

IEEE Magnetics Society Newsletter

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[John Nyenhuis](#) and [Richard Dee](#), Editors

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Courtesy Associates Named Magnetics Society Executive Director

The IEEE and especially its Magnetics Society are volunteer organizations. As such, the Magnetics Society has been able to provide many services to its members at the lowest possible cost. These services include a high-quality journal, discounts at prestigious conferences, and a distinguished lecture series. I think that we all owe a vote of thanks to the many volunteers that have contributed so much to the Society. Since they are so numerous, I will not mention any of them by name, not wishing to slight the many who also deserve thanks. I urge those interested in volunteering their services to contact the Society officers and help to continue this valuable tradition. About twenty years ago, the INTERMAG and MMM conferences grew to the point that it was impossible to run them effectively with volunteers only. In particular, the complexity of hotel contracts and local arrangements has become formidable. At that time, it was realized that if we were to maintain the quality of the conferences, we would need professional help. Courtesy Associates was called in to help manage them. They have improved the efficiency of the conferences, and we are appreciative of their assistance. We have once more come to a point that other facets of the Society need professional management. Day-to-day problems arise which involve considerable detail and which require immediate attention. This proves a considerable burden on the Society officers. It has become increasingly difficult to find volunteers who are able to commit the time required to do these jobs. Therefore, upon the advice of the Administrative Committee of the Magnetics Society, Courtesy Associates, in an effort headed by [Diane Suiters](#), has been selected to act in an Executive Director capacity for the Society. They will handle many of the problems alluded to above and will be able to be more responsive to Society members. I will elaborate on many of these details in the next issue of the Newsletter.

Article submitted by
[Edward Della Torre](#)
Magnetics Society President

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Millennium Medals Awarded to Magnetics Society Members



As part of the IEEE celebration of the Third Millennium, IEEE Millennium Medals and Certificates honoring their outstanding achievements and contributions were presented to Magnetics Society members at Intermag 2000. Front row, from left, Koosuke Harada, Art Pohm, Fritz Friedlaender, Sidney Rubens, Emerson Pugh, Richard Barker and Gordon Slemon. Back row, from left, Yoshifumi Sakurai, Carl Patton, Chris Bajorek, Floyd Humphrey, Mark Kryder, Andrew Bobeck, Stanley Charap, David Thompson, William Doyle and Fred Luborsky. Magnetics Society members Simon Foner, Harold Lord, Shmuel Shtrikman, and Joseph Suozzi were also awarded Millennium Medals and certificates.

Closeup pictures of awardees may be obtained by clicking on names. Emerson Pugh is the presenter of the awards.

[Cris Bajorek](#)
[Richard Barker](#)
[Andrew Bobeck](#)
[Stanley Charap](#)
[William Doyle](#)
[Fritz Friedlaender](#)
[Koosuke Harada](#)
[Floyd Humphrey](#)
[Mark Kryder](#)
[Fred Luborsky](#)
[Carl Patton](#)
[Art Pohm](#)
[Sid Rubens](#)
[Yoshifumi Sakurai](#)
[Gordon Slemon](#)
[David Thompson](#)

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Kryder Receives IEEE Reynold B. Johnson Information Storage Award

The 2000 IEEE Reynold B. Johnson Information Storage award was presented to Mark Kryder by former IEEE President Wally Reed, at the awards session of Intermag 2000 in Toronto, Canada. The citation which accompanies Dr. Kryder's award reads: "For leadership in data storage research and education as founding director of the Carnegie-Mellon Magnetics Technology Center and Data Storage Systems Center."



Dr. Mark H. Kryder's contributions to data storage fall into three categories: innovative research, noteworthy students, and his role in creating the Carnegie-Mellon Magnetics Technology Center (MTC), which is now called Data Storage Systems Center (DSSC).

The DSSC is recognized as a leading institute for magnetic storage research. Students and faculty from the DSSC play leading roles in government, industry, and academic laboratories worldwide.

Dr. Kryder founded the MTC in 1983, and his efforts and skill are credited with bringing great success to the endeavor. In 1990, the National Science Foundation designed the center an Engineering Research Center. The scope of the research at the center was broadened, and the name was changed to the Data Storage Systems Center.

