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EDWARD DELLA TORRE, EDITOR

TRANSLATION OF JAPANESE ARTICLES

The following article appeared in the Wall Street Journal on December 27, 1985. It is reprinted here for the information of readers of the Newsletter in case they missed it. The Magnetics Society is committed to the publication of the IEEE Transactions Journal on MAGNETICS in Japan. It is hoped that this will make technical information published in Japan available to subscribors in a timely fashion.

TECHNOLOGY

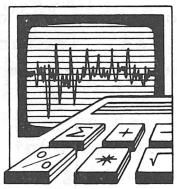
Pace Picks Up in Translations Of Japanese Technical Articles

By ARLEN J. LARGE
Staff Reporter of THE WALL STREET JOURNAL

"Magnetic thin films with perpendicular magnetic anisotropic characteristics have been the focus of interest recently and are known to be of columnar structure generally."

SO BEGINS a technical paper by four engineering faculty members at Hiroshima University. Originally written in Japanese, it's now available in English, thanks to a new translating endeavor by the Institute of Electrical and Electronics Engineers in New York. The Magnetics Society, one of the IEEE's 35 subgroups, selects articles published by the Magnetics Society of Japan for translation and reprinting in a $430-a-year "translation journal" that is intended to appear monthly.

"A huge amount of work is going on in magnetics in Japan, and that's why translations are so keenly sought after here," says Patricia Penick of the IEEE publications department.



So are other technical translations. U.S. researchers in the technologies of robotics, semiconductors, bioengineering, fiber optics and chemical engineering experience plenty of linguistic frustration in keeping up with their hard-charging counterparts in Japan.

"The competition right now is Japan, and the technical literature for Americans is just a complete blank," says Edward Brady, an international specialist at the Commerce Department's National Bureau of Standards.

HOPING TO CONVERT demand into profit, University Microfilms International of Ann Arbor, Mich., plans to offer customers English translations from an assortment of 750 Japanese technical publications next year. The company, an old-line publisher of U.S. periodical indexes and summaries of academic papers, is a subsidiary of Bell & Howell Co.

Just finished is the first issue of its new monthly publication called Japanese Technical Abstracts, providing about 5,000 short English summaries of articles on topics ranging from optics to computer hardware. The annual subscription price is $5,000; for an extra fee the company will sell a full-article translation to readers.

The U.S. government may try to stimulate more such activity. The Senate last month passed the "Japanese Technical Literature Act," which instructs the Commerce Department to publish an annual directory of U.S. companies and professional societies that do Japanese translations, plus a list of Japanese technical documents that have been translated by federal agencies themselves.

SAYS SEN. MAX BAUCUS (D., Mont.), a principal sponsor of the Senate-passed bill, "Anyone who has visited Japan and seen the bookstores on almost every street corner knows that the Japanese are prolific writers and voracious readers." Mr. Baucus came back from a trip to Japan a year ago hoping that Congress could do something about the U.S. trade deficit besides putting up protectionist barriers against imports, a notion that found favor among Republicans and Democrats alike.

But first Sen. Baucus and his main co-sponsor, Democratic Sen. John D. Rockefeller IV of West Virginia, had to trim down their original bill. University Microfilms, for one, feared it would put government translators in direct competition with the company's own plans to sell English translations of Japanese technical articles. As passed by the Senate, the measure specifies that the Commerce Department should only do translations that aren't otherwise available from private U.S. sources.

A companion bill has been introduced by senior members of a House science subcommittee for consideration next year. General support has been voiced by the National Association of Manufacturers, the Electronic Industries Association, the Semiconductor Industry Association and the American Institute of Aeronautics and Astronautics. But the Commerce Department itself objects that it would be "unwise" right now to legislate the government more deeply into translation activities.

EVERYONE SEEMS to agree, however, that American researchers need more access in English to Japanese technical literature and that U.S. professional scientific and engineering societies should help provide it. The American Chemical Society is widely praised for including summaries of translated chemistry papers from Japan in its world-wide compendium of abstracts; last year it published 56,000 such translations.

