

## From the President

By Bruce Terris, President of the Magnetics Society

By the time you read this column, the Joint MMM/INTERMAG conference in San Diego will have concluded, and I know that it will have been another very exciting conference. As I write below, conferences are one of the activities most valued by the Magnetics Society membership.



There were a couple of interesting items at the recent IEEE Technical Activities Board (TAB) meeting. This board is comprised of all the Presidents of the societies and councils, as well as the Division Directors and various other IEEE officers, and meets 3 times per year.

First, the IEEE commissioned a survey of the membership, and in particular was looking at the differences between members

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## Rare Earths for Life

Details submitted by Laura Henderson Lewis

On November 16, 2015, Iowa State University and the Ames National Laboratory jointly hosted “Rare Earths for Life,” an event in honor of the 60 years of service and the 85th birthday of Karl A. Gschneidner, Jr.

Prof. Gschneidner is a member of the National Academy of Engineering, Chief Science Officer of the Critical Materials Institute (CMI) and is Anson Marston Distinguished Professor of Engineering at Iowa State.

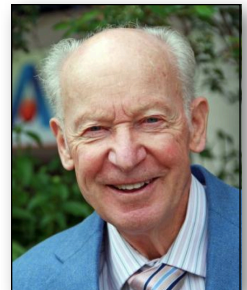
After opening remarks from senior Iowa State, Ames Lab and CMI officials, the day saw a number of presentations:

- ‘Thank Goodness for Gadolinium’ - Bruce Harmon (Iowa State);

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- ‘Ultimate Cluster Condensation Produces Polar Intermetallics’ - Gerd Meyer (University of Cologne / Iowa State);
- ‘Highlights from the Rare Earth Information Center 1966-2002’ - Bill McCallum (Ames Lab / Iowa State);
- ‘Powerful Cooling from First Order Magnetocaloric Materials’ - Carl Zimm (Astronautics Corporation of America);
- ‘40 Years of Rare-earth Science: From Coordination Chemistry to Biomarker Detection’ - Jean-Claude Bünzli (EPFL); and
- ‘Beyond Rare Earth Knowledge: Learning from Karl A. Gschneidner, Jr.’ - Iver Anderson (Ames Lab / Iowa State).



# From The President *continued from page 1*

who belonged to societies, such as the Magnetics Society, and those who do not belong to any society. In general, society members were more satisfied with the value of IEEE than non-society members. I was able to obtain the results from Magnetic Society members, and it is this feedback I find most interesting.

Overall, 74% of those responding were satisfied with their Magnetics Society membership, with 84% likely to renew and 68% likely to recommend membership to a colleague. I view these as very positive results, but what is even more interesting is what the respondents saw as positive and negative about the society.

The top reasons for continuing membership were:

- To obtain Magnetics Society publications
- To remain technically current
- To interact with others (networking)
- To enhance career opportunities
- To obtain reduced conference registration fees

The top areas of membership involvement in past 2 years:

- Accessed periodicals
- Visited the website
- Attended a society-sponsored conference
- Co-authored a paper
- Read the newsletter

There are also areas where we are not as successful. One of those is in the number of members attending chapter meetings. Over 60% of the respondents replied that they were unfamiliar or only somewhat familiar with their local chapters. I think this is clearly an area where we need to improve, although the root cause of why they lack information on their local chapters is not clear.

The second topic of interest is a proposed IEEE constitution change that may be placed on the IEEE election ballot this fall. This is a very complicated and intensely debated issue, and I cannot go into full details in this Newsletter. Briefly, there is a desire to optimize the IEEE governance process to better enable strategic thinking. One impediment to developing strategy in the current governance structure is the size of the Board of Directors (BoD). The current BoD is 31 members, and includes all ten Divisional and all ten Region Directors as required in the constitution. There is a proposed constitution change to remove the automatic inclusion of the Divisional and Region Directors. This would be a first step toward enabling the formation of a newly defined BoD.

Please watch for information on this proposal in the coming months from IEEE, and I will also write in more detail if the proposal is to be on the fall ballot. All constitution changes need to be approved by a vote of the IEEE members. .

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## IEEE ICMM 2016

By Tim Mewes, ICMM Conference Chair, and Mingzhong Wu, Technical Program Committee Chair

The 2016 IEEE International Conference on Microwave Magnetics (ICMM) will take place at the University of Alabama in Tuscaloosa, USA, during June 5-8, 2016. This is the fifth ICMM conference after the success of previous conferences in Fort Collins (USA, 2008), Boston (USA, 2010), Kaiserslautern (Germany, 2012) and Sendai (Japan, 2014). The conference will focus on new developments in all branches of fundamental and applied microwave magnetics.