Praised for his encyclopedia knowledge of magneto-optics and data storage, Dr. Kryder made significant research contributions to head design, materials, processing, characterization, testing, media, and more.

Mark H. Kryder was born on 7 October 1943, in Portland, Oregon. He earned a B.W.S. from Stanford University in 1965, then at the California Institute of Technology he earned an M.S. in Electrical Engineering, and a Ph.D. in Electrical Engineering and Physics, in 1970.

At Caltech he developed an innovative high-speed Kerr magneto-optic camera system. In 1973, after spending time as a visiting scientist at the University of Regensburg in Germany, he joined the IBM T.J. Watson Research Center, where he built and investigated a groundbreaking submicrometer magnetic bubble device.

In 1978, Dr. Kryder jointed the faculty at Carnegie-Mellon University, where he stayed until 1998, when he left to join Seagate Technology. At Seagate he leads a team creating storage products that will address future market and customer needs for data storage.

Dr. Kryder has over 300 publications in scientific journals and 16 patents in the field of magnetics. A Fellow of the IEEE, he was twice selected as a Distinguished Lecturer of the Magnetics Society, which has also honored him with an achievement award. Elected to the National Academy of Engineering, he was named the Stephen J. Jatras Professor and later the University Professor at Carnegie-Mellon. Dr. Kryder is also a member of the American Physical Society, the Optical Society of America, and the Materials Research Society.

The IEEE Reynold B. Johnson Information Storage Award was established by the Board of Directors in 1991 and may be presented annually "for outstanding contributions to the field of information storage, with emphasis in the area of computer storage." Recipient selection is administered by the Awards Board through its Technical Field Awards Council.

The Award consists of a bronze medal, certificate and five thousand dollars, and is sponsored by IBM Corporation. It is named in honor of Reynold B. Johnson, who is renowned as a pioneer of magnetic disk technology and was founding manager of the IBM San Jose Research and Engineering Laboratory, San Jose, California in 1952.

Past recipients of the award are:

1993 - John M. Harker
1994 - C. Dennis Mee
1995 - James U. Lemke
1996 - Nobutake Imamura
1997 - Alan F. Shugart
1999 - David A. Patterson, Randy H. Katz and Garth A. Gibson

Prior to the establishment of the IEEE Reynold B. Johnson Information Storage Award, the IEEE Magnetics Society presented the Magnetics Society Information Storage Award. Winners of this award were Sidney M. Rubens (1987), Jay W. Forrester (1988), Reynold B. Johnson (1989), M. Camras (1990), Charles H. Coleman (1991), and Claude Shannon (1992).

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Fontana Receives IEEE Cleo Brunetti Award



The 2000 IEEE Cleo Brunetti award was presented to Robert E. Fontana, Jr. by former IEEE President Wally Reed, at the awards session of Intermag 2000 in Toronto, Canada. The citation which accompanies Dr. Fontana's award reads: "For contributions to micro fabrication techniques for the manufacture of thin film and magnetoresistive heads used in hard disk drives".

Dr. Robert E. Fontana, Jr. has contributed greatly to the magnetics industry, as well as the world at large, by leading research into the successful manufacture of magnetoresistive (MR) and giant magneto-resistive (GMR) recording heads used in hard disk drives.

Dr. Fontana led innovations in the processes used to manufacture MR and GMR heads that changed the magnetic recording industry, by making it possible to dramatically extend the density of magnetic recording. The complicated nature of this seminal work at IBM is evidenced by the fact that no other company recreated the achievement for several years following.

Nearly all of the several hundred million magnetic hard disk drives manufactured this year rely upon some form of MR or GMR head. The initial fabrication processes for making those heads by and large trace their roots to the research of Dr. Fontana.

Dr. Robert E. Fontana, Jr. was born on 17 July 1947, in Champaign, Illinois. He received three degrees in Electrical Engineering from the Massachusetts Institute of Technology, culminating in a 1975 Ph.D.

After six years at Texas Instruments, Dr. Fontana joined the IBM Research Division in 1981. From 1982 to 1987, Dr. Fontana managed an advanced recording head processing group in the IBM Storage Systems Division. In 1984, that group processed IBM's groundbreaking narrow trackwidth, magnetoresistive thin film head suitable for hard disk drive applications.