The society offers the full articles from which the abstracts are taken. But the articles are still in Japanese, and there's no plan to provide a translation service for them. Says Edward Donnell, a marketing specialist for the society's Chemical Abstracts in Columbus, Ohio: "We already have difficulty getting enough Japanese-speaking chemists just to translate the abstracts."

That's likely to be a continuing problem until more Americans take the trouble to learn Japanese. Some scientists hope the budding availability of English translations may inspire just that. An editorial in the IEEE's first issue of translated magnetics articles, written by Stanley Charap of Carnegie-Mellon University, says interest stirred by Japanese research may encourage "many more people on this side of the exchange to overcome the language barrier and perhaps make translation journals less essential than they are today."

INTERMAG '86
to be held in Phoenix, Arizona

The 24th International Magnetics Conference (INTERMAG), sponsored by the Magnetics Society of the IEEE, will be held from Monday, April 14, to Thursday, April 17, 1986 at the Hyatt-Regency Hotel in Phoenix, Arizona, USA. This conference provides a remarkable opportunity for participants to meet with their colleagues and discuss controversial and new developments.

Program Committee chairmen D.A. Thompson and E. Della-Torre have organized a stimulating program consisting of invited and contributed talks on the newest developments in all branches of magnetism. Approximately one third of the papers will be devoted to magnetic recording with topics such as media, heads, and systems being discussed. Other papers will describe the newest developments in fields such as magneto-optics, magnetic bubbles, permanent magnetics (including Nd-Fe-B), soft and amorphous magnetic materials, power devices, magnetic separation, magnetic bubbles, eddy currents, magnetic measurements, magnetic microwave devices, magnetic calculations, and CAD.

A one day tutorial on magnetic recording will be held in the conference hotel on the Sunday preceding the conference. On Monday, there will be an invited session on the theoretical and experimental status of the reversal process in magnetic recording. The Education Committee of the IEEE Magnetics Society will present an invited tutorial on permanent magnet motor design on Wednesday evening.

The Plenary address will be given by Dr. Emerson Pugh, IEEE Executive Vice President. The title of the talk is "Technology Assessment".

Each morning between 8:00 and 9:15, the session chairmen will present overviews of that day's papers in the Regency Ballroom. These non-specialist introductions will help participants to choose papers to attend, in sessions outside their speciality, by highlighting tutorial papers, indicating points of disagreement or controversy, highlighting "must hear" papers, and generally discussing the many aspects of research in magnetics.

Social events include a reception at the Heard Museum of Anthropology and Primitive Art and a steak cook-out in the Old West Town. Tickets for these events should be purchased in advance of the conference.

For advance registration (prior to March 15), the fee is $115 for IEEE members and $145 for non-members. After March 15, these registration fees will be $135 and $165, respectively. The Student/Retiree registration is $10. The registration for the magnetic recording tutorial is $50. Conference attendees are advised to make early hotel reservations.

Individuals not on the conference mailing list may obtain information by contacting either Publicity Chairman, J.A. Nyenhuis, Purdue University, School of Electrical Engineering, West Lafayette, IN 47907, Telephone (3317) 494-3524, or Diane S. Suiters at Courtesy Associates, Inc., 655 15th St. N.W., Suite 300, Washington, DC 20005, Telephone (202) 639-5088.

The IEEE Magnetics Society Newsletter is published quarterly by the Institute of Electrical and Electronics Engineers, Inc., 345 East 47 Street, New York, New York 10017. The objective of the Newsletter is to publicize activities, conferences, workshops, and other information of interest to the membership of the Society and technical people in the general area of applied magnetics. Copy is solicited from the S-MAG membership, organizers of conferences, officers of the Society and local chapters, and other individuals or organizations with potentially relevant material. Copy should be sent to Dr. Ed Della Torre, Editor, Magnetics Society Newsletter, Dept. of EE & CS, The George Washington University, Washington, D.C. 20052 by the following deadlines, September 20, December 20, April 20 and July 20.