Topics covered include:

- Magnetization Dynamics and Relaxation
- Magnonics, Spin Waves, and Nonlinear Phenomena
- Spintronics, Spin-Orbit Coupling, and Spin Transfer
- High Frequency Magnetic Materials
- RF, Microwave, and Millimeter Wave Devices

Early registration and abstract submissions are already open.

Important dates:

- March 10, 2016: Abstract submission deadline
- March 31, 2016: Notification of acceptance
- April 22, 2016: Early registration ends
- May 31, 2016: Pre-registration closes
- June 5, 2016: Conference begins
- June 8, 2016: Conference ends
- July 1, 2016: Deadline for manuscript submission to *IEEE Magnetics Letters*.

For more information visit <http://icmm2016.ua.edu/>.

# Luc Berger Receives 2016 Achievement Award

Submitted by Randy Victora

Each year the IEEE Magnetics Society honors one of its outstanding members for his or her lifetime professional achievement. This is the highest award of the Society and is given for scientific and technical achievements. The award is presented at the INTERMAG conference each year, and consists of a diploma with citation and a cash prize.

Luc Berger receives the 2016 Achievement Award for “for contributions to theoretical studies on metallic ferromagnets crucial to data storage, nanotechnology and magnetism, including SWASER, current-induced switching, spin-transfer torque, relaxation, and domain wall resistance.”

Prof. Berger received his BSc and PhD in Physics from the University of Lausanne (Switzerland) in 1955 and 1960, respectively. After graduating, he was a postdoctoral fellow at Carnegie Mellon University, before becoming an instructor in 1961. In 1963, he was made an Assistant Professor at CMU, followed by a 1967 promotion to Associate Professor, then Full Professor in 1974. He was visiting Associate Professor of Physics at UCLA in 1973-1974. Prof. Berger became emeritus in 1995.

As noted in the citation, Prof. Berger has made many contributions to magnetism, particularly at the atomic and nanoscale. He is best known for theoretically predicting spin-transfer torque, which represents the transfer of angular momentum from a polarized current to a ferromagnet. It directly leads to the possibility of current-induced control over magnetic nanostructures. It enables devices such as spin-torque RAM, wherein information is stored in small magnetic elements written according to the direction of the applied current.

Such technologies are inherently nonvolatile and are often considered to be a possible successor to such ubiquitous semiconductor technologies as DRAM.

The spin-transfer torque effect can also produce oscillations of the magnetization of a nanoscale element at microwave frequencies. These spin-torque oscillators may become

important for technologies such as communications. Prof. Berger has also drawn interesting analogies between spin-transfer torque effects and other physical phenomena such as the Josephson effect and semiconductor lasers.

Prof. Berger is a member of the American Physical Society and the IEEE Magnetics Society. In 2013, he, with John Slonczewski, received the highly prestigious 2013 Oliver E.

Buckley Condensed Matter Prize from the American Physical Society.

*Prof. Berger joins a distinguished list of past recipients: Fred Luborsky (1981), Herb Storm (1982), Harold Lord (1984), Joe Suozzi (1985), Fritz Friedlaender (1986), Andrew Bobeck (1987), Floyd Humphrey (1988), Paul Biringier (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), Stan Charap (1998), Dave Thompson (1999), Denis Mee (2000), Fred Hagedorn (2001), Sun-ichi Iwasaki (2002), Carl Patton (2003), Yutaka Sugita (2004), Robert Fontana (2005), Neal Bertram (2006), John C. Mallinson (2007), Jack H. Judy (2008), Roger Wood (2009), Isaak Mayergoyz (2010), Jian-Gang (Jimmy) Zhu (2011), John Slonczewski (2012), Michael Mallery (2013), Randall Victora (2014), and Takao Suzuki (2015).*



# Ron Goldfarb Receives 2016 Distinguished Service Award

Submitted by Burkard Hillebrands, Honors and Awards Committee Chair

In 2015 the IEEE Magnetics Society Distinguished Service Award was established to honor outstanding service to the Magnetics Society. Recipients are characterized by sustained voluntary service significantly beyond the typical. The award is presented at the INTERMAG Conference each year and consists of a certificate and a cash prize.

