

IEEE Magnetics Society Newsletter

July 1999

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John Nyenhuis and Richard Dee, Editors

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Electronic Publication of IEEE Transactions on Magnetics

Prof. Edward Della Torre IEEE Magnetics Society President Electrical and Computer Engineering Department George Washington University Washington, DC 20052 TEL (202)994-0410 Fax:(202)994-0227 dellator@SEAS.GWU.EDU	Ron B. Goldfarb Editor-in-Chief, IEEE Trans. Magn. National Inst. of Standards and Tech. 325 Broadway Boulder, Colorado 80303 r.goldfarb@ieee.org
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The IEEE is moving rapidly into electronic publishing. It has established Web-based programs that are accessible by institutions ("IEL") and individual members ("OPERA"). They have full search features and can reproduce entire articles on paper or on screen. The Magnetics Society will participate in these databases starting next year.

Since 1997, the Society has processed regular Transactions papers electronically. However, conference-related papers, published as "camera-ready," are included in IEEE's electronic products only as bit-mapped images. Soon, IEEE will no longer accept camera-ready papers, and conferences will be required to submit "electronic" (i.e., "magnetic") versions of their papers. These conference-related papers will have the "look and feel" of regular Transactions papers and will be fully searchable and linkable in IEEE's electronic products.

IEEE's electronic database currently goes back to 1988. In future years, the Magnetics Society hopes to scan back issues of the Transactions to convert them to electronic versions. Other Societies in the IEEE have done that, going back to the beginning of their respective Transactions.

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Important Author Information for IEEE Transactions on Magnetics

If you are planning to submit a paper for publication in the IEEE Transactions on Magnetics, please read the instructions for authors on the back, inside cover of a recent issue of the journal.

In particular, please note that IEEE sets galley proofs directly from PC or Macintosh disks provided by the authors. You must include a disk along with two paper copies of your final, accepted manuscript. Make certain the magnetic version of your manuscript is identical to the paper copies. The disk should be labeled with your name, the file name of your manuscript, format (PC or Macintosh), and the software and version number used to create the file. The preferred software is LATEX or Microsoft Word. Figures should be in TIFF or EPS as separate files on disk(s). Do not put boxes around figures. Do not write captions as part of the graphic images. Important instructions for manuscript and figure preparation are available at <http://www.ieee.org/organizations/pubs/authors.html> Please download file TRANSMAG.DOC.

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Intermag '99 Held May 18-21, 1999 in Kyongju, Korea

Intermag '99 was held at the Hyundai Hotel near Kyongju, Korea. General Chairman Dr. Il Koo Kang and the organizing committee worked hard to prepare a memorable conference that was a technical and artistic success. More than 1000 attendees learned about recent advances in the technology of magnetism from oral and poster papers. The success of the conference must have been especially satisfying to Dr. Kang and the members of the Korean Magnetics Society, who feared a profound negative impact from the recent financial crisis in Korea.

A plenary session talk, "Outlook of Magnetic Storage Industry, Technology/Application Trend of Overall Storage Industry, Emphasizing Korean HDD Industry" was given by Dr. Moon S. Song of Samsung Electronics Co., Ltd. In the talk he told of possible applications that would increase the demand for hard drives, encouraging words in this time of oversupply and low prices. Dr. Song also reported of Samsung's substantial involvement in the world hard drive business.

The Hyundai and other conference hotels are on the shores of Pomun lake which features jogging and bicycle trails along its banks and picturesque wooded hills in its vicinity. The staff at the conference were friendly and helpful.

The conference banquet on May 19 was simply fantastic. Profs. Kang, Prof. Mark Kryder from Carnegie Mellon University and the Chairman of the Japanese Magnetics Society addressed the more than 500 banquet attendees. The dinner menu was multi-course Western of an elegance and splendor that an ordinary person experiences only a few times in a lifetime. Following the dinner, a beautiful program of dancing and music was presented by a native Korean dance group.