In 1987, Dr. Fontana supervised the design, construction, and start-up operation of an advanced thin film head processing. In 1988, Dr. Fontana returned to the IBM Research Division with projects in the fabrication of advanced transducers for magnetic recording applications. In 1995, Dr. Fontana processed IBM's pioneering thin film recording heads incorporating giant magnetoresistive sensors. He is currently a Research Staff member in the IBM Research Division.

Dr. Fontana holds 33 patents in the areas of thin film magnetic device structures and magnetic device processing. He has authored over 30 technical papers. He is an IEEE Fellow and is Vice President of the IEEE Magnetics Society, where he served as Secretary-Treasurer in 1997 and 1998. He served as program committee chairman of the 1987 and 1992 Intermag Conferences and as General Chairman of the 1996 Magnetism and Materials Conference.

Cledo Brunetti was an executive of the FMC Corporation. He requested that the IEEE present an award "for outstanding contributions in the field of miniaturization in the electronic arts". His request was honored in 1975 with the creation of the IEEE Cledo Brunetti Award. The award consists of a certificate and a cash honorarium.

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Mee Awarded IEEE Magnetics Society Achievement Award



The 2000 IEEE Magnetics Society Achievement Award was presented to Denis Mee at Intermag 2000 by IEEE Magnetics Society Awards Chair Fritz Friedlaender.

Denis Mee has worked in the magnetics related business for almost 50 years. About 40 years of this time has been in the field of information storage. He is being recognized today for his technical accomplishments and his services to the magnetics community.

Denis started his magnetic recording career in England where he developed magnetic tape for a project on digital control of machine tools at Cambridge University and at Ferranti.

He then joined CBS Laboratories where he developed the first system for high-density audio stereo tape recording, which was the precursor to the consumer audiotape cassette. He received the IRE Audio Society Award for this work in 1964.

After joining the magnetic device research group at IBM Yorktown Heights in 1962, he worked on magnetic thin film memory devices for a short time and then started a new project on magneto-optical recording using garnet recording media and argon lasers. In 1965 he transferred to the magnetic disk development laboratory in San Jose where he initiated and led the early development of novel thin film recording heads and media. In subsequent years he led several joint research and development laboratories at IBM aimed at advanced magnetic and optical storage components for disk drives. He received the IEEE Reynold Johnson Information Storage Award in 1994.

Denis has been a strong supporter of the magnetics storage community since the 1950s.

He wrote a classic book on "The Physics of Magnetic Recording" in 1964, which is still on sale today. He also produced a series of books on magnetic recording technology and recording systems in the 1980s and 1990s. Last year he was a coeditor of a book to commemorate the 100th anniversary of the invention of magnetic recording.

In the early 1980s he played a major role in leading IBM support for the formation of University Research Centers in magnetic and optical storage. Subsequently in 1990 he was a co-founder and the first Chairman of the Board of the National Storage Industry Consortium, which aimed at strengthening the cooperation between the storage industry and the universities.

Denis has supported the IEEE Magnetics Society involvement in magnetic recording since the 1960s when it was a very small part of Intermag. He formed the magnetic recording technical committee in 1963 with the charge to raise the number of papers at Intermag much higher than the four contributed papers presented that year. Later, he helped to initiate the focused IEEE sponsored conferences in magnetic recording including TMRC in 1990 and APMRC in 1995.

Denis has presented numerous papers at Intermag conferences, including one here in Toronto in 1974 which compared the prospects for Magnetic Bubbles, Semiconductor Memory, and Magnetic Recording. The proposed title for the paper was "The Bubble Squeeze". The paper was accepted but the title was rejected.

Dr. Mee is the 19th recipient of the Achievement Award. Previous winners are: F.E. Luborsky, H.W. Lord, H.F. Storm, J.J. Suozzi, F.J. Friedlaender, A. Bobeck, F.B. Humphrey, P.P. Biringer, D.L. Gordon, E.W. Pugh, Y. Sakurai, W.D. Doyle, R.C. Barker, M. Kryder, Koosuke Harada, Gordon R. Slemmon Stanley Charap and David Thompson.

