



## President's Message To Those Affected By The Earthquake And Tsunami In Japan

By Takao Suzuki, President of the IEEE Magnetics Society

On behalf of the IEEE Magnetics Society, I would like to convey my deepest sympathy to all of you who have suffered in the earthquake and tsunami disaster that took place in northern Japan. I know that this must be a very difficult time for you, and I pray and hope that you all will recover from this disaster as quickly as possible.



Among the areas hit hardest by the earthquake and tsunami, the city of Sendai is the place which most of us in the magnetic community know as being the Mecca for magnetism and magnetic materials. Historically, we have had many excellent scientists and engineers from Sendai who are very active in the

international magnetic community. We now have three AdCom members from Japan; two of them are in Sendai. Also, we have a Sendai Chapter. All of the efforts given by these individuals from Sendai are some of our most vital resources for the IEEE Magnetics Society.

On a personal matter, I spent many years as a faculty member of Tohoku University in Sendai. Many of my long-time colleagues and close friends are there, and my heart is heavy. The path to recovery for Sendai and for all of Japan will not be easy, but we will continue to hope and pray diligently for all of you who have been affected.

As President of the Magnetics Society, I want you to know that our Society is here to assist you by all measures. Our thoughts and prayers are with you every day.

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## A Message From Japan

By Hiroaki Muraoka, AdCom Member

I am writing this note from Sendai to express my heartfelt thanks to all IEEE Magnetics Society members, for their sympathy and encouragement with lots of warm emails and offers of help.

Actually, it was the worst disaster that Sendai has ever experienced. I am very sorry that [as of the beginning of April 2011] more than 12,000 people are confirmed to have been killed. I am afraid we have to estimate the final number of victims as at least 20-25,000. As you know, it was an extremely large earthquake of magnitude 9.0 on the Richter scale, which caused an awful tsunami, probably 10 m or higher. Almost all victims were killed by the tsunami; very fortunately no serious human losses has been reported in Tohoku University, where many Magnetic Society members are working, though some

buildings were significantly damaged. My colleagues, students, and their families are all safe.

When the power supply was restored and we hooked up to the Internet, we all found many warm emails from all over the world. I would like to convey our deepest thanks for all the encouraging words in the emails. We are very much strengthened by the support of the IEEE Magnetics Society members.

Finally I would like to report an upside about the Japanese people. Everyone has been incredibly patient and cooperative to maintain the social order. Most infrastructure in Sendai city was lost or malfunctions, and the traffic system is still a mess. But the calmness of the people is a great relief.

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## Nominations For IEEE Medals And Recognitions

By Melissa Swartz, Awards Program Specialist, IEEE

The IEEE Awards Program provides peer recognition to technical professionals whose exceptional achievements and outstanding contributions have made a lasting impact on technology, society, and the engineering profession. Magnetics Society members may be particularly interested in the following IEEE Medals and Recognitions, whose nomination deadlines are July 1, 2011. The awards, presented by the IEEE Board of Directors, typically consist of a medal, certificate and honorarium and are presented at the distinguished IEEE Honors Ceremony.

- **IEEE Medal of Honor**, for an exceptional contribution or an extraordinary career in the IEEE fields of interest.
- **IEEE Founders Medal**, for outstanding contributions in the leadership, planning, and administration of affairs of great value to the electrical and electronics engineering profession.
- **IEEE James H. Mulligan, Jr. Education Medal**, for a career of outstanding contributions to education in the fields of interest of IEEE.
- **IEEE Jack S. Kilby Signal Processing Medal**, for outstanding achievements in signal processing.

- **IEEE Jun-ichi Nishizawa Medal**, for outstanding contributions to material and device science and technology, including practical application.
- **IEEE Medal in Power Engineering**, for outstanding contributions to the technology associated with the generation, transmission, distribution, application and utilization of electric power for the betterment of society.
- **IEEE Service Awards**
- **IEEE Corporate Recognition Awards**
- **IEEE Honorary Membership**

The IEEE also recognizes outstanding individuals through a special membership category: IEEE Honorary Member.