Dr. Emerson Pugh

PLENARY SPEAKER ANNOUNCED

Emerson Pugh will be the Plenary Speaker for the INTERMAG conference. He will speak on "Technology Assessment." An account is given of the evolution and use of the "minimum-linewidth method" for assessing competing integrated circuit technologies, including its use in evaluating thin magnetic-film memory devices during the 1960s, magnetic bubble devices during the 1970s, and Josephson-junction devices in the early 1980s. From this account, general rules are derived for conducting successful technology assessments.

Emerson Pugh received the B.S. and Ph.D. degrees in physics from Carnegie-Mellon University, Pittsburgh, Pennsylvania, where he remained as an assistant professor until joining IBM in 1957. He led the development of the magnetic thin-film memory array shipped on the IBM System/360 Model 95 in 1968, organized and managed the interdivisional magnetic-bubble memory program beginning in 1971, and has held a variety of corporate and divisional assignments including Group Director of Operational Memory and Director of Technical Planning for the Research Division. In 1974, on leave from IBM, he served as Executive Director for the National Academy of Sciences' study of automobile emisions and fuel economy conducted for the Environmental Protection Agency and the United States Congress.

Technology assessment, technical history, and information storage technologies are his primary current interests. He is the author of Memories that Shaped an Industry (The MIT Press, 1984) and co-author of Principles of Electricity and Magnetism (Addison Wesley, 1960 and 1970) and IBM's Early Computers (The MIT Press, 1986).

Dr. Pugh is the 1986 Executive Vice President of the IEEE, having previously served as editor of the Transactions on Magnetics, president of the Magnetics Society, twice general chairman of the Intermag Conference, director of the Division of Electromagnetics and Radiation, member of the Technical Activities and the United States Activities Boards, vice chairman of the Publications Board, and member of the Board of Directors.

SESSION CHAIRMAN'S OVERVIEW

Due to the many parallel sessions, participants at the INTERMAG Conference can attend only a small fraction of the papers presented. In order to alleviate this problem and to try to enhance the interdisciplinary nature of this conference, the conference organizers are introducing an innovation. Each morning between 8:00 and 9:15 a.m., the session chairmen will present overviews of that day's papers in the Regency Ballroom. These nonspecialist introductions will help participants to choose papers to attend, in sessions outside their specialty, by highlighting tutorial papers, indicating points of agreement or controversy, highlighting "must hear" papers, and generally discussing the many aspects of research in magnetics.

INVITED TUTORIAL SESSION ON PERMANENT MAGNET MOTOR DESIGN

Chairperson: A.H. Qureshi
Wayne State University
Detroit, MI

The Education Committee of the Magnetics Society is sponsoring this session describing the design of permanent magnet motors Wednesday evening at 8 p.m. Presentations will be given on Magnetic Materials, Magnetic Modeling, and Salient Magnet Design, and Flux Concentration Methods, Imbedded Magnet Design.

The speakers are:

G.R. Slemon
University of Toronto
Toronto, Canada
M5S 1A4 CANADA

M.A. Rahman
Memorial University of Newfoundland
St. John's
NEWFOUNDLAND A1B 3X5

TUTORIAL ON MAGNETIC RECORDING

On Sunday, April 13th, a short course will be given covering four areas of current research in magnetic recording. The purpose of these lectures is not only to give an introduction to the field of recording, but also to provide the listeners with the concepts and terminology to enable them to follow readily the presentations during the regular INTERMAG '86 sessions. The four topics to be covered in this course are (1) Models of the Recording Process and Noise (H. Neal Bertram, CMRR-UCSD); (2) Comparison of Longitudinal and Vertical Recording (John Mallinson, CMRR-UCSD); (3) Channel Coding and Equalization (Roger Wood, Ampex Corp.); (4) Magneto-Optic Recording Technology (Mike Haynes, IBM Corp.).