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New Magnetics Society Fellows Honored at Intermag '00

The new Magnetics Society Fellows for 2000 were honored at the plenary session of Intermag 2000. Award certificates were presented by Awards Chair Fritz Friedlaender. The new fellows and their contributions are as follows.

[Aric Kumaran Menon](#)

"For contributions to the development of magnetic heads for hard disk drives".

[Masayuki Nakayama](#)

"For contributions to the development and standardization of the 3.5 inch floppy disk drive system".

[Kazuhiro Ouchi](#)

"For contributions to the development of Co-Cr alloy based thin film magnetic recording media".

[Roger William Wood](#) "For contributions to the theory and practice of magnetic recording systems".

New Magnetics Society Fellows evaluated by other societies are Stephen Y. Chou, Caio Alexandre Ferreira, Tkashi Inuki, Guiseppe Pelosi, Andrew Francis Peterson, Linden W. Pierce, and Makoto Tsutsumi.

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Magnetic Materials Producers Association offers Scholarship

Applications are solicited for up to two scholarship awards of up to \$5000 each. The deadline is October 6, 2000. Information may be found at http://www.mmpa.org/scholarship_information.htm

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IEEE Transactions on Magnetics Online for Members of the Magnetics Society

IEEE Xplore <http://www.ieee.org/ieeexplore> provides online access to all IEEE publications. If your institution subscribes, you probably can access Xplore from your office computer.

Now, all members of the Magnetics Society can access the IEEE Transactions on Magnetics using any Web connection. Go to <http://www.ieee.org/ieeexplore> and click on "Establish IEEE Web Account." Once you have a username and password, click on "Journals and Magazines" on the Xplore home page. Click on "Magnetics, IEEE Transactions on" and select the volume of interest. When you choose to view a full-text article, you will be asked to enter your username and password. (Before you do, make sure cookies are enabled on your Web browser.) You will need Adobe Acrobat Reader.

You may also:

Browse the complete collection of tables of contents of all IEEE transactions, journals, magazines, conference proceedings, and standards;

Search and view all IEEE abstract/citation records starting from 1988;

Browse, search, and view full-text articles of IEEE Spectrum magazine.

Currently, Xplore has articles going back to 1988. In future years, we expect to add additional back volumes to the Xplore system.

For additional information, refer to the Frequently Asked Questions on the IEEE Xplore home page.

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Intermag 2000 Held April 10-13 in Toronto

Intermag 2000 was held April 10-13 at the Royal York Hotel in Toronto, Canada. The city was pleasant and interesting and the people of Toronto were warm and friendly. A memorable test of their acrophobia for some attendees was to go to the top of the CN tower, the world's tallest free standing structure, and look down through the glass floor some 350 m to the ground!

The program lived up to the high standards of an Intermag conference for quality, interest and variety. The topics most represented were Giant Magneto-Resistance (GMR phenomena and heads), to which six sessions were devoted, and magnetic tunnel junctions and MRAM, a topic of current great interest to which four sessions were devoted.

The Education Committee of the IEEE Magnetics Society sponsored a very interesting evening tutorial session, "From East to West: 2000 Years of Magnetism". This session, which was organized by Martha Pardavi-Horvath and Can Korman of George Washington University", covered the history of magnetism in both the Eastern and Western Hemispheres.

The session opened with "The Beginnings" in which Dr. Pardavi-Horvath described the early history of magnetism in the Western Hemisphere. She recounted the myths and legends of loadstone by the ancient Greeks. However, the first Western paper on magnetism wasn't written until 1269, by Peter Peregrinus, a crusader. William Gilbert, a physician of Elizabeth I, wrote *De Magnete*, aiming to summarize and explain what was known about magnets and magnetism in 1600. Significant applications of magnetism did not occur until the 19th century and the industrial revolution.

Tachiro Tsushima, from the Society of Non-traditional Technology in Tokyo presented "Old Stories of Magnetism in the East, and the Beginning of Modern Research on Magnetism in Japan". The oldest literature in the East concerning magnetism is from the 3rd century B.C. The compass was described about 1100 B.C. and Marco Polo brought this instrument from China to Europe. Magnetic steels were developed in the 20th century and K. Honda is known as the Japanese father of magnetism.