Nominations are initiated by members and the public, and then reviewed by a panel of peers. Their recommendations are submitted to the IEEE Awards Board prior to final approval by the IEEE Board of Directors. For nomination guidelines and forms, visit <http://www.ieee.org/awards> or e-mail: [awards@ieee.org](mailto:awards@ieee.org).

## New Senior Members

Senior Member is the highest grade for which IEEE members can apply. The following members of the IEEE Magnetics Society were recently elevated to the grade of Senior Member. Congratulations!

January 2011: Yoshiro Kawase, Zhiyong Jia, Glenn Knierim and David Lowther.

February 2011: Michael Devine, Ganping Ju and Tadashi Sawata.

For further information, visit the IEEE Web site at:

[http://www.ieee.org/membership\\_services/membership/grade\\_elevation.html](http://www.ieee.org/membership_services/membership/grade_elevation.html)

# From The President

By Takao Suzuki, President of the IEEE Magnetics Society

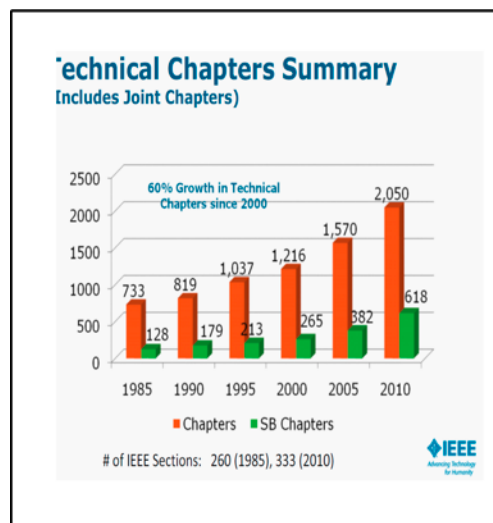
First of all, I would like to report that the Magnetics Society AdCom is presently discussing how our Society can aid those in Japan who have suffered in the earthquake and tsunami disasters. We are considering, in particular, how we can assist these members to attend the Asia INTERMAG 2011 which will take place in Taipei only a few weeks away from now. It is too early to know exactly how we will support them, but all of our AdCom members share the same spirit of wanting to assist our colleagues in Japan at this difficult time.

Secondly, special thanks to the local committee, management committee and staff for their efforts in smoothly preparing Asia INTERMAG. I am excited about this upcoming conference, and I am sure that it will be very successful. We have seen in our past INTERMAGs and MMMs that the number of participants from Asia and Europe has been increasing, I have heard that there will be several industries from China who will exhibit their companies' products in booths during the conference. It is probable that the market place for our conferences may be shifting from the USA/Canada to other regions. The AdCom already has started discussions about the current schedule for a "three-year cycle" of the offshore INTERMAG conference. That is to say that the INTERMAG will be held outside of the USA/Canada every three years. In the near future, INTERMAG conferences may take place at shorter intervals in Europe and Asia so that members there will have more opportunities to attend. At the same time, this shorter cycle will offer us a chance to explore new membership possibilities in those regions.

On another subject, I would like to report about the last IEEE TAB (Technical Activities Board) meeting held in Miami in February 2011. TAB is the organization that defines and plans the strategy for core values and visions for the future, and it sets near- and long-term goals for IEEE's activities. The TAB meeting itself usually is one week long in its entirety, but presidents of the societies and councils usually attend the meetings on Friday and Saturday during these week-long meetings.

Among several issues discussed at the TAB meeting this February, membership was one of the hottest discussions. The present membership system is that when one becomes an IEEE member, he/she may choose to join a technical society or not to be associated with any particular society. Recent statistics show that membership retention in the second year is lower for those who are not involved in any technical society than for those who are members of a technical society.

To increase the retention percentage, the idea of a "bundle membership system" has been proposed by the IEEE membership committee. With this new membership policy, a new member who pays the IEEE's basic membership fee can become a technical society member without any additional fees (at present, a new member must pay an additional fee to become a technical society member). Therefore, the "bundle policy" offers benefits to members, by enabling them to become technical society members without paying additional fees, and giving them opportunities to be exposed to that particular field of interest. However, during the TAB meeting, it was not clear to us if this new membership policy would keep members from leaving IEEE.