Intermag '99 will be fondly remembered by all of us who attended. Pictures from Intermag '99 are below. These were supplied by Prof. Soon-Ju Kwon, publicity chair for Intermag '99, and Richard Dee.



One of several placards welcoming attendees.



Prof. Kang at banquet welcomes attendees.



Prof. Kryder at banquet greets attendees.



A toast to the conference attendees.



Korean dance group at banquet.



Korean dance group at banquet.



Korean dance group at banquet.



Korean dance group at banquet.



Ice sculpture at banquet.



Hyundai Hotel, where Intermag 99 was held.



Hotel on whose shores the Hyundai and other hotels are located.



Water geyser in the middle of the lake



Scene from the pleasant city of Kyongju, a few km from the Hyundai Hotel.



Dr. Moon S. Song delivered the plenary address



Scene from a poster session.



A model of an ancient Korean military ship was amongst the posters.

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David Thompson Honored with Achievement Award



The 1998 Magnetics Society Achievement Award was awarded to Dr. David Thompson of IBM Almaden Research Center during the Awards Session at InterMag '99 in Kyongju, Korea.

David A. Thompson received his B.S., M.S., and Ph.D. degrees in Electrical Engineering from the Carnegie Institute of Technology, Pittsburgh, Pa., in 1962, 1963, and 1966, respectively.

In 1965, he became an Assistant Professor of Electrical Engineering at C.I.T., now Carnegie-Mellon University. His research activities there were primarily in the fields of magnetic thin films and microwaves. From 1968 to 1987 he was at the IBM Thomas J. Watson Research Center, Yorktown Heights, New York. There his work was concerned with magnetic memory, magnetic recording, and magnetic transducers. He became an IBM Fellow in 1980, was named Director of the Compact Storage Laboratory in December 1985. He moved to Almaden Research Center in 1987 to assume responsibilities as Director of Magnetic Recording Institute as well as Director of Compact Storage Laboratory. These two programs merged in 1991, to form the Advanced Magnetic Recording Laboratory. He is presently head of AMRL.

Dr. Thompson is a member of the (US) National Academy of Engineering (NAE). He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), and a member of Sigma Xi, Tau Beta Pi, Eta Kappa Nu, and the IEEE Magnetics Society. He has served terms as President, Vice President, and Secretary-Treasurer of the IEEE Magnetics Society. He served four three-year terms on the Administrative Committee of the IEEE Magnetics Society, was often a member of the Program Committee of the InterMag Conference, was Program Co-Chairman of the InterMag '86 Conference and of the InterMag '78 Conference in Florence, Italy, and has served as Reviews Editor of the IEEE Transactions on Magnetics. He was Conference Chairman of the first TMRC (The Magnetic Recording Conference) in 1990.

Dr. Thompson has been member of the Technical Advisory Board of the Magnetics Technology Centre (National University of Singapore) since its inception. In April 1992, he received the IEEE Clelio Brunetti Award, "for pioneering work in miniature magnetic devices for data storage...". In 1993 he received the National Inventor of the Year Award from the New York Patent Lawyers' Association. He is currently a Master Inventor of the the IBM Corporation. In 1996, he was inducted into the Silicon Valley Engineering Hall of Fame.

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New Magnetics Society Fellows Honored at Intermag '99

Members of the Magnetics Society recently elected to the grade of IEEE Fellow after evaluation by the IEEE Magnetics Society were listed in the [February 99 Newsletter](#). Award certificates were presented by Prof. Fritz Friedlaender at the Plenary Session of Intermag '99. Photographs of recipients who received their certificates at Intermag 99 are by Richard Dee.



Tu Chen, Komag, Inc. San Jose, CA, USA For contributions to the development of thin film materials, tools and processes used for magnetic and optical information storage disks.



Mason L. Williams, IBM Almaden Research Center, San Jose, CA, USA. For contributions to the understanding of the digital magnetic recording process and the continued progress of areal density of disk drives.



