



# IEEE MAGNETICS SOCIETY

## NEWSLETTER

VOLUME 34, NO. 1

ISSN 1059-8340

October 1997

JOHN NYENHUIS, EDITOR

### MESSAGE FROM THE PRESIDENT

By *Dan Stancil,*  
*Data Storage Systems Center*  
*Carnegie Mellon University*  
*President, IEEE Magnetics Society*



The Magnetics Society plays a key role in supporting engineers and scientists working in applied magnetism. The Society is able to function because of the hard work and dedication of members who volunteer their time. In this first message as president, I would like to specifically thank several people who have recently stepped down after years of service to the Society.

Prof. C. D. Graham of the University of Pennsylvania has just completed six years as chairman of the Conference Executive Committee (CEC). This committee coordinates the policies and schedules for conferences sponsored by the Society, and selects sites for future INTERMAG Conferences. Conference sponsorship is one of the most visible and important of our activities, and Chad's capable leadership has been greatly appreciated. As chairman, he was widely respected for his breadth of experience and international perspective. I am grateful that Dr. Bob Fontana of the IBM Almaden Research Center has agreed to be the new chairman of the committee. Bob also has a wide range of conference experience, and I look forward to the continued effectiveness of the CEC under his leadership.

At the conclusion of 1996, Dr. Dan Gordon completed six years as chairman of the Nominating Committee. This committee presents nominations for membership in the Administrative Committee, and nominations for officers of the Society. Clearly, the work of this committee is critical for maintaining the vitality of the Society. This is only the most recent of many contributions that Dan has made over the years, including having served as President of the Magnetics Society. I am pleased that Prof. Bill Doyle of the Center for Materials for Information Technology at the University of Alabama has agreed to be the new chairman of this committee. Bill is also a Past-President of the Society.

Finally, I would like to thank Dr. Jim Opfer for his service as president of the Society for the past two years. Because of his

able leadership, the Society is well on the way to economic health, and its technical vitality has never been better. He also significantly raised our awareness to trends that could impact the future operation of the Society, such as electronic publishing.

As president, I would like to continue to strengthen the Society financially, and to encourage the development of a long-range plan. This plan would enable us to be proactive with respect to areas such as membership strength, internationalization, and electronic publishing. To this end, I have asked Prof. Ed Della Torre, Vice President, to serve as chair of the Planning Committee. Over the next few months, this committee will be considering a strategic plan for the future of the Society. I will discuss some possible opportunities for the Society in future columns. I would also welcome your ideas. You may contact me at [stancil@cmu.edu](mailto:stancil@cmu.edu).

### INTERMAG 1997 HELD IN NEW ORLEANS, LOUISIANA

Scientists and engineers from around the world gathered in New Orleans from April 1 to April 4 at InterMag '97. The Digest Book for InterMag '97 can be purchased from the IEEE Customer Service Department: Tel. 800-701-4333 or 908-981-0060; fax 908-981-9667; email [customer.service@ieee.org](mailto:customer.service@ieee.org). Refereed manuscripts submitted by conference presenters have been published in the September 1997 issue of the IEEE Transactions on Magnetics. Summaries prepared by the session chairs can be found on the IEEE Magnetics Society Home Page at <http://yara.ecn.purdue.edu/~smag>.

### VISIT THE IEEE MAGNETICS SOCIETY WEB PAGE

The IEEE Magnetics Society Web page at <http://yara.ecn.purdue.edu/~edu> is intended as a resource for members of the Magnetics Society and others interested in magnetism. Information at this site includes conference announcements and programs, information on the Magnetics Society, announcements from the Magnetics Society and other organizations, and issues of the Newsletter. A recent addition to the Web page is a bulletin board where readers can make posts and respond to the posts of others. It is hoped that the bulletin board will be a useful venue for discussion of topics of interest to those studying and working in magnetism.

## ALAN F. SHUGART HONORED WITH INFORMATION STORAGE AWARD AT INTERMAG '97



The 1996 IEEE Reynold B. Johnson Information Storage award was presented to Alan Shugart by IEEE President Joseph Bordogna, at the plenary session of Intermag '97 in New Orleans, Louisiana. The citation which accompanies Mr. Shugart's award reads.