James D. Livingston from the Massachusetts Institute of Technology presented "Mutual Induction". Electromagnetic induction was essentially co-discovered by Faraday and Henry. While he was as instructor at the Albany Academy, Henry built an electromagnet that could lift 2000 pounds and he arguably demonstrated the first motor in 1831. Prof. Livingston showed a photograph, taken by his daughter, from a stained glass window of a church in Albany in which Henry holds an electromagnet. After his monumental technical discoveries, Henry went on to lead the Smithsonian Institution from 1846-1878.

Dr. Livingston is the author of "[Driving Force, The Natural Magic of Magnets](#)", a popular-science book on the history, legends, science and technology of magnets that is intended for both technical and non-technical readers.

The fourth and last talk of the evening was an electrifying presentation by Anthony Arrott entitled "Hysteresis Begins with J.A. Ewing in 1882." Ewing, whom many magneticians have never heard of, gave us the word "hysteresis". He was originally from the United Kingdom and performed research on magnetism at the University of Tokyo from 1878 to 1883. After his accomplishments in magnetism, his pursuits had a profound influence on education in the United Kingdom and his leadership in decoding of the Zimmerman telegram played a major role in the entry of the United States into World War 1.

The next Intermag Conference will be held January 8-11, 2001 in San Antonio, Texas in conjunction with the Magnetism and Magnetic Materials Conference. Information on this 8th Joint MMM-Intermag Conference can be found at

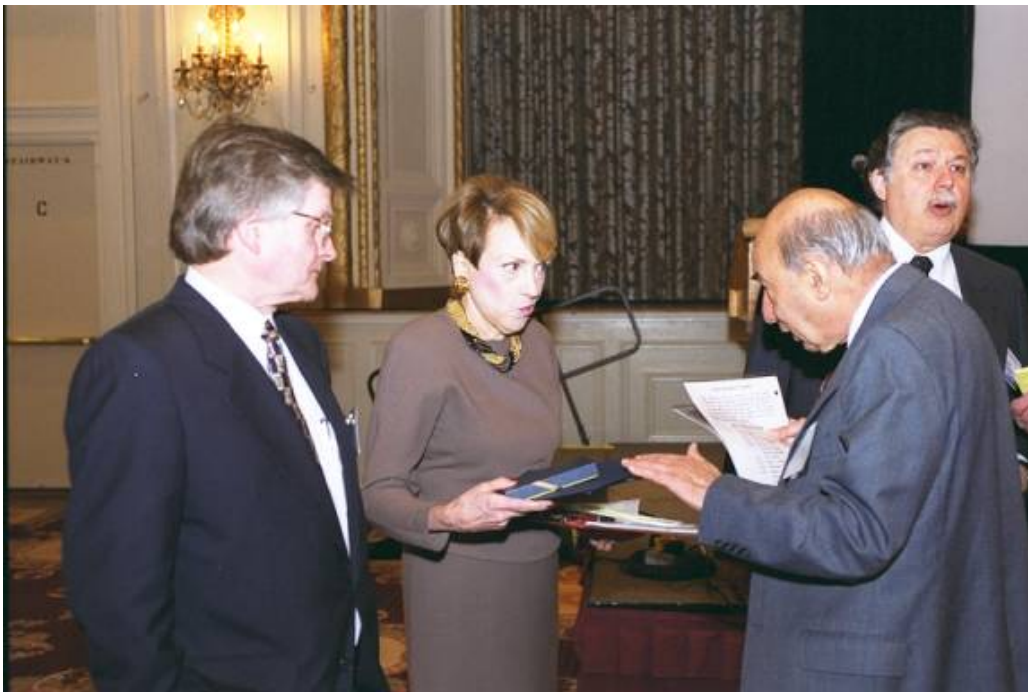
<http://www.magnetism.org>

<http://www.intermagconference.com>

Photographs from Intermag 2000



Poster presentation.



Doug Lavers, Diane Suiters, Fritz Friedlaender and Ed Della Torre prepare for the plenary session.



Attendees at plenary session.