The inaugural recipient is Ron Goldfarb of the National Institute of Standards and Technology (NIST) in Boulder, Colorado, USA. He receives the 2016 Distinguished Service Award for “for two decades of leadership in advancing the quality and operational excellence of Magnetics Society and IEEE publications.”

Dr. Goldfarb received the bachelor’s degree in electrical engineering and the MS degree in materials science from Rice University, the MS and PhD degrees in physics from Colorado State University, and the MBA degree from the University of Colorado. He has been at NIST (formerly the National Bureau of Standards) since 1979. Dr. Goldfarb’s research has concentrated on magnetometry, superconductivity, phase transitions, magnetic particles, magnetochemistry, biomagnetism, and standards. In 2004 he was elected Fellow of the IEEE for contributions to magnetic metrology for the characterization of superconductors. He was leader of the NIST Magnetics Group for 15 years.

Dr. Goldfarb’s service to the IEEE Magnetics Society and the IEEE at large has had broad impact. He was Conference Editor of *IEEE Transactions on Magnetics* from 1990 to 1995 and then Editor-in-Chief from 1995 to 2004. He wrote an author style guide and template that was subsequently adopted by IEEE for most of its journals and conference proceedings. Dr. Goldfarb

was one of the first adopters of IEEE’s on-line article submission and peer-review system, which resulted in a substantial reduction in time from article submission to publication. He was an early supporter of *IEEE Xplore* and proposed that the Magnetics Society underwrite the scanning and posting of the *Transactions* article archive.

Dr. Goldfarb served as Publications Chair of the Magnetics Society from 1995 through 2015, with responsibility for the society’s entire publishing program. He made the editorial and business case for the *Transactions* to go from bimonthly to monthly publication beginning in 2005. He is the founding editor of *IEEE Magnetics Letters*, the society’s innovative, rapid-publication journal, established in 2010. Dr. Goldfarb is an elected member of the IEEE Publication Services and Products Board for 2015-2018.

Dr. Goldfarb helped launch *IEEE Transactions on Applied Superconductivity* in 1991 and has served as a Magnetics Society representative to its editorial board and to the IEEE Council on Superconductivity’s Administrative Committee for many years. In 2013 and 2014 he helped establish the *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, which began publication in 2015 and which is co-sponsored by the Magnetics Society.

In addition to his publication activities, Dr. Goldfarb has served on the Magnetics Society’s Fellows Evaluation Committee, the Nominations Committee, and as an elected member of the Administrative Committee. He has also been an ex officio member of the Conference Executive Committee, the Planning Committee, and the Administrative Committee.

## New Senior Members

The following members of the IEEE Magnetics Society were recently elevated to the grade of Senior Member.

November 2015: Jeffrey Dierker, Harry Edelman, Cristian Enachescu, Vitor Machado, Fan-Yi Meg and James Wood.

For further information, visit the IEEE Web site at:

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

# Memorial Workshop at Stony Brook University

Details submitted by Laura Henderson Lewis

On November 13, 2015, Stony Brook University hosted a graduate research workshop on electronic and magnetic materials, honoring the legacy of the late Richard Gambino.

Prof. Gambino received the BA degree in 1957 from the University of Connecticut, and the MS degree in 1976 from the Polytechnic Institute of New York University. He served from 1956-60 as a physics scientist at the US Army Signal Corps Research Lab, as a metallurgist from 1960-61 at Pratt & Whitney, and from 1961-1993 Prof. Gambino was a member of the research staff at IBM Yorktown. In 1993 he became a professor at Stony Brook University.

In 1992 Prof. Gambino received the IEEE Morris N. Liebmann Memorial Award together with Praveen Chaudhari and Jerome J. Cuomo, for "the discovery of amorphous magnetic films used in magneto-optic data storage systems". He received the National Medal of Technology in 1995 for the development of amorphous magnetic materials used for magneto-optic disk media, and in 2005 was elected to the National Academy of Engineering. Prof. Gambino was an IEEE Fellow and held 40 patents.

After opening remarks from members of the Stony Brook faculty, a number of presentations were given:

- 'A Patent That Should Not Have Been' - Jerome Cuomo (NC State University);
- 'Magneto-optical Recording Materials' - Takao Suzuki (University of Alabama);
- 'Looking Back and Looking Up - Tales from a Lucky Mentoree' - Laura Henderson Lewis (Northeastern University);
- 'Fossils, Stone Carving, and Integrated Circuits' - Jeffrey Gambino (IBM);
- 'Thermoelectric Devices using Thermal Spray and Laser Micro-machining: A New Approach to an Old Challenge' - Jon Longtin (Stony Brook University);
- 'Tales from the Startup: Pushing Splat Boundaries to New Heights' - Jeffrey Brogan (Mesoscribe); and
- 'Functional Oxides by Thermal Spray: Process-Property Correlations' - Su Jung Han (Stony Brook University).