*"For leadership in the evolution of disk drive technology".*

This award was established by the IEEE 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".

The award is named in honor of Reynold B. Johnson, a pioneer in magnetic disk technology, who was founding manager of the IBM San Jose Research Engineering Laboratory in California. It consists of a bronze medal, a certificate, and \$5000. It is sponsored by IBM Corporation.

Alan F. Shugart has more than 40 years of experience in the technology industry and continues to play a key role in shaping its future. Since founding Seagate Technology, Inc. in 1979, Mr. Shugart has built the company into one of the world's largest independent manufacturers of disk drives and related components, as well as a leading developer of tape drives, software tools and applications in the area of data management, including information management, network and systems management and storage management. Mr. Shugart had the insight to combine the cost effectiveness of the flexible drive with the capacity potential of rigid disk technology, producing products that matched the format and interface of existing personal computers. This enabled use of substantial application programs and established a hardware base that launched an industry explosion.

In 1973 he co-founded Shugart Associates, the pioneer of the 5.25-inch floppy disk drive, which was critical to the first widely successful personal computer, the Apple II. From 1969 to 1973, Mr. Shugart was at Memorex where he held the position of vice president of product development. Prior to his time with Memorex, Mr. Shugart spent 18 years with IBM Corporation, starting as a field engineer in 1951, the day after he finished college. He managed a variety of programs including IBM's 2321 data cell drive; design team 1301, which developed the first modern disk drive with air bearing heads; and

IBM's 305 "RAMAC", the first rigid disk drive.

Beginning in 1984, Mr. Shugart was one of the initiators of university storage research centers, encouraging more advanced training and research in the data storage field. He was also an initial sponsor of the Center for Magnetic Recording Research at the University of California at San Diego at the Data Storage Systems Center at Carnegie Mellon University, both centers of excellence in information storage research. This commitment continues worldwide today with research and development sponsorships at universities in the United Kingdom and Singapore, as well as the United States.

A California native, Mr. Shugart attended the University of Redlands where he received a Bachelor of Science degree in engineering and physics.

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 will be published approximately three times a year.

The paper version of the Newsletter will be sent to members of the IEEE Magnetics Society and the electronic version, which includes the contents of the paper version plus additional information, is on the Magnetics Society Web Page at <http://yara.ecn.purdue.edu/~smag>

Please send contributions to one of the co-editors:

Dr. Jodie A. Christner  
Western Digital Corporation  
1599 North Broadway  
Rochester, MN 55906  
TEL: 507-286-7642 FAX 507-286-7528  
E-Mail: [jodie.a.christner@wdc.com](mailto:jodie.a.christner@wdc.com)

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: [smag@ecn.purdue.edu](mailto:smag@ecn.purdue.edu)

The **IEEE Magnetics Society Newsletter** is published by the Magnetics Society of The Institute of Electrical and Electronics Engineers, Inc. Headquarters of the IEEE is 345 East 47th Street, New York, NY 10017-2394, \$1.00 per member per year (included in Society fee) for each member of the Magnetic Society. Printed in USA. Second-class postage paid at New York, NY and at additional mailing offices. Postmaster: Send address changes to IEEE magnetics Society Newsletter, IEEE, 445 Hoes Lane, Piscataway, NJ 08854-4150.

## Gordon R. Slemon Honored with Achievement Award

The 1997 Magnetics Society Achievement Award was awarded to Professor Gordon R. Slemon of the University of Toronto during the Plenary Session at the 1997 INTERMAG Conference in New Orleans, Louisiana USA. Professor Slemon was born in Bowmansville, Ontario, Canada. He received his B.A.Sc. and M.A. Sc. degrees in Electrical Engineering from the University of Toronto. His advanced degrees are from Imperial College in London, and a Ph.D. and D.Sc. degree from the University of London, in Electrical Engineering and Engineering, respectively. He holds an honorary Doctorate from the Memorial University, St. John's, Newfoundland. His employment has been primarily with educational institutions, starting as a lecturer at the Imperial College in London and moving through the ranks on his return from England to Canada, first as an Assistant Professor at the Nova Scotia Technical college in Halifax and then as Associate Professor and since 1964 as a Professor of Electrical (and Computer) Engineering at the University of Toronto. From 1966 to 1976 he served as a Head of the Department of Electrical Engineering and from 1979-1986 as Dean of the Faculty of Applied Science and Engineering at the University of Toronto.

