. Moses and D.C. Jiles. *Journal of Applied Physics*, 109, 07A908, 2011.
265. "Dependence of the magnetic and magnetoelastic properties of cobalt ferrite on processing parameters", I.C.Nlebedim, J.E.Snyder, A.J.Moses and D.C.Jiles. *Journal of Magnetism and Magnetic Materials*, 322, 3938, 2010.
266. "Field and temperature induced colossal strain in $Gd_5(Si_xGe_{1-x})_4$ ", R.L. Hadimani, P.A. Bartlett, Y. Melikhov, J.E. Snyder, D.C. Jiles, *J. Magn. Magn. Mater.* 323, 532-534, 2011.
267. "Effect of deviation from stoichiometric composition on structural and magnetic properties of cobalt ferrite, $Co_xFe_{3-x}O_4$ ($x = 0.2$ to 1.0)", I. C. Nlebedim, J. E. Snyder, A. J. Moses, and D. C. Jiles. *Journal of Applied Physics*, 111, 07D704, 2012.

268. "Developments in Deep Brain Stimulation using Time Dependent Magnetic Fields", L. J. Crowther, I. C. Nlebedim and D. C. Jiles, *J. Applied Physics*, 111, 07B325, 2012.
269. "Modelling of two-phase magnetic materials based on Jiles-Atherton theory of hysteresis", A. Raghunathan, Y. Melikhov, J. E. Snyder, and D. C. Jiles. *Journal of Magnetism and Magnetic Materials*, 324, 20, 2012.
270. "New designs for deep brain transcranial magnetic stimulation", P.I.Williams, P.Marketos, L.J.Crowther and D.C.Jiles. *IEEE Transactions on Magnetics*, 48, 1171, 2012.
271. "Calculation of Lorentz Forces on Coils for Transcranial Magnetic Stimulation", L. J. Crowther, R. L. Hadimani, D. C. Jiles. *IEEE Transactions on Magnetics*, 48, 4058, 2012
272. "Mapping Stress along Depth at the Surface of Steel Structures using a frequency dependent Magnetic Barkhausen Noise Technique", O. Kypris, I.C. Nlebedim and D.C. Jiles. *IEEE Transactions on Magnetics* 48, 4428, 2012.
273. "Study of the second order phase transition temperature of monoclinic phase in mixed phase region of $Gd_5(Si_xGe_{1-x})_4$ ", R. L. Hadimani, Y. Melikhov and D. C. Jiles. *IEEE Transactions on Magnetics* 48, 4070, 2012.
274. "Magnetocrystalline anisotropy in single crystal $Gd_5Si_{2.7}Ge_{1.3}$ ", R. L. Hadimani, Y. Melikhov, M. Han and D. C. Jiles. *IEEE Transactions on Magnetics* 48, 3989, 2012.
275. "Anisotropy and Magnetostrictive Properties of Non-stoichiometric Co-Ferrite", I. C. Nlebedim, J. E. Snyder, A. J. Moses and D. C. Jiles. *IEEE Transactions on Magnetics* 48, 3084, 2012.
276. "Fine structure observation in Magnetostriction near the critical temperature in $Gd_5Si_{1.95}Ge_{2.05}$ R. L. Hadimani, Y. Melikhov, J.E. Snyder, D.C. Jiles. *IEEE Transactions on Magnetics*, 49, 820, 2013.
277. "Realistically modeled TMS-coils for stress and Lorentz force calculations during MRI", L. Crowther, K. Porzig, R. Hadimani, H. Brauer and D.C. Jiles. *IEEE Transactions on Magnetics*, 49, 3426, 2013.
277. "Growth and Characterization of Magnetocaloric $Gd_5(Si_xGe_{1-x})_4$ Thin Films", R. Hadimani, I. C. Nlebedim, Y. Melikhov and D.C. Jiles. *Journal of Applied Physics*, 113, 17A935, 2013.
278. "Structural, Magnetic and Magnetoelastic Properties of Magnesium Substituted Cobalt Ferrite", I. C. Nlebedim, R. Hadimani, R. Prozorov and D.C. Jiles. *Journal of Applied Physics* 113, 17A928, 2013.
279. "Temperature Dependence of the Structural, Magnetic and Magnetostrictive Properties of Zinc-doped Cobalt Ferrite", I. C. Nlebedim, V. Monaji, P. J. Praveen, D. Das and D.C Jiles. *Journal of Applied Physics*, 113, 193904, 2013.
280. "Determining Residual Stress Depth Profiles using Magnetic Barkhausen Effect", L. Mierczak, Y Melikhov, D.C. Jiles. Accepted for publication in *IEEE Transactions on Magnetics*.
281. "Non-stoichiometric cobalt ferrite $Co_xFe_{3-x}O_4$ ($x = 1.0-2.0$): Structural, Magnetic and Magnetoelastic Properties", I.C. Nlebedim, J.E.Snyder, A.J. Moses and D.C. Jiles. *Journal of Magnetism and Magnetic Materials*, 343, 49, 2013
282. "Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models", L. J. Crowther, R. L. Hadimani, A. G. Kanthasamy, D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. *Journal of Applied Physics*, 115, 17B303, 2014