The hours during which the course will be held on Sunday are 10:00 AM to 12:30 PM, and 2:00 PM to 4:30 PM. The fee is $50. We urge you to register in advance for this course, as space may be limited. You can reserve your place by using the enclosed Advance Registration Form for both the course and the Conference. For those of you who do attend this course, the Conference Registration Desks will be open on Sunday, April 13th, from 8:00 until 10:00 AM. At that time, copies of foils used by the speakers during the course will be available to course registrants. Persons not registered cannot be admitted to the course sessions.

MUSICIANS WANTED FOR INTERMAG

Because the performance of Scott Joplin's "Magnetic Rag" by 1985 INTERMAG attendees was so well received, another performance will be attempted at the 1986 INTERMAG, at 5:45 pm Monday afternoon. Besides the "Magnetic Rag", Joplin's Ragtime Dance will also be performed. Any conference attendee is welcome to participate; all instruments, including strings, are welcome. The larger, bulkier, instruments will be furnished locally. Please contact Jim Torok, 612-456-2397 immediately if you would like to participate.

STUDENT TRAVEL AWARDS

A. Haq Queshi, chairman of the Education Committee of the Magnetics Society, announced that a record number of students were nominated for Magnetics Society's travel awards to INTERMAG'86. Award letters have been sent for 18 nominees who will receive partial support towards their expenses incurred in attending the INTERMAG'86 at Phoenix, Arizona. The Society hopes to promote graduate studies and research at academic institutions by making these awards. Deadlines for award nominations for the 3M Conference will be announced shortly.

ELECTROMAGNETICS AND RADIATION KEY DEVELOPMENTS OF THE LAST HUNDRED YEARS

by Emerson Pugh, 1984 Director

In commemoration of the IEEE Centennial, I met with presidents of the IEEE societies in the Division of Electromagnetics and Radiation, to discuss the technological advances of the past hundred years that have most influenced the work of our members. Our "meeting" was held by phone, air mail, and electronic mail, none of which existed one hundred years earlier.

Clark E. Johnson, Jr., 1984 president of the Magnetics Society, noted that his society probably represents the oldest of our technologies, with the use of magnetic compasses for navigation dating back before 1100 AD. By the time the American Institution of Electrical Engineers was organized in 1884, two major applications of magnetism and magnetic materials had already been created: the dynamo and the electromagnet. During the last century, significant advances in soft magnetic materials have made power distribution and generation more economical, and permitted development of higher-efficiency, low-cost motors. The development and commercialization of nonmetallic magnetic materials such as ferrites have sparked the way for exceptional improvements in telephoning, communications, and radar -- not to mention ferrite cores that provided the first reliable, high-speed memories for electronic computers beginning in the mid-1950s. Yet, magnetics have often been considered to be an arcane and somewhat uninteresting endeavor. Nothing could be further from the truth. The atomic origins of magnetism itself are still only poorly understood; and in so far as a dynamic growth industry is concerned, magnetic recording media manufacturing has been growing at 30 percent per year over the last three decades. Recent magnetic developments, such as amorphous films, will undoubtedly touch our daily lives in as important ways as the magnetics of old.

Allan W. Love, 1984 president of the Antennas and Propagation Society, notes that in the 36 years of its existence, the Antennas and Propagation Society and its members have contributed to many astonishing developments. Prominent among these are the sophisticated ground and satellite antennas with their multiple and contoured beam capabilities for communications, the antennas of NASA's deep space tracking network that facilitate the exploration of our solar system by space probes, and the exquisitely sensitive antennas used in radio astronomy to probe the vast reaches of the universe at distances well beyond the capabilities of their optical counterparts. In the area of remote sensing we find many examples of satellites carrying both active and passive remote sensing systems using antennas to gather the unimaginably weak signals emitted or reflected by the land and sea surfaces. A prodigious amount of theoretical and experimental effort has gone into studies of electromagnetic wave propagation in all kinds of media, homogeneous and nonhomogenerous, isotropic and nonisotropic. Electromagnetic waves are now used extensively to delineate otherwise inaccessible sub-surface features in the earth's crust and to locate discontinuities which can point to oil, gas and mineral deposits, and they are increasingly being used in medical imaging techniques and for noninvasive diagnosis and treatment.