The event concluded with remarks by former colleagues and students.

## Back Issues Wanted

The Magnetics Society would like to post back issues of the Magnetics Society Newsletter on its Web site.

We have a number of documents ready for scanning but are still missing a significant number

of back issues. If you have old print copies of the Newsletter that you could scan or loan to us for scanning, please contact Newsletter Editor Gareth Hatch via [g.p.hatch@ieee.org](mailto:g.p.hatch@ieee.org).

Thanks!

## Call for Editors and Editorial Board Members

By Ron Goldfarb, Associate Publications Committee Chair

At the beginning of a new year we would like to solicit expressions of interest from Magnetics Society members who might like to serve on the editorial boards or as editors of our journals: *IEEE Transactions on Magnetics*, *IEEE Magnetics Letters*, and *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits* (which the Magnetics Society co-sponsors). Appointments will depend on experience and journal needs in different technical areas.

Most of our editors manage the reviews for submitted articles. We would also be interested in technical editors who have a broad knowledge of magnetics, English grammar and usage, and SI units, and an ability to edit titles and abstracts to effectively capture main points.

Please contact me at [r.goldfarb@ieee.org](mailto:r.goldfarb@ieee.org).

# Obituary: Oleg Mryasov

By Takao Suzuki

We are all saddened and shocked by the news that Oleg Mryasov passed away due to complications with cancer on December 26, 2015.

Dr. Mryasov was one of the MINT Cluster hire faculty and was an Associate Professor of Physics at the University of Alabama from 2009 to 2014. He received his PhD in Physics and Mathematics from the Russian Academy of Sciences in 1993, under the supervision of Prof. A. I. Lichtenstein and Prof. V. I. Gubanov (1989-1993). He was a post-doctoral researcher at Northwestern University in the group of Professor Arthur Freeman (1994-1999).

From 1999 to 2001, Dr. Mryasov held joint appointments of Research Engineer and Technical Staff at UC Berkeley and Sandia National Laboratories (Livermore). From 2001 to 2009, he was Principal Research Engineer at Seagate Technology Research Center. He joined Western Digital in the summer of 2014 where he led a team effort on advanced computational materials research for developing high density magnetic recording media and heads

Dr. Mryasov was well recognized as one of the key theoreticians in the fields of magnetism, especially on magnetic anisotropy mechanisms for various magnetic systems. In particular, he did pioneering work on high magnetic-anisotropy materials such as

$L1_0$  ordered FePt alloys, to elucidate the magnetic anisotropy mechanism. He also contributed in the field of novel CPP-GMR heterostructures with high spin polarization Heusler alloys, transparent conductors, constrained density functional theory for magnetic excitations, and beyond DFT-LDA theory of metal/insulator interface states. Through these stimulating works, his contribution to better understanding of basic magnetism is significant.



Dr. Mryasov was awarded the C. T. Walton Fellowship grant by the Irish Science Foundation and Technology Achievement Award from Seagate Technology.

He is survived by his wife, Elena Mryasova, his son, Nicolas Mryasov, and his daughter, Jennifer Mryasova. His mother will take Dr. Mryasov's remains to Russia and they will be buried there near those of his father. There will be no funeral ceremony in the U.S.

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## Magnetic Instrumentation Package for Exomars 2018

Details submitted by Marina Díaz Michelena

The Exomars 2018 mission of the European Space Agency (ESA) will bring two scientific observatories to the surface of Mars, in the form of a rover and a lander.

The lander, which is under the responsibility of the Space Research Institute of the Russian Academy of Sciences (IKI), will carry payloads focused on studies of the environment on the landing site.

A magnetic instrument has been selected as one of the lander payload. Its purpose is to study the magnetic field on the surface of the planet and its daily variations during a full terrestrial year, along with interactions between the lithosphere and ionosphere on Mars.

The project is led by Marina Diaz Michelena of the Spanish National Institute of Aerospace Technology (INTA).

The instrument will be developed with the Polytechnical University of Madrid, in scientific collaboration with the Complutense University of Madrid (Spain), the University of Trier (Germany), the University of Michigan (USA), Carnegie Mellon University (USA), the Royal Observatory of Belgium and the Vernadsky State Geological Museum (Russia) among others.