283. "Growth and Characterization of Pt-protected Gd₅Si₄ thin films", R. L. Hadimani, Y. Mudryk, T. E. Prost, V. K. Pecharsky, K. A. Gschneidner, and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17C113, 2014.
284. "Evolution of Griffiths Phase in La_{0.4}Bi_{0.6}Mn_{1-x}Ti_xO₃ Perovskite Oxide", V. Dayal, K.V. Punith, R. L. Hadimani and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17E111, 2014.
285. "Dependence of the magnetostrictive properties of cobalt ferrite on the initial powder particle size distribution", I. C. Nlebedim and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17A928, 2014.
286. "Structural and magnetic properties of Ti⁴⁺/Co²⁺ co-substituted cobalt ferrite", I. C. Nlebedim, K. W. Dennis, R. W. McCallum and D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17A519, 2014.
287. "Magnetocaloric effect in GdCo_xAl_{2-x} system for 0.15 ≤ x ≤ 1 compositions", H. Fu*; R. L. Hadimani; M. H. Wang; B. H. Teng; D. C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17A914, 2014.
289. "Optimization of sensor design for Barkhausen noise measurement using finite element analysis", N. Prabhu Gaunkar, O. Kypris, I.C.Nlebedim and D.C.Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17E512, 2014.
290. "Barkhausen spectroscopy: Non-destructive characterization of magnetic materials as a function of depth", O. Kypris, I.C. Nlebedim, D.C. Jiles. 58th Annual Conference on Magnetism and Magnetic Materials, Denver, Colorado, November 4-8, 2013. Journal of Applied Physics, 115, 17E305, 2014.
291. "A model for the Barkhausen frequency spectrum as a function of applied stress", O. Kypris, I.C. Nlebedim and D.C. Jiles, Journal of Applied Physics, 115, 083906, 2014.
292. "Transcranial Magnetic Stimulation of Mouse Brain Using High-Resolution Anatomical Models", L. J. Crowther, R. L. Hadimani, A. Kanthasamy and D. C. Jiles. Submitted to IEEE Transaction on Biomedical Engineering.
293. "Temperature dependence of magnetic properties of heat treated cobalt ferrite". I.C. Nlebedim, Y. Melikhov and D.C. Jiles. Journal of Applied Physics, 115, 43903, 2014.
294. "Magnetic stimulation of the brain", **(Invited)**, R.L.Hadimani, L.J.Crowther and D.C.Jiles, Magnetics Technology International, pp. 4-8, 2014.
295. "Differential effect of magnetic field orientation on the proliferation rate of dopaminergic neurons during transcranial magnetic stimulation", Y.Meng, R.L.Hadimani, V. Anantharam, A.Kanthasamy and D.C.Jiles. To be submitted to IEEE Transactions on Bioengineering, 2014.
296. "Study of Magnetic, Magnetotransport and Dielectric properties in La_{0.4}Bi_{0.6}Mn_{1-x}Ti_xO₃ Manganite", V. Punith Kumar, R. Hadimani, D.C. Jiles, R. Bhowmik and V. Dayal. Submitted to Journal of Physics C: Condensed

Matter.

297. “Enhancement of magnetocaloric effect in the Gd₂Al phase by Co alloying”, Z.Y.Huang, H. Fu, R.L. Hadimani and D.C.Jiles, J. Appl. Phys., 116, 83908, 2014.
298. “Determination of stimulation focality in heterogeneous head models during transcranial magnetic stimulation (TMS)”, American Physical Society March Meeting, March 2-6, 2015.
299. “First Successful Fabrication of Nanoparticles of magnetocaloric Gd₅Si₄”, American Physical Society March Meeting, March 2-6, 2015.

h-index and related citation measures

Web of Science

Total articles in publication list:	383
Sum of the Times Cited:	5877
Sum of Times Cited without self-citations:	5075
Citing Articles:	3485
Average Citations per Item:	15.34
h-index:	33

Google Scholar

Total number of articles:	631
Citations	10,761
h-index:	39
i-10 index	174

Updated: February 2015.