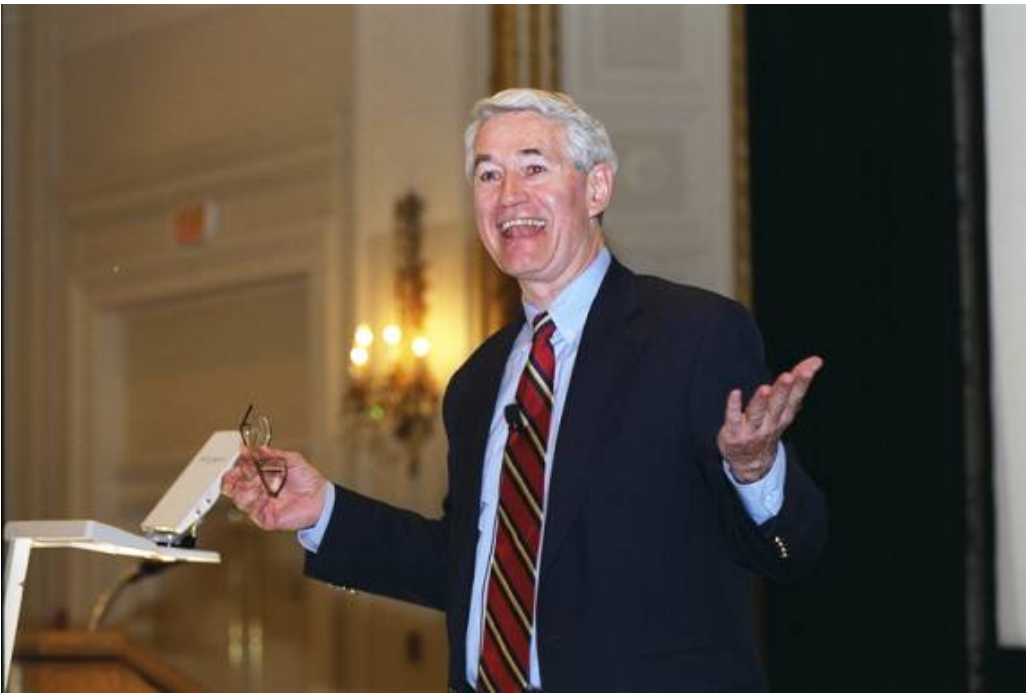
IEEE Magnetics Society Awards Chairman Fritz Friedlaender addresses the attendees.



Conference Chairman Doug Lavers addresses the attendees.



IEEE Magnetics Society President Ed Della Torre addresses the attendees.



Robert J. Birgeneau, President of the University of Toronto, presents the plenary speech, "Quantum Effects in Magnetism".

A Tribute to Paul Biringer

On this occasion which brings together a number of the former recipients of the Magnetic Society's Achievement Award, it is fitting that we take a moment to note the recent passing of University of Toronto Professor Emeritus Paul Biringer, the Achievement Award recipient in 1989.

Paul's early fame was based on his research and commercial development of magnetic frequency doublers and triplers for application in the processing of steel. He made major contributions to the design of electric furnaces and electro-metallurgical plants. Among his many eminent graduate students is the chair of this conference, Professor Doug Lavers.

Paul was one of those who created the AIEE Committee on Non-linear Magnetics and Magnetic Amplifiers and he co-authored the first paper in its 1958 conference. With the merger of AIEE and IRE to form IEEE, he was active in the foundation of this Magnetics Society. He acted on its Administrative Committee for at least 20 years, was for several years its Awards Chair and was appointed its Distinguished Lecturer in 1991. Paul was made an IEEE Fellow in 1970 and a Fellow of the Canadian Academy of Engineering in 1989.

In the history of this Society, he will be remembered as an outstanding researcher, teacher, engineer and volunteer. Those among us who knew him will remember a warm colleague with a deep sense of humor, a world traveler comfortable in many languages and places, and most of all as a valued friend.

By Gordon R. Slemon at the Awards Ceremony of Intermag 2000, Toronto, 12 April, 2000.

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Nominations Sought for 2001 Achievement Award of the Magnetics Society

The Magnetics Society of the IEEE honors one of its outstanding members each year for his or her lifelong professional achievement. This is the highest award of the Magnetics Society and is given for scientific, technical and service contributions to the society. The award is presented at Intermag each year and consists of a diploma with citation and a cash prize.