As far as our Society's membership goes, we have seen a decrease in our membership during the last few years even though the worldwide membership of IEEE has been increasing. Our new membership committee chair, Peter Fischer, already has begun discussions to reverse this trend, and I am very much looking forward to the outcome.

Continuing, the matter of the chapters was also discussed. As shown in the graph, the number of technical chapters is increasing by some 20 to 30% each 5-year period (127 chapters were formed in 2010.). This trend most likely will continue in the near future, which is great! However, a concern was expressed that there is a growing number of chapters that have not been active at all. After the discussion, it was advised that each technical society should pay attention to chapter activities to provide maximum benefits for the local community. Our Magnetics Society has 33

*continued on page 4*

# From The President *continued from page 3*

Chapters (16 in the USA/Canada/Brazil, 8 in Europe, and 9 in Asia). All of them are very active, so we do not need to worry about this issue.

Another matter reported at the TAB meeting was related to publications. The number of articles published is increasing significantly, as shown in the graph. During the past ten years, it has nearly tripled. The IEEE needs to maintain quality at the same time, and one issue is how to do this. According to the statistics disclosed, 20 Journals of the IEEE received high ranking scores as far as the citation goes. Unfortunately, our Magnetics Transaction Journal is not among them. I have seen much discussion at editorial meetings on this issue of how to increase the quality of our articles, so we need to work as much as possible to maintain a high standard of quality.

<b>Top 20 Journals in Electrical &amp; Electronics Engineering</b>	
1	IEEE Signal Processing Magazine
2	Proceedings of the IEEE
3	IEEE Transactions on Industrial Electronics
4	IEEE Transactions on Pattern Analysis and Machine Intelligence
5	<i>Progress in Quantum Electronics</i>
6	<i>Progress in Electromagnetic Research</i>
7	IEEE Journal on Selected Areas in Communications
8	IEEE Transactions on Software Engineering
9	IEEE Transactions on Medical Imaging
10	IEEE Transactions on Fuzzy Systems
11	IEEE Journal of Solid-State Circuits
12	IEEE Intelligent Systems
13	IEEE Pervasive Computing
14	IEEE Journal of Selected Topics in Quantum Electronics
15	IEEE Transactions on Power Electronics
16	<i>Expert Systems with Applications</i>
17	IEEE Transactions on Neural Networks
18	IEEE Transactions on Image Processing
19	IEEE Transactions on Energy Conversion
20	<i>Automatica</i>

Source: Journal Citation Reports – 2009 Science Edition

Another matter that was reported is that there has been a significant increase in cases in which “virtual conferences” have asked technical societies to sponsor their events so that they can publish papers that are sponsored by the technical society (note: a “virtual conference” is one in which a conference is held on a web-basis, and not in person). In order to have as many participants as possible, virtual conference organizers ask relevant (or even irrelevant) societies to sponsor their virtual event, so that the registered participants can publish their papers in the Transaction Journal or the proceedings of that sponsored society. To my knowledge, our Magnetics Society did not receive such a request, but there is a growing concern among IEEE members.

The next TAB meeting is scheduled in June, so I will keep you informed.

I look forward to receiving your feedback!

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## 20th Soft Magnetic Materials Conference SMM20

By Evangelos Hristoforou, SMM20 Local Chair

The 20th Soft Magnetic Materials Conference SMM20, will be organized on Kos Island, at the Kos International Conference Center, during September 18-22, 2011.

Following the successful publication procedure of the 19th SMM in Torino, the publications of the accepted papers of the Conference will be published in 2012 in the IEEE Transactions on Magnetics, following the manuscript submission process via the IEEE Portal. Prof. Luc Dupre, Editor of the IEEE Transactions on Magnetics, will act as the Publication Chair of the Publication Committee.

Apart from the regular topics of the SMM Conference, some new topics have been inserted, namely bio-engineering and energy applications of soft magnetic materials.