The instrument will be the first of its kind to be placed on Mars.

# Joint Meeting of Spain Chapter & Spain Magnetic Club

By Victorino Franco, Spain Chapter Secretary/Treasurer

The annual meeting of the Spain Chapter of the IEEE Magnetics Society took place in Sevilla during December 10-11, 2015.

On the first day, the assembly of the members of the Chapter was celebrated at the Rectorate of Sevilla University. The tradition of the building, which was formerly the tobacco factory in which Bizet's opera Carmen takes place, promoted a thorough review of the different activities organized in 2015, and strategic planning for the coming year.

On the second day, continuing with the series of meetings of the previous years, a joint scientific meeting of the Spain Chapter and the Sister Society "Spain Magnetic Club" (CEMAG) was organized, with attendance of around 60 people. We started the sessions by paying homage to two colleagues who passed away during the past year: Patricia Crespo and Guillermo Rivero. They performed their research activities at both Complutense University and Institute of Applied Magnetism.

For the scientific portion of the meeting we had speakers from the three southernmost European Chapters: Italy, Romania and Spain, serving as a seed for future common programming. This year the program covered a broad spectrum of topics:

- 'Design of skyrmion based devices from racetrack to microwave detectors and oscillators' - Giovanni Finocchio (University of Messina);
- 'Analysis of the Magnetocaloric Effect in Powder Samples Obtained by Ball Milling' - Javier Blázquez (Sevilla University); and

- 'FORC diagram method as general characterization tool of hysteretic processes' - Alexandru Stancu (Alexandru Ioan Cuza University).

The three talks generated lively discussions, with numerous questions and comments from the audience.



## New AAAS Fellow

In November 2015 the journal *Science* announced that Magnetics Society member Vincent G. Harris has been elected as Fellow of the American Association for the Advancement of Science (AAAS).

Prof. Harris is one of a group of 347 AAAS members elected by their peers, in recognition of their scientifically or socially distinguished efforts to advance science or its applications. This year's fellows will be honored at a ceremony on

February 13, 2016, at the AAAS Annual Meeting in Washington.

An IEEE Fellow and a member of the Northeastern University faculty, Prof. Harris is a University Distinguished Professor and W.L. Smith Chair Professor in the Department of Electrical Engineering and Computer Science. He was recognized "for seminal contributions to the advancement of high frequency magnetism, magnetic materials and RF device technologies."

# Coordination Meeting: Spain, Romania & Italy Chapters

By Victorino Franco, Spain Chapter Secretary/Treasurer

On the morning of 10 December 2015, a coordination meeting among the three southernmost European Chapters of the IEEE Magnetics Society was celebrated in Sevilla (Spain). The Romania Chapter was represented by its Chair, Alexandru Stancu; the Italy Chapter was represented by Giovanni Finocchio, and the Spain Chapter was represented by both its Chair, Oksana Fesenko, and its Secretary/Treasurer, Victorino Franco. We also enjoyed the attendance of the Vice President of the Magnetics Society, Manuel Vázquez.

After an initial discussion of the circumstances of the three Chapters, their relation with the national magnetism societies and some information about the membership, a few possible common programming actions were considered.

Initial discussions focused on increasing the visibility of the Society at the IEEE flagship conferences taking place in Region 8, namely EUROCON and MELECON, as magnetic materials for energy applications could fit inside their scope. Also discussed was the convenience of coordinating efforts in order to facilitate the inclusion by Distinguished Lecturers, visits to the three Chapters during their European tours.

One of the most relevant points regarding membership was aimed at designing activities for the student members. While student branches of IEEE have numerous activities, they are usually not related to magnetism and, therefore do not appeal to our students. Even if Summer Schools are an

incentive to enroll in the Society, as this is a 'once in a lifetime' event it is difficult to maintain the membership. It was proposed to organize some young researchers' sessions, coinciding in location and time with other magnetism conferences in the region, to let students gain experience in the organization of events and in giving talks, as the chances of getting oral presentations at general conferences are not often available.

As a seed of these common programming efforts, our colleagues from the Italy and Romania Chapters gave invited talks at the Joint Meeting of the Spain Chapter of the IEEE Magnetics Society and Spain Magnetism Club which was celebrated at Sevilla University the following day.



