

# Proceedings of the 52nd Annual Conference on Magnetism & Magnetic Materials

Tampa, Florida, 5-9 November 2007

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# 52nd MMM Annual Conference

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### Best Student Presentation Award Winner

**Matthew D. Vannette**

*Iowa State University, Ames, IA*

DG-04: Distinguishing local moment vs itinerant ferromagnets: Dynamic magnetic susceptibility

### Best Poster Award Winners

**AR-18:** Magnetization reversal process and single domain stability of Co/Pt multilayer dot

**EP-05:** Micro total analysis system for hematopoietic stem/progenitor cell separation and counting

**BU-01:** Crystallization and thermal-magnetic treatment of Co-rich HiTPerm-type alloys with Ni and Mn additions

**FP-13:** Examination of the optimum arrangement of magnetic sensors for nondestructive crack system in distribution line

**CP-12:** Relation between nonadiabaticity and damping in Permalloy studied by current-induced spin structure transformations

**GR-09:** Magnetic transmission x-ray microscopy of field-driven magnetization processes in Permalloy structures

**DQ-04:** Deposition of hexagonal ferrites by the ATLAD technique—gateway to new and exotic ferrite materials

**HR-03:** Magnetoelectric properties of the high Curie temperature relaxor composite Sr<sub>1.9</sub>Ca<sub>0.1</sub>Nb<sub>5</sub>O<sub>15</sub>-CoFe<sub>2</sub>O<sub>4</sub>

## Preface: Proceedings of the 52nd Annual Conference on Magnetism and Magnetic Materials, Tampa, Florida, November 2007

Dieter Weller

*General Chair, 52nd Annual Conference on Magnetism and Magnetic Materials*

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These two volumes constitute the *Proceedings of the 52nd Annual Conference on Magnetism and Magnetic Materials* (MMM52), which was held in Tampa Bay, Florida, in the Tampa Marriott Waterside Hotel, on 5–9 November 2007. The conference had a healthy international attendance with participants from 47 countries. Overall, there were 1369 registered attendees from academic institutions, national laboratories, and industry. A breakdown by country underlines the international flavor of the conference with a trend towards growing participation from Asian countries: 38% Asia, 34% North America, 24% Europe, and 4% Other (South America, Mideast, Australia). Student participation, as in recent years, was high (460). From a total of 2116 submitted abstracts, 1450 abstracts (70%) were accepted for presentation at the conference. The program comprised an evening tutorial on femtosecond magnetization dynamics, eight invited symposia on diverse fundamental and applied topics in magnetism, 31 individual invited talks, and 1366 contributed oral and poster presentations. Nanomagnetism, patterned magnetic structures, emerging applications and devices, spin-dynamics, and unconventional materials attracted particular interest. Poster and exhibits were featured in one of the large ballrooms, interspersed with coffee and water stations. A program highlight was the announcement of the Best Student Presentation Award to Matthew D. Vannette, of Iowa State University, on the final day of the meeting. Eight Poster Awards were presented, and the winning posters were displayed in the entrance hallway to the meeting ballrooms throughout the meeting.

In recognition of the Nobel Prize in Physics in 2007 for the Discovery of the Giant Magnetoresistance (GMR) Effect, special posters were displayed in the Foyer and Hallways of the hotel. One poster was entitled “MMM 2007 congratulates Albert Fert and Peter Grünberg—winners of the 2007 Nobel Prize in Physics.” Another poster provided background on the 1988 discovery of GMR and highlighted the commercial impact of GMR on the magnetic recording industry.

The MMM conference is jointly sponsored by Physics Conferences Incorporated (PCI) and the Magnetics Society of the Institute of Electrical and Electronics Engineers (IEEE). Owing to surpluses from previous conferences ex-

ceeding the required reserve funds for the MMM and Joint MMM-Intermag conferences, the sponsors were able to make additional financial support available this year. This financial support allowed for funding of a number of ongoing and special conference initiatives. Foremost, the registration rates for all participants—and especially students—were directly subsidized and kept at levels comparable or lower than those of MMM 2005 in San Jose. A special reception was held on Tuesday evening, allowing for extended interactions and networking amongst the attendees. The reception featured generous servings of local foods, beer, wine, and other beverages from serving stations spread out across the hallways and the sun-bathed waterfront terraces of the hotel, making for an especially memorable event. Also memorable was an offsite stage play in historical Tampa Theatre, portraying the life and work of Serbian Physicist Nikolai Tesla. The stage play was introduced by Professor Anthony Arrott and was a cultural highlight for many. The traditional evening Bierstube was extended to 1.5 hours, serving beer from local and international breweries. Women had an opportunity to meet and socialize during the Women’s Networking Event on Thursday evening. The wireless café, which has become an established feature of the MMM and Joint conferences, was set up in the foyer area in front of the main lecture ballrooms and provided participants with the opportunity to exchange electronic data and stay connected with their peers and home institutions. An initiative to dispose of expensive hotel session timers and use computer timers instead was introduced for the first time this year.

Overall, this conference provided an outstanding opportunity for participants to meet their colleagues and discuss new developments and controversial topics in fundamental and applied magnetism. I had the privilege to oversee the organization of this event over the past 2–3 years. Its success is undoubtedly due to the dedicated support of the staff of the American Institute of Physics and Courtesy Associates, along with the efforts of the steering committee and many volunteers. I want to express my personal thanks to all of them as well as to the sponsor organizations, PCI and IEEE, for their generous financial support.