Gordon Slemon has maintained a very active research program throughout his career. His interests have largely been related to the development of basic theory and models for polyphase machines, including permanent magnet synchronous machines, and the application of these machines in controlled drive systems. He has published widely on these topics, commencing with a paper that was published by the American Institute of Electrical Engineers in 1949, and today has a career total of over 160 journal publications and technical reports, many of which have appeared in the Transactions on Magnetics. In recognition of his lifetime research contributions, Gordon Slemon has received numerous awards, most notably the IEEE Nikola Tesla Award in 1991 and an honorary Doctorate from Memorial University, Newfoundland, in 1994. Gordon Slemon was a superb lecturer, particularly on the topics of magnetic devices and electric machines. Many of his ideas, particularly with regard to device and system modelling, were incorporated in the several texts that he authored or co-authored, starting with *The Scientific Basis of Electrical Engineering* (1961; co-authored with Prof. James M. Ham), as well as *Magnetolectric Devices - Transducers, Transformers and Machines* (1966), *Electric Machines* (1980; co-authored with Prof. A. Straughn), *Power Semiconductor Drives* (1984; co-authored with Profs. S. B. Dewan and A. Straughn) and, most recently, *Electric Machines and Drives* (1992).

Gordon Slemon has given much of his time to the IEEE Magnetics Society, as a member of the Administrative Committee for many years, on numerous Magnetics Society Committees, on the Editorial Board of the Transactions on Magnetics, on the Awards Committee which he chaired at one time. Gordon brought the INTERMAG Conference to Toronto in 1974 and was the Canadian Chair. In addition to the Tesla Award and the Honorary Doctorate he has also won the Western Electric Award for Engineering Education; Ross Medal, Engineering Institute of Canada; Centennial Medal, Institute of Electrical and Electronics Engineers; George Sinclair Award, University of Toronto; Canadian Engineering

Educator of the Year Award; Inducted, Engineering Hall of Distinction, University of Toronto; American Society for Engineering Education Centennial Certificate; among others, and has long been a Fellow of IEEE.

## New Magnetics Society Fellows for 1997

Seventeen members of the Magnetics Society were recently elected to the grade of IEEE Fellow. The new Fellows were recognized by Daniel Stancil, President of the IEEE Magnetics Society and Fritz Friedlaender, chair of the Awards Committee, at the 1997 Intermag Conference in New Orleans, Louisiana USA.

The new Fellows evaluated by the Magnetics Society and the contributions leading to their awards are as follows:

Ioan Matei R. Ciric, University of Manitoba,

*"For contributions to modeling and analysis of magnetic devices"*

Richard Gerber, University of Salford,

*"For contributions to solid-state and applied magnetism"*

Roger Franklin Hoyt, IBM Storage Systems Division,

*"For contributions to magnetic rigid disk storage, and interface reliability";*

Klaas Berend Klaassen, IBM Almaden Research Center,

*"For contributions to advanced measurement and analog circuit designs for magnetic recording"*

James Edward Monson, Harvey Mudd College,

*"For contributions to modeling and education in magnetic recording"*

Lubomyr T. Romankiw, IBM T. J. Watson Research Center, *"For invention of magnetic thin film inductive head, and for major contributions to the science and technology of electrochemistry"*

Takao Suzuki, Toyota Technological Institute,

*"For contribution to the understanding of micromagnetics and to the development of magneto-optical recording technology"*

The following new Fellows are enrolled in the Magnetics Society but were evaluated by another Society:

Larry Richard Carley, Carnegie Mellon University;

Kenneth Kingsley Clarke, Clarke-Hess Communication Research Corp.;

Alexander E. Emanuel, Worcester Polytechnic Institute; Bruno

P. Bernard Lequesne, General Motors Corporation; Naoki Maki, Hitachi, Ltd.;

Robert Piloty, Technische Hochschule Darmstadt;

Zong Sha, Chinese Institute of Electronics, Chinese Institute of Radiowave Propagation;

Paul H. Siegel, University of California - San Diego;

Saburo Tazaki, Shime University;

Yasuo Watanabe, Yokisuka Research Laboratory, CRIEPI.