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## Magnetics Society New IEEE Fellows 2016

By Gareth Hatch

Seven members of the Society were recently elected as 2016 IEEE Fellows:

- Claudia Felser, “for contributions to the design and chemical synthesis of new materials with multi-functional properties”;
- Mohammad Islam, “for development of electromagnetic sensors and actuators for automotive applications”;
- Sheldon Kennedy, “for leadership in the technology and standards for rectifier, inverter and harmonic-mitigating transformers”;
- Zhiwu Li, “for contributions to Petri nets and their applications to automated manufacturing systems”;
- Kai Liu, “for contributions to the understanding of magnetotransport effects and magnetization reversal in nanostructures”;
- Thomas Silva, “for contributions to the understanding and applications of magnetization dynamics”;
- Ping Zhou, “for contributions to finite element methods applied to electromagnetic devices and electrical machines.”



# Seoul Chapter News

ByJongill Hong, Seoul Chapter Chair

The Seoul Chapter of the Society held two seminars in Korea in 2015, on the topic of spin switching in magnetic nanostructures, originated from spin-orbit coupling.

The first, an international seminar, hosted seven invited speakers and over 50 attendees on February 3, 2015, at Korea University. The speakers were Sahashi from Tohoku U., Ono from Kyoto U., Kurebayashi from London Center for Nanotechnology, Yang from NUS, Lee from Korea U., Park from KAIST, and Whang from KRISS.

The domestic seminar was held during October 15-17, 2015, on Jeju Island. Eleven speakers participated, with the main

content of the seminar focused on spin-orbit torque and magnetic skyrmions.

In addition to these seminars, the Seoul Chapter also invited 2015 Distinguished Lecturer Bethanie Stadler, to present her lecture on “Magnetic Nanowires, Revolutionizing Hard Drives, RAM, and Cancer Treatment.” Prof. Stadler gave the lecture at Yonsei and Korea Universities, during June 25-26, 2015.

The Seoul chapter has been active to support several seminars and invited talks and to encourage IEEE member students to participate in chances to learn emerging topics in magnetism in 2015.



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## UCLA Team Wins Best Paper Award at Globecom 2015

Submitted by Roger Wood

A UCLA team led by Lara Dolecek received the best paper award at IEEE Globecom 2015. The paper, titled ‘Non-binary LDPC Code Optimization for Partial Response Channels,’ was co-authored by A. Hareedy, B. Amiri, S. Zhao, R. Galbraith and L. Dolecek. The paper presented state-of-the-art coding solutions for magnetic recording applications using novel symbol-based coding on graphs. The resulting codes are based on a new combinatorial analysis and enjoy orders of magnitude performance gains over existing methods.

This work was done in collaboration with HGST and was sponsored by Advanced Storage Technologies Consortium (ASTC).

The IEEE Globecom Conference attracts 3,000 submissions per year. It is held annually and is attended by more than 2,500 scientists, researchers, and industry practitioners from around the world.

## Conference Calendar

March 14-18, 2016 APS March Meeting  
Baltimore, MD, USA  
<http://www.aps.org/meetings/march/>

April 11-15, 2016 20th Conference on Solid Compounds of Transition Elements SCTE 2016  
Zaragoza, Spain  
<http://scte2016.unizar.es>

June 5-8, 2016 IEEE International Conference on Microwave Magnetics 2016  
Tuscaloosa, AL, USA  
<http://icmm2016.ua.edu>

June 26-30, 2016 Magnetic North V Conference  
Colorado Springs, CO, USA  
<http://www.magneticnorth.mun.ca/MagNorthV/>

July 4-7, 2016 12th Int. Workshop on Magnetism and Superconductivity at the Nanoscale  
Comaruga, Spain  
<http://www.ub.edu/gmag/comaruga/>

August 17-19, 2016 The Magnetic Recording Conference TMRC 2016  
Stanford, CA, USA  
<http://nanomag.stanford.edu/tmrc-2016>

August 21-26, 2016 8th Joint European Magnetics Symposium (JEMS 2016)  
Glasgow, UK  
<http://jems2016.iopconfs.org>

August 28 - September 1, 2016 24th Int. Workshop on Rare-Earth & Future Permanent Magnets (REPM 2016)  
Darmstadt, Germany  
<http://www.repm2016.org>

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.

Contributions are solicited from Magnetics Society members, conference organizers, Society Officers & other volunteers, local chapters, and other individuals with relevant material. The Newsletter is published quarterly on the Magnetics Society webpage at

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

Please send articles, letters & other contributions via email to the Newsletter Editor, Gareth Hatch, at [g.p.hatch@ieee.org](mailto:g.p.hatch@ieee.org).

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