Arthur Yelon, Ecole Polytechnique de Montreal, Montreal, Quebec, Canada. For contributions to the science and technology of ferromagnetic materials and devices, and to education in the applied sciences.

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About the Newsletter

The objective of the IEEE Magnetics Society Newsletter is to publicize activities, conferences, workshops and other information of interest to the Society membership and technical people in the general area of applied magnetics. Copy is solicited from the Magnetics Society membership, organizers of conferences, officers of the Society and local chapters and other individuals with relevant material. The Magnetics Society Newsletter is published approximately four times a year at the [Magnetics IEEE Magnetics Society Web Page](#).

Please send articles, letters and other contributions to one of the co-editors:

Dr. Richard H. Dee
Storage Technology Corporation
2270 South 88th Street
Louisville, CO 80028-8110 h
TEL: 303-673-3976 FAX 303-673-6540
E-Mail: r.dee@ieee.org

Prof. John Nyenhuis
Purdue University
School of Electrical and Computer Engineering
West Lafayette, IN 47907-1285
TEL 765-494-3524 FAX 765-494-2706
E-Mail: j.a.nyenhuis@ieee.org

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MMM '99 to be held Nov. 15-18, 1999 in San Jose, California

The Forty-Fourth Annual Conference on Magnetism and Magnetic Materials, (MMM'99) will be held at the Fairmont Hotel in San Jose, California, USA, November 15-18, 1999. The Conference annually brings together scientists and engineers interested in recent developments in all branches of fundamental and applied magnetism. Emphasis is placed on experimental and theoretical research in magnetism, the properties and synthesis of new magnetic materials, and advances in magnetic technology. The program will consist of invited and contributed papers. (The abstract deadline was May 15.) Abstract booklets will be made available at the conference, and proceedings will be published in the Journal of Applied Physics. Individuals who are not on the Conference mailing list may obtain Conference information and details concerning the preparation of abstracts by contacting the Conference Coordinator:

Courtesy Associates
2000 L Street, NW Suite 710
Washington, D.C. 20036
Tel. 202-973-8668 Fax 202-973-8722
magnetism@courtesyassoc.com

The latest information on the conference can be obtained on the World Wide Web via the conference web site:
<http://www.magnetism.org>

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Intermag '2000 to be held April 9-13, 2000 in Toronto

The 2000 International Magnetics Conference (INTERMAG 2000) will be held at the Royal York Hotel in Toronto, Canada, from Sunday, April 9, through Thursday, April 13, 2000. Contributed papers are solicited in all areas of applied magnetics, related magnetic phenomena, and information storage technologies. Topics of wide interest include all aspects of magnetic recording, magnetic memory technologies, microwave magnetics, micromagnetics and hysteresis modeling, microscopy and imaging, micromagnetic devices and MEMS, magnetic materials and properties, transformers and inductors. This list is intended to be suggestive rather than restrictive.

In addition to the contributed papers, there will be invited papers, sessions wherein competing technologies can be assessed, tutorial sessions, and workshops for less formal discussions of timely and/or controversial topics. In all of the above, special emphasis will be placed on application- oriented topics.

Two page digests must be submitted electronically to the conference web site: <http://www.intermagconference.com>

All information regarding the format of the digests and submission categories can be found at this web site. The deadline for submission is **October 10, 1999**.

Complete details regarding hotel reservations, conference registration fees and the necessary forms will be available both in the Advance Program and on the conference web site. Information may also be found at the IEEE Magnetics Society web site: <http://www.ieee.org/society/mag>

There will be a technical exhibit at Interamag 2000. Exhibitor information is available at the conference website.

For additional information please contact:

Courtesy Associates
intermag@courtesyassoc.com

Tel: +1-202-973-8676 Fax: +1-202-973-8722

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Nominations Sought for 2000 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, and David Thompson 1999.