A complete list of the conference topics may be found at the Conference Web site, which can also be used for all actions

related to the conference, such as abstract submission, registration etc.

In addition to a high-quality technical program, the organizers promise some unforgettable conference events, following the famous Greek hospitality!

Important dates:

**April 30, 2011** - Abstract submission deadline

**May 15, 2011** - Notification of acceptance

**June 15, 2011** - Early registration deadline

**August 14, 2011** - Full paper submission deadline

**September 15, 2011** - Full paper reviewers report deadline

**September 18, 2011** - Conference opening

The Conference website is at <http://www.smm20.net>

## Upcoming Society AGM

Have you ever attended our Society's Annual Meeting? It is a terrific opportunity to learn all about what is happening within YOUR society, and for YOU to be heard. There are presentations, a time for questions from the audience, and very free and open discussion among everyone present. If you plan to attend

the 2011 INTERMAG Conference to be held in Taipei, Taiwan on April 25-29, 2010, then plan also to be at the Annual Meeting. It will be held on Tuesday, April 26, 2010 at the close of that afternoon's sessions. Stop at the Bierstube for a beverage, bring it with you, and join us!

## Society Membership Booth At INTERMAG 2011

By Peter Fischer, Membership Committee Chair

The Magnetics Society will host a membership booth onsite at the 2011 INTERMAG Conference being held in Taipei, Taiwan. Here you can obtain information about the advantages of being a member of the of the world's best-known professional organization in the magnetics community. We cordially invite you to stop by and share with us your experiences with being a member. We would be even more interested to hear from you the reasons why you have not yet decided to become a member. As a member, you will enjoy many benefits, such as largely reduced rates at IEEE sponsored conferences.

The IEEE Magnetics Society has a Sister Society Agreement with the Taiwan Association for Magnetic Technology (TAMT) and the Korean Magnetics Society (KMS). If you are the member of TAMT or KMS, your membership fee will be reduced by 10% for both the IEEE and the Magnetics Society.

If you join onsite, you get a discount for this conference alone, which is enough to cover the membership fee immediately. As a member you can access other valuable member benefits such as discounts at other events, conferences and symposia, group insurance and other financial benefits.

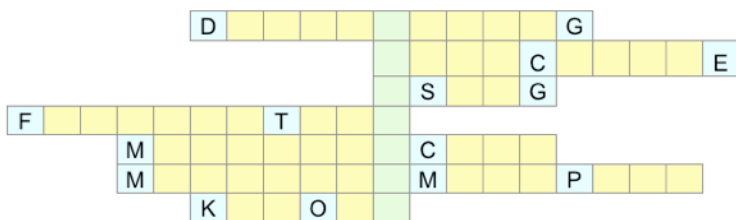
Through the Magnetics Society you get unlimited access to all issues of the IEEE Transaction on Magnetics since the journal's inception in 1969 with unlimited downloads! This includes all INTERMAG Conference Proceedings as well as those from other topical conferences published in these Transactions (e.g. The Magnetic Recording Conference). Membership also includes a CD-Rom copy of the Transactions for each year that you are a member.

We are looking forward to meeting you at the membership booth.

## Quiz Time

By Laura Jane Heyderman, AdCom Member

Find the horizontal words and reveal the topic in the vertical column marked in green:



- 1 Famous British Physicist. Connects two charge defects.
- 2  $\text{Ho}_2\text{Ti}_2\text{O}_7$  and  $\text{Dy}_2\text{Ti}_2\text{O}_7$
- 3 Mathematical model of ferromagnetism
- 4 Not all interactions can be satisfied simultaneously
- 5 Magnetic current
- 6 Isolated magnetic charge
- 7 Traditional Japanese basket design

(Answers on Page 7)

# 22nd Magnetic Recording Conference TMRC2011

By Kaizhong Gao, Conference Chair

The 22nd Magnetic Recording Conference (TMRC 2011) will be held during August 29-31, 2011 at the University of Minnesota, Minneapolis, Minnesota, USA. TMRC 2011 will focus on magnetics recording heads and recording systems. Approximately 36 invited papers of the highest quality will be presented orally at the conference and will later be published in the IEEE Transaction on Magnetics. The topics to be presented include:

- Advanced read and write head design and development
- Highly sensitive reader technology
- Write head dynamics and micromagnetics
- Energy assisted recording technologies
- Head / media interface and reliability
- Head testing, methods and apparatus
- High data rate effects and advanced electrical interconnects
- Recording systems and integration
- Advanced recording channels and detection algorithms
- Advanced coding and error-correction technologies
- System reliability and mechanics

Nominations for invited speakers should be made to the Program co-chairs via email: Prof. Hiroaki Muraoka ([muraoka@riec.tohoku.ac.jp](mailto:muraoka@riec.tohoku.ac.jp)), Dr. Hitoshi Iwasaki ([hitosi.iwasaki@toshiba.co.jp](mailto:hitosi.iwasaki@toshiba.co.jp)) and Dr. Jinshan Li ([jinshan.li@wdc.com](mailto:jinshan.li@wdc.com)) by April 15, 2011. Please include a brief description or abstract to support your nomination and help the selection.

Poster sessions feature contributed posters in addition to invited speaker posters. Poster contributors must send a one-page abstract to the Poster Chairman by August 8, 2011. The IEEE Magnetics Society may award partial travel funding to assist students to attend TMRC 2011 in order to present papers or posters. See the TMRC 2011 website for contact information. The conference program and invited paper digests will be available on-line by June 2011. Poster abstracts received and approved by July 29 will be included in the printed Digest Book.

The website for TMRC 2011 is at:

<http://www.ece.umn.edu/~MINT/TMRC2011/>

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## 2010-2011 Publications Report

By Massimo Pasquale, Publications Committee Chair

Publications Committee: Massimo Pasquale (Chair), Ron B. Goldfarb (Associate Chair)

IEEE Transactions on Magnetics: David C. Jiles, (Editor-in-Chief), Pavel Kabos (Associate Editor-in-Chief)

IEEE Magnetics Letters: Ron B. Goldfarb, Editor

IEEE Magnetics Society Newsletter: Gareth P. Hatch, Editor

IEEE Press Liaison: Liesl Folks

IEEE Magnetics Letters

- Number of articles published as of 31 October 2010: 19
- Number of articles projected for 2010: 24
- Number of articles originally planned for 2010: 20
- Average time from submission to first decision: 10 days
- Average time from submission to publication: 60 days
- Article acceptance rate: 25%

IEEE Transactions on Magnetics: the 2010 page budget of 4,300 pages was met ( $\pm 2-3\%$ ). 65% of total published pages in 2010 were Conference related. The 2011 page budget remains

at 4,300 pages. Overall, it is concluded that the IEEE Magnetics – Conferences Manuscript Central Web site has been a qualified success. Since the site went live, over 3,800 manuscripts for 8 conferences (with 3 currently under way) have been handled, almost 1,300 of which have been sent for publication in the Transactions. The goal of migrating all IEEE TMAG conferences over to a dedicated conference manuscript-handling site has been achieved with an almost complete success.

Time from submission to publication in the second quarter (Q2) of 2010 was on average 8.4 weeks for Magnetics Letters (8.8 in Q1) and 29.1 weeks for Transactions on Magnetics (29.3 in Q1). In the case of Conference related publication the average time in 2009-2010 was 25 weeks. All conferences are now required to use Manuscript Central (using an INTERMAG-based scheme). All Conferences sponsored by the Magnetics Society are being instructed to achieve a target of 25 weeks from submission to publication time.

# Singapore Chapter News

By S.N. Piramanayagam, Singapore Chapter Chair

*(Editor's note: my apologies for inadvertently omitting this item from the last edition of the Newsletter).*

The Society's Singapore Chapter organized a poster competition on magnetism for students on October 18, 2010, in conjunction with the visit of IEEE Distinguished Lecturer (DL) Prof. Dan Dahlberg. The first-round of competition was contested by 20 students presenting 23 posters. A panel of judges, comprising Prof. Dan Dahlberg (U. Minn.), Dr. Iwao Okamoto (Western Digital), Dr. Thomas Liew (DSI) and Dr. Tan Seng Ghee (DSI) chose the top 8 posters, which qualified them for at least a merit award. The second round of competition was held after brief pause for refreshments.