H. George Oltman, 1984 president of the Microwave Theory and Techniques Society, observed that microwave devices and components are generally not end-products; they are used as components by other industries to make useful systems for the benefit of mankind. An obvious example is radar in all of its forms: weather avoidance, commercial and military, airborne, satellite geophysical, automotive and on and on. Microwave heating has come closest to being a microwave end product. Two major thrusts have made possible the recent expansion in communication services: point-to-point microwave repeaters and satellite stations. Now we are beginning to see the effects of another technology, fiber optics, that promises even lower communication costs. Members of the Microwave Theory and Techniques Society have, over the last five decades, developed sophisticated and versatile design tools. Not only have these tools extended the variety, the speed, and the quality of microwave components, but they have been modified and used by workers in other fields.

Eugene D Knowles, 1984 president of the Electromagnetic Compatibility Society considers Marconi to be the first EMC engineer. Four years after Marconi successfully demonstrated radio communication, he filed patent No. 7777, which permitted more than one station to operate without interference. Since then, technology and systems have grown and become more sophisticated. Armstrong's superheterodyne permitted more devices in a finite spectrum,and the advent of radar and pulse equipment in the 1940s and 1950s expanded the use of the spectrum and greatly increased the need for electromagnetic compatibility. The field was technically active but professionally unorganized until 1957 when the IRE granted a charter to the new Professional Group on Radio Interference; the group later became an IEEE Society. In the IEEE Centennial year the membership passed 2500 and the first International Symposium was held in Tokyo, Japan. Now, 85 years after patent 7777, electromagnetic compatibility has become an internationally recognized discipline.

John A. Martin, 1985 president of the Nuclear and Plasma Sciences Society recalls that this society was formed as the professional group on Nuclear Science in 1949, two years after a study committee was commissioned to determine the proper role of the IRE in this field. At the beginning of this century of progress, the scientific discoveries that underpin the nuclear plasma sciences had not been made: the electron was discovered in 1896; the neutron was identified in 1932; nuclear fission was not understood until 1939. The development of the nuclear energy sources and applications and basic research in nuclear and particle physics have driven the growth of the nuclear sciences. The plasma sciences have been stimulated by a broad spectrum of important applications of plasma devices and the possibility of limitless power through controlled thermo-nuclear fusion. The challenges

seem limitless. Perhaps in no field of IEEE are there greater uncertainties and opportunities as we enter the second century of the IEEE.

FUTURE CONFERENCES

FIFTH ANNUAL CONFERENCE ON PROPERTIES AND APPLICATIONS OF MAGNETIC MATERIALS

This will be held at Illinois Institute of Technology on the 28th and 29th of May 1986. Further details concerning the conference may be obtained from Professor H.P. Messinger, Department of Electrical Engineering and Computer Science, Illinois Institute of Technology, 3301 South Dearborn Street, Chicago, IL 60616.

3rd INTERNATIONAL CONFERENCE ON PHYSICS OF MAGNETIC MATERIALS

The 3rd International Conference on Physics of Magnetic Materials organized by the Institute of Physics of the Polish Academy of Sciences will be held in Szczyrk-Bila, Poland, on September 9-14, 1986 instead of the previously fixed place and date: Spala, Poland, September 14-20, 1986.

This decision results mainly from talks with the Members of the International Advisory Board of the XXIII Congress Ampere on Magnetic Resonance, Rome, September 15 - 19, 1986, who have mentioned that quite a number of our colleagues-magneticians would like to attend both meetings.