The past award winners were Fred Luborsky 1981, Herb Storm 1982, Harold Lord 1984, Joe Suozzi 1985, Fritz Friedlaender 1986, Andrew Bobeck 1987, Floyd Humphrey 1988, Paul Biringer 1989, Daniel Gordon 1990, Emerson Pugh 1991, Yoshifumi Sakurai 1992, William Doyle 1993, Richard Barker 1994, Mark Kryder 1995, Koosuke Harada 1996, Gordon Slemon 1997, Stanley Charap 1998, David Thompson 1999 and Dennis Mee in 2000.

Nominations are requested. For your convenience, please use the Achievement Award nomination form obtainable from Floyd Humphrey, the IEEE or by clicking [HERE](#). Any member of the Magnetics Society may nominate a candidate at any time. To be considered for the 2001 award, nominations should be received before November 1, 2000. Please send nominations to:

Floyd B. Humphrey
Chairman, Achievement Awards Committee
P.O. Box 722
Meredith, NH 03253-0722
Voice/FAX (603) 279-3395
E-mail FBH@BU.EDU

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Conference Calendar

- **August 6-11, 2000**
International Conference on Magnetism, ICM 2000
Recife, Brazil
For information:
icm2000@df.ufpe.br
<http://www.icm2000.org.br>
- **August 7-10, 2000**
The 8th Asia Pacific Physics Conference
Tapai, Taiwan
For information, contact:
Miss Opheila Huang
Institute of Physics
Academia Sinica
Taipei 11529, Taiwan
TEL + 886-2-27899602 FAX + 886-2-27826680
appc2k@phys.sinica.edu.tw
- **August 8-12, 2000**
Berkeley, California USA
Eight International Conference on Electronic Spectroscopy and Structure
For information, visit:
<http://www.lbl.gov/Conferences/icess-8.html>
email: icess@lbl.gov
- **August 13-16, 2000**
Biomag2000, 12th International Conference on Biomagnetism,
Helsinki
<http://biomag2000.hut.fi>
- **August 14-16, 2000**
TMRC 2000, Santa Clara, CA
Topic: *Signal Processing for Magnetic Storage*
For information, visit: <http://www.iist.scu.edu> or phone: (408) 554-6853.
- **August 14-16, 2000**
Workshop on Applications of Synchrotron Light to Magnetic Materials
(an ICM 2000 Satellite Conference)
Laboratório Nacional de Luz Síncrotron (LNLS)
Campinas, Brazil,
<http://www.ifi.unicamp.br/~waslmm/>
- **August 21, 2000** Hermann von Helmholtz-Symposium:
New Frontiers and Opportunities in Biomagnetism, Berlin
<http://www.ptb.de/english/news/conferen/hp.htm>
- **September 17-22, 2000**
Applied Superconductivity Conference
Pavilion Conference Center
Virginia Beach, VA
For information, visit:
<http://www.ascinc.org>

- **September 18-21, 2000**

The International Conference on Ferrites, Kyoto, Japan

For information:

Prof. Masahiko Naoe

Dept. of Physical Electronics, Tokyo Institute of Technology

2-12-1, O-okayama, Meguro-ku

Tokyo 152-8552 Japan

TEL: +81-3-5734-2575 FAX: +81-3-5734-2513

naoe@pe.titech.ac.jp

<http://spin.pe.titech.ac.jp/icf8/>

- **September 25,27, 2000**

DataStorage2000

Fairmont Hotel, San Jose, CA

For information contact:

Conferences Etc.

2680 Bayshore Parkway, Suite 214

Mountain View, CA 94043

Ph: (650) 968-2836, FAX: (650) 968-5392

E-mail: darlene@conferencesetc.com

<http://www.dsforum.com>

- **October 2-6, 2000**

47th International Vacuum Society Meeting

Featuring Magnetic Interfaces and Nanostructures Symposium

<http://divisions.vacuum.org/min/MINpage.html>

- **October 22-27, 2000**

6th International Symposium on Magnetic Materials, Processes and Devices (a part of the 198th Meeting of The Electrochemical Society, Inc.)