The top 3 posters were identified by judges after going through a grueling round of discussions. The winners were Ms. Taiebeh Tahmasebi ("Texture effects on magnetic and transport properties of Co/ Pd multilayers-based Pseudo-Spin-Valves with perpendicular anisotropy"), Mr. Saidur Rahman Bakaul ("Detection of buckling and vortex state in Permalloy dot by electrical transport study using superconducting electrode") and Mr. Mahdi Jamali ("Interaction between spin waves and magnetic domain walls"). They won cash prizes, sponsored by Western Digital. All the other students received a 8 GB thumb drive in appreciation for their efforts.

The students enjoyed presenting their posters and interacting with the others. The feedback has been highly positive with a suggestion to continue such efforts annually. There were also suggestions to improve the number of posters, which is entirely in the hands of participating students. In addition, there was a fun-element called "Guess the winner" for visitors to guess the potential winners. The winners of this competition received a 8GB thumb

drive as well.

The poster competition was followed by the Magnetics Society Distinguished Lecture by Prof. Dan Dahlberg. The talk contained lots of interaction with the participants, who enjoyed doing magnetic force microscopy with the hand-outs provided by Prof. Dahlberg. After the DL talk, the students received their certificates and prizes.



Overall, it was a fulfilling experience for all those involved.



## Quiz Time Answers:

KAGOME  
MAGNETIC MONOPOLE  
MAGNETRICITY  
FRUSTRATION  
SINGAPORE  
DIRAC STRING

## Conference Calendar

Apr 11-14, 2011 8th International Conference on Computation in Electromagnetics  
Wroclaw, Poland  
Web site: [www.cem2011.com](http://www.cem2011.com)

Apr 25-29, 2011 International Magnetism Conference INTERMAG 2011  
Taipei, Taiwan  
Web site: [www.intermagconference.com/intermag2011/](http://www.intermagconference.com/intermag2011/)

Aug 21-25, 2011 Moscow International Symposium on Magnetism  
Moscow, Russia  
Web site: [mism.magn.ru](http://mism.magn.ru)

Aug 29-31, 2011 22nd Magnetic Recording Conference TMRC2011  
Minneapolis, MN, USA  
Web site: [www.ece.umn.edu/~MINT/TMRC2011/](http://www.ece.umn.edu/~MINT/TMRC2011/)

Sep 18-22, 2011 20th Soft Magnetic Materials Conference SMM20  
Kos, Greece  
Web site: [www.smm20.net](http://www.smm20.net)

Oct 30 - Nov 3, 2011 56th Conference on Magnetism & Magnetic Materials MMM 2011  
Scottsdale, AZ, USA  
Web site: [www.magnetism.org](http://www.magnetism.org)

May 22-26, 2012 9th International Conference on the Scientific and Clinical Applications of  
Magnetic Carriers  
Minneapolis, MN, USA  
Web site: [www.magneticmicrosphere.com](http://www.magneticmicrosphere.com)

To list your conference in the Newsletter Conference Calendar, please contact the Editor

### About the Newsletter

The purpose of the IEEE Magnetics Society Newsletter is to publicize activities, conferences, workshops and other information of interest to the Society's members and other technical people in the general area of applied magnetics. Manuscripts are solicited from Magnetics Society members, conference organizers, Society Officers & other volunteers, local chapters, and other individuals with relevant material.

The Newsletter is published in January, April, July and October electronically on the Magnetics Society webpage at [www.ieeemagnetics.org](http://www.ieeemagnetics.org). Submission deadlines are January 1, April 1, July 1, and October 1 respectively.

Please send articles, letters & other contributions to the Newsletter Editor:

Gareth Hatch  
Technology Metals Research, LLC  
180 S. Western Ave #150  
Carpentersville, IL 60110 USA

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