1986 APPLIED SUPERCONDUCTIVITY CONFERENCE

Hyatt Regency - Baltimore, Maryland
September 28 to October 3, 1986

The 1986 Applied Superconductivity Conference coincides with the 75th anniversary of the discovery of superconductivity and the 20th anniversary of the first ASC. The 1986 "Anniversary Conference" will include special plenary sessions and both oral and poster sessions in the following ten subject categories:

1. Electronic materials and processes
2. Analog devices and circuits
3. Digital devices and circuits
4. High T_c and emerging materials and applications
5. Composite conductors
6. Cables, rotating machinery, and other power devices
7. Fusion systems and other large magnets
8. High energy physics applications
9. General physics applications
10. Non-physics applications, e.g., biomedical, NDT

A one-page abstract of approximately 200 words is solicited by March 7, 1986. The Proceedings of the Conference will be published in the IEEE Transactions on Magnetics. Authors whose papers are accepted will receive material and instructions for preparing camera-ready manuscripts so the papers can be directly reproduced. Camera-ready copies must be submitted upon arrival at the Conference.

Inquiries of a general nature should be directed to the Executive Administrator Lahni Blohm or the Conference Chairman Edgar Edelsack.

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Arlington, Va 22217
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Code 6630C
Naval Research Laboratory
Washington, DC 20375
(202) 767-3246

First International School
Electromagnetic Fields and Biomembranes

The First International School on Electromagnetic fields and Biomembranes is to be held in Pleven, Bulgaria on October 6-12, 1986.

The scientific program will consist of 25 invited lectures, several poster sessions and round table discussions. The following topics will be discussed.

A. Structure and function of biomembranes
B. Transport phenomena
C. Electrical properties of biomembranes
D. Reaction of biomembranes to applied electromagnetic field
E. Applied biophysics and biotechnology with use of electromagnetic fields.

All wishing to take part in the School are kindly requested to return the enclosed registration form to the Organizing Committee not later than 15 February 1986.

Address for correspondence:

Prof. Marko Markov
Department of Biophysics and Radiobiology
Biological Faculty
Sofia University
8 Dragan Tzankov Blvd.
Sofia 1000
Bulgaria

ANNUAL CONFERENCE ON MAGNETISM AND MAGENTIC MATERIALS

Baltimore, Maryland
17-21 November 1986

The Thirty-First Annual Conference on Magnetism and Magnetic Materials will be held at the Hyatt Regency Hotel, Baltimore, Maryland, 17-21 November, 1986. The Conference annually brings together scientists and engineers interested in recent developments in all branches of fundamental and applied magnetism. Emphasis is traditionally 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 both invited and contributed papers. Selection of contributed papers is based on abstracts whose submission deadline is 23 June 1986. A Program Booklet will be available in advance of the Conference from the American Institute of Physics for a fee of $10.00. Registrants will receive this booklet at the Conference. The Conference 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 in the prescribed format by writing to Dr. John T. Scott, American Institute of Physics, 335 East 45th Street, New York, New York 10017 or Diane Suiters, Courtesy Associates, 655 15th Street N.W., Suite 300, Washington, DC 20005.

This topical conference is sponsored jointly by the American Institute of Physics and the Magnetics Society of the IEEE in cooperation with the American Physical Society, the Office of Naval Research, the Metallurgical Society of the AIME, the American Society for Testing and Materials and the American Ceramic Society. The meeting will be open to all persons subject to a registration fee of approximately $130 (marked reduction for students).

WHO GETS THE NEWSLETTER

The Newsletter is sent to persons on mailing lists supplied by the IEEE and APS. They include members of the Magnetics Society and past attendees of INTERMAG and MMM conferences. Any address correction should be referred to the respective societies and not the Newsletter Editor. The addresses are:

Ellen Petix
American Institute of Physics, Inc.
335 East 45th Street
New York, NY 10017

and

IEEE Service Center
445 Hoes Lane
Piscataway, N.J. 08854

OUR NEXT ISSUE

In our next issue, June 1986, we will review activities of the INTERMAG'86 conference. As done in the past, session chairmen overviews will be presented along with other information on the conference. Upcoming conference information will again be provided. Look for our next issue in June 1986.

CONFERENCE CALENDAR

INTERMAG Conference, April 15-18, 1986, Phoenix, Arizona

Fifth Annual Conference on Properties and Applications of Magnetic Materials, May 28-29, Illinois Institute of Technology.