Phoenix Civic Plaza & Hyatt Regency, Phoenix, Arizona

Deadline for submission of papers: June 1, 2000

For information on the Symposium and on submission of papers visit:

<http://www.electrochem.org/meetings/198/cfp.html#j1>

To obtain the Proceedings of the 5th International Symposium on Magnetic Materials, Processes and Devices (published 1999) visit:

<http://www.electrochem.org/meetings/198/pv98-20.html>

- **October 30 - November 2, 2000**

Joint MORIS/APDSC 2000

Magneto-Optical Recording International Symposium/Asia-Pacific Data Storage Conference

Nagoya, Japan

For information, contact:

Prof. Takao Suzuki

Toyota Technological Inst.

Information Storage Materials Lab.

2-12-1 Hisakata, Tempaku-ku

Nagoya, 468-8511

Japan

TEL: +81-52-809-1870 FAX: +81-52-809-1874

tsuzuki@toyota-ti.ac.jp

<http://c-linkage.co.jp/moris-apdsc>

- **November 6-8, 2000**

Asia Pacific Magnetic Recording Conference

Tokyo, Japan

For information, contact:

Dr. Roger Wood

IBM, Storage System Division, AE5/0282

5600 Cottle Road, San Jose CA 95193 USA

TEL +1-408-256-4131 FAX +1-408-256-2653

wroger@us.ibm.com

Dr. Yoshimasa Miura
Fujitsu, Storage Products Group
4-1-1 Kamikodanana Nakahara
Kawasaki 211-8588 Japan
TEL +81-44-754-2120 FAX +81-44-754-2849
yoshimasa-miura@cs.fujitsu.co.jp
<http://www.fujitsu.co.jp/hypertext/hdd/apmrc/apmrc2000hpe.html>

- **January 8-11, 2001**

8th Joint MMM-Intermag Conference
San Antonio, Texas USA

For information:

Courtesy Associates
2000 L Street NW, Suite 710
Washington, DC 20036

TEL: 202 973-8668

FAX: 202 331-0111

email magnetism@courtesyassoc.com

<http://www.intermagconference.com>

<http://www.magnetism.org>

- **February 27 - March 2, 2001**

Eastmag-2000

Ekaterinburg, Russia

<http://www.imp.uran.ru/EASTMAG/default.htm>

- **April 21-27, 2001**

International Society for Magnetic Resonance in Medicine 9th Annual Meeting
Glasgow, Scotland, UK

ISMIRM

2118 Milvia Street, Suite 201

Berkeley, CA USA 94704

FAX: +1-510-841-2340

- **May 21-23, 2001**

3rd International Symposium on Hysteresis and Micromagnetic Modeling
George Washington University Virginia Campus, Ashburn, Virginia

For information:

Larry Bennett

TEL 701-726-8299 FAX: 703-726-8251

hmm01@va.gwu.edu

<http://www.seasva.gwu.edu/magnetics/workshop.htm>

- **June 11-15, 2001**

International Conference on Communications 2001

Featuring special session on coding and signal processing techniques for magnetic and optical data storage systems

Helsinki, Finland

<http://www.wsccc.com/alison/coding.txt>

- **June 24-29, 2001**

Fourth International Symposium on Metallic Multilayers (MML '01)

Aachen, Germany

<http://www.ep4.ruhr-uni-bochum.de/fk/mml/>

- **August 28 - September 1, 2001**

1st Joint European Magnetism Symposia (JEMS '01)

New joint conference that replaces European Magnetic Materials and Applications (EMMA) meeting and Magnetic Recording Materials (MRM) meeting.

Grenoble, France

<http://www.polycnrs-gre.fr/JEMS01/>

- **September 9-13, 2001**

SEEHEIM CONFERENCE ON MAGNETISM, SCM-2001

Lufthansa Trainig Center

Germany

For information:

M. Ghafari , H. Hahn, J.Kuebler

Darmstadt University of Technology

Petersenstr. 23

64287 Darmstadt, Germany

Tel: + 49-6151-16 63 25 Fax: + 49-6151- 16 63 35

email: scm@tu-darmstadt.de

<http://www.tu-darmstadt.de/magnetism/>

- **November 13-16, 2001**

46th Conference on Magnetism and Magnetic Materials

Seattle, Washington USA

For information:

Courtesy Associates

2000 L Street NW, Suite 710

Washington, DC 20036

TEL: 202 973-8668

FAX: 202 331-0111

email magnetism@courtesyassoc.com

<http://www.intermagconference.com>