## NEW IEEE CHANGE-OF-ADDRESS PROCEDURE

The IEEE has introduced a service that allows you to accomplish a change of address by e-mail. Simply send the change to: [address.change@ieee.org](mailto:address.change@ieee.org). Include your name, member number, postal mail and e-mail addresses, and phone and fax numbers. Submitting your address change promptly will help keep the newsletter, *Transactions*, and other IEEE publications coming on time.

## IEEE Magnetics Society Distinguished Lecturers for 1997

The 1997 IEEE Magnetics Society Distinguished Lecturers are Prof. David Jiles of Iowa State University and Prof. Shmuel Shtrikman of the Weizman Institute. The title of Prof. Jiles's talk is "Modeling Magnetic Properties of Materials" and Prof. Shtrikman's talk is entitled "A Short Excursion into Magnetic Levitation". Descriptions of these talks can be found on the IEEE Magnetics Society Web page at "<http://yara.ecn.purdue.edu/~smag/distlect.html>" Please contact the speakers if you would like a presentation to be made to your group.

Prof. David C. Jiles  
Ames Laboratory  
Iowa State University  
Ames, Iowa 50011  
Phone: 515-294-5655  
Fax: 294-8727  
Email: [gauss@ameslab.gov](mailto:gauss@ameslab.gov)

Prof. Shmuel Shtrikman  
The Weizmann Institute of Science  
Department of Electronics  
P.O. Box 26  
Rehovot 76 100, ISRAEL  
Fax: +972-8-934 4109  
Email: [feshtrik@weizmann.weizmann.ac.il](mailto:feshtrik@weizmann.weizmann.ac.il)

---

## CONFERENCE CALENDAR

- January 6-9, 1998**      **7th Joint InterMag and MMM Conference, San Francisco, California USA**  
For info: Diane Suiters, Courtesy Associates 2000 L Street NW, Suite 710 Washington, DC 20036 TEL: 202 973-8668 FAX: 202 331-0111 email [magnetism@courtesyassoc.com](mailto:magnetism@courtesyassoc.com);  
<http://www.aip.org/edops/mmmconf.html>
- August 30 - September 3, 1998**      **Fifteenth International Conference on Rare Earth Magnets and their Applications**  
For info: K-H Muller, REM XV Institut fuer Festkoerper und Werkstofforschung Postfach D-01171 Dresden, Germany, Tel: +49 351 4659 237 Fax: +49 351 4659 541  
[d.hinz@ifw-dresden.de](mailto:d.hinz@ifw-dresden.de); <http://www.ifw-dresden.de/remxv.html>
- August 31 - September 2, 1998**      **7th International Conference on Magnetic Recording Media, MRM'98, Maastricht, NL**  
For info: Cock Lodder, MESA Research Institute Univ. of Twente P.O.Box 217 7500 AE Enschede The Netherlands, Tel.: + - 31- 53 - 489 2750, fax : +31-53-489 3343,  
[j.c.lodder@el.utwente.nl](mailto:j.c.lodder@el.utwente.nl); <http://www.el.utwente.nl/mrm98>
- November 9-12, 1998**      **43rd Conference on Magnetism and Magnetic Materials, Miami, Florida USA**  
For info: Diane Suiters, Courtesy Associates 2000 L Street NW, Suite 710 Washington, DC 20036 TEL: 202 973-8668 FAX: 202 331-0111 email [magnetism@courtesyassoc.com](mailto:magnetism@courtesyassoc.com);
- May 18-21, 1999**      **InterMag Conference, Seoul, Korea**
- November 15-18, 1999**      **44th Conference on Magnetism and Magnetic Materials, San Jose, California USA**
- April 9-12, 2000**      **InterMag Conference, Toronto, Canada**
- January 8-11, 2001**      **8th Joint MMM-InterMag Conference, San Antonio, Texas USA**

IEEE Headquarters  
345 East 47th Street  
New York, NY 10017-2394

BULK RATE  
U.S. POSTAGE  
PAID  
ROCHESTER, MN  
PERMIT #289