Nominations are requested. For your convenience, please use the Achievement Award nomination form obtainable from Fritz Friedlaender, Floyd Humphrey or the IEEE. Any member of the Magnetics Society may nominate a candidate at any time. To be considered for the 2000 award, nominations should be received before November 1, 1999. 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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IEEE Standards Association (IEEE-SA)-Year One

Members of IEEE's Technical Societies rightly have been anxious to know more about the IEEE-SA. We are well into the second year and are better positioned to assess its accomplishments, unresolved issues, and future challenges.

When the SA was launched, our promises to you included:

- 1) an election of the governing body,
- 2) expanded opportunities for standards development under the Standards Board, and
- 3) even further standardization opportunities outside of the Standards Board.

How did we do?

We've given IEEE-SA members a voice in the governance. The IEEE-SA Board of Governors (IEEE-SA BOG) developed an election process for its members-at-large and for the IEEE-SA President. This was approved by the IEEE Board of Directors in November 1998. Now members of the IEEE-SA can elect the members-at-large of the IEEE-SA BOG, and members of the IEEE-SA who are also IEEE members may elect the IEEE-SA President. The position of President-Elect was also created to allow for continuity of leadership.

The first elections will be held this year as part of the IEEE annual election process. IEEE-SA members will see their ballots in the fall.

Issues and challenges.

Some volunteer standards developers don't see the value of a constituency with the above-mentioned electoral privileges. The goal of an election is to bring forward individuals with leadership abilities, industry involvement, and strong interest and experience in the standards activities of the Institute. The more vested the interest, the better for the standards constituency.

IEEE standards developers have new voting options.

The Standards Board approved entity balloting (e.g., corporate balloting) as a part of the traditional IEEE standards consensus process. Remember, the IEEE-SA Bylaws include several new membership categories, such as company, government, and organization. Now, an IEEE committee can declare at the outset of its project (PAR) that it will proceed with a corporate-level ballot, as distinct from an individual-based ballot. IEEE hosts a broad range of standards programs, coming from diverse industry sectors. Now we have started to enable IEEE to embrace that diversity with options for proceeding rather than a "one size fits all" policy.

Issues and challenges.

1) There is strong interest in a mixed balloting process, which could include individuals and company representatives, as an example. The Standards Board is working on this during 1999.

2) Some IEEE standards developers have shown resistance to joining the SA (we have approximately 3500 individual members). The requirement for membership is directed toward the consensus ballot privilege. If you want to ballot, you must join the SA. However, if you want to work on the writing of the standard, you have no SA membership requirements. Our balloting statistics show an increase in activity, which indicates that overall, SA membership has not been a deterrent for that level of participation.

A new organization has been formed that allows IEEE to provide a full range of standards services to its members and their industries.

Over the last several years, we have been keenly aware of the proliferation of industry groups that have formed for the purpose of developing industry standards and running related programs. These groups formed because they found that the IEEE was not able to respond adequately and quickly enough to the market demands of their technologies. We had to ask ourselves, Why shouldn't this work be done in the IEEE? These are IEEE technologies! And as a result the IEEE-SA developed the IEEE Industry Standards and Technology Organization (IEEE-ISTO), which was approved by the IEEE Board of Directors in November 1998 and launched on 1 January 1999.

The new organization's goals complement the activities of the IEEE-SA. It provides a forum in which development processes and related activities can be tailored to the technology, market, and participants. It also offers support for industry-specific post-development activities, including marketing, certification, branding, and conformity assessment. The Medical Device Communications Industry Group is the first group to organize within the IEEE-ISTO. Several additional programs are expected as 1999 progresses.

Together, the IEEE-SA and the IEEE-ISTO enable the IEEE to offer industry an unprecedented level of choice through a complete menu of standards activities and services.

Issues and challenges.

1) IEEE's ability to change its culture in its standards activities toward one that focuses on identifiably market-relevant initiatives.

2) The IEEE ISTO must provide proof of concept that it is functioning as a supplier to the Societies and the Standards board, not a competitor.