IEEE International Symposium on the Applications of Ferroelectrics, June 8-11, 1986, Lehigh University, Bethlehem, Pennsylvania

IQEC'86-International Conference on Quantum Electronics, June 9-13, 1986, Moscone Center, San Francisco, California

CLEO'86-Conference on Lasers and Electro-Optis, June 9-13, 1986, Moscone Center, San Francisco, California

International Conference on Physics of Magnetic Materials (ICPMM), September 14-20, 1986, Spala, Poland

1986 Applied Superconductivity Conference, September 28 to October 3, 1986, Baltimore, Maryland, USA.

31st Conference on Magnetism and Magnetic Materials, November 17-20, 1986, Baltimore, Maryland

INTERMAG Conference, April 1987, Tokyo, Japan

Rapidly Quenched Metals 6th Annual Conference, August 3-7, 1987, Montreal, Quebec

32nd Conference on Magnetism and Magnetic Materials, November 9-12, 1987, Chicago, Illinois

Joint INTERMAG/Magnetism and Magnetic Materials Conference, July 11-15, 1988, Vancouver, British Columbia

ICM 88, July 25-29, 1988, Paris France.

INTERMAG Conference, April 4-7, 1989, Washington, DC.

33rd Conference on Magnetism and Magnetic Materials, November, 1989, Boston, Massachusetts

JOIN THE IEEE MAGNETICS SOCIETY TODAY

Membership in the IEEE Magnetics Society entitles you to receive, for the low Society fee, the IEEE Transactions on Magnetics, and the quarterly Magnetics developments, meetings, and conferences in your areas of interest, and are entitled to purchase informative conference records and other helpful educational aids at greatly reduced rates for members.

Use the convenient coupon to become a member of the IEEE Magnetics Society. If you are not a member of the IEEE, but would like to join, please check the appropriate box on the coupon. Descriptive materials and an IEEE membership application will be sent to you upon receipt.

Society Fee: $7.00 for IEEE members of all grades except Student.

Student Fee: $5.00.

These rates apply to payments received September 1 through February. On payments received March 1 through August 31, remit one-half of the above rates. (Payments received September 1 through December 31 apply through December 31 of the following year.)

MEMBERSHIP APPLICATION/ IEEE MAGNETICS SOCIETY

_____ I am a _____ (Grade) member of IEEE and hereby apply for membership in the MAGNETICS Society. I enclose a check for the Society Fee* (Made payable to IEEE).

_____ I am not a member of the IEEE but would like to join. Please send information.

_____ I am interested in becoming a MAGNETICS Society affiliate. Please send information.

Name _____ IEEE No. _____

Mailing Address _____

City _____ State/Country _____ ZIP _____

Company _____

Field of Interest _____

Send to: IEEE Service Center
445 Hoes Lane
Piscataway, NJ 08845

(Please show this message to a colleague in magnetics who could benefit from membership in the Magnetics Society.)

JOIN THE MAGNETICS SOCIETY

If you are not yet a member of the IEEE Magnetics Society and are involved in magnetics research, development or engineering, the Society could make a valuable contribution to your professional activities.

You will join over 2000 colleagues in belonging to the only society in this country devoted solely to the interests of those who work in magnetism.

You will have the opportunity of contributing to your profession through membership in its Society and participation in the work of its technical and administrative committees.

You will receive bimonthly the Magnetics Transactions, recognized throughout the world as a leading publication in applied magnetics.

The Society sponsors the INTERMAG Conference and co-sponsors the Conference on Magnetism and Magnetic Materials, which jointly cover the whole subject of magnetism.

Fill out the application blank today. For additional information, you may contact: Barbara Langland, Membership Chairman of the Magnetics Society, HP Labs, Distributed Systems Center, 1501 Page Mill Road, Palo Alto, CA 94304-1181.

IEEE MAGNETICS SOCIETY NEWSLETTER
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