Our goals for this year include an aggressive globalization program, new product and service opportunities, and increased communication and improved relationships with the IEEE Technical Societies. We will keep you informed through this newsletter and other media, and we welcome your thoughts and comments.

Judy Gorman
Managing Director
IEEE Standards

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Conference Calendar

- **June 20-24, 1999**
Moscow International Symposium on Magnetism (MISM)

For information:

Nicolai Perov or Alexander Granovsky
MISM, Magnetism Division, Department of Physics
M.V.Lomonosov Moscow State University
Moscow 119899, Russia
TEL: +7-095-939-4787
FAX: +7-095-932-8820 +7-095-939-5907

mism@magn.phys.msu.su

granov@magnet.phys.msu.su

perov@magn.phys.msu.su

<http://magn.phys.msu.su/~mism>

- **June 21-24, 1999**

[The 1999 NSIC Annual Meeting](#)

Monterey, California

For information:

National Storage Industry Consortium
(619) 621-2550, (619) 621-2551 fax

<http://www.nsic.org/>

- **June 28-30, 1999**

10th Annual Symposium on Information Storage and Processing Systems
Santa Clara University, Santa Clara, CA USA

For information:

TEL +1-619-451-7693

<http://www.asme.org/divisions/isps/isps0.html>

dconnoly@ucsd.edu

- **August 9-11, 1999**

TMRC, The Magnetic Recording Conference: Media

For information:

Michael Alex

KOMAG

1704 Automation Parkway

San Jose, CA 95193

TEL: 408-576-2149

FAX: 408-944-9255

michael_alex@komag.com

http://www.iist.scu.edu/iist/TMRC/TMRC99/TMRC_99.html

- **Sept. 7-10, 1999**

SMM 14 - Soft Magnetic Materials Conference

Balatonfured, Hungary

For information, email:

smm14@sunserv.kfki.hu

<http://www.kfki.hu/~smm14/>

- **Sept. 23-25, 1999**

International Symposium on Electromagnetic Fields in Electrical Engineering

Pavia, Italy

For information:

Prof. A. Savini

University of Pavia, Italy

savini@ipv36.unipv.it

<http://etabeta.unipv.it/volta1999/isef99/>

- **September 26 - October 2, 1999**

The 16th International Conference on Magnet Technology

Ponte Vedra Beach, FL (near Jacksonville, FL)

For information:

Jo Ann Palmer, Conference Secretary

National High Magnetic Field Laboratory

1800 E. Paul Dirac Drive

Tallahassee, FL 32310

USA

Telephone: - 1 - 850 - 644 - 1933

Fax: - 1 - 850 - 644 - 9462

mt16@magnet.fsu.edu

<http://www.magnet.fsu.edu/mt16/index.html>

- **Sept. 27-30, 1999**

MSM 99 First Regional Conference on Magnetic and Superconducting Materials

Tehran, Iran

For information, email:

msm-99@sina.sharif.ac.ir

<http://194.225.40.9/~msm-99/>

- **Nov. 15-18, 1999**

44th Conference on Magnetism and Magnetic Materials, San Jose, California, 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.magnetism.org/>

- **April 9-13, 2000**

[Intermag Conference, Toronto, Canada](#)

For information:

Courtesy Associates

2000 L Street NW, Suite 710

Washington, DC 20036

TEL: 202 973-8668

FAX: 202 331-0111

email intermag@courtesyassoc.com

- **July 5-14, 2000**

[Progress in Electromagnetics Research Symposium \(PIERS 2000\)](#)

Royal Sonesta Hotel, Cambridge, MA, USA

Abstract deadline: December 1, 1999.

For information:

Hsiu C. Han

TEL +1-515-294-5320

hsiu@iastate.edu

<http://www.piers.org/piers2k>

- **August 6-11, 2000**

International Conference on Magnetism, ICM 2000

Recife, Brazil

For information:

icm2000@df.ufpe.br
<http://www.icm2000.org.br>

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/>

- **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

- **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

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