On the Reflection of 3rd International Conference on Superconductivity and Magnetism—ICSM2012, Between 29th April–4th May, 2012, Istanbul, Turkey

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Received: 30 November 2012 / Accepted: 6 December 2012 / Published online: 29 December 2012
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The third International Conference on Superconductivity and Magnetism-ICSM2012 was held at the Artemis Marin Princess Hotel in Kumburgaz, close to the historical and famous city of Istanbul between 29th April and 4th May, 2012. It was well organized with daily nine parallel Symposia/sessions of over 1300 abstracts submitted, of which some 1020 were accepted and 950 were presented at the conference. As a consequence, the conference was also very well attended with 1100 registered attendees from 62 different countries—the largest in Turkey at an international level. ICSM has gradually grown to be a prominent conference on superconductivity and magnetism in combining the fields of superconductivity, magnetism, their interplay and applications.

We are grateful to the major contribution from the worldwide community of superconductivity and magnetism. The Program Committee consisted of all focused session chairs with their active participation on selection of works presented at the conference. The conference program composed of eleven plenary talks (given in Table 1) 200 invited talks and 232 selected talks, which was arranged with nine parallel oral sessions in addition to daily poster sessions with 512 presentations. We are grateful for their hard work and dedication for the selection of very high level presentations and their harmonic sequence in the sessions.

As of the feedback received, we are happy to note that no one was disappointed with the scale and quality of the scientific and social programs. Of course, many others made

a significant contribution to the conference with their participation in the official opening ceremony on Sunday 29th April, 2012, to Prof. Dr. Davut Kavranoglu as Deputy Minister of Science, Industry and Technology, Ankara University Rector Prof. Dr. Cemal Taluğ, Sabancı University Rector Prof. Dr. Nihat Berker, Hakkari University Rector Prof. Dr. Ibrahim Belenli and District Governor Dr. Ismail Gündüz. We are especially grateful to Prof. Alex Karl Müller, Nobel laureate, who has also attended the opening ceremony and gave a plenary talk on Monday 30th April, 2012.

The Student Program focused on “Educational Courses and Training has been held prior to the conference together with “the special student poster session” on Tuesday April 24, 2012. We are grateful to Professors Eyyüphan Yakıncı and Ekrem Yanmaz for their effort on aspects of student program: It has become an opportunity for students and young scientists to share their work with their pioneers in the field to gain information, training and experience in their skilled field for their career.

Around 330 full text papers were submitted for the special issue; after peer review, 263 papers were accepted for publication as the proceedings of the conference. We are also most grateful to the Publication Editors and their teams for their active support. All papers have been refereed in accordance with regulations of the Journal of Superconductivity and Novel Magnetism. Although we have been unable to include all the submitted ones in the proceedings, we believe that this special issue of *Journal of Superconductivity and Novel Magnetism* and the corresponding issue in Open access SpringerPlus reflect most of the booming research in the fields of superconductivity and magnetism. We are very pleased to have worked with Springer as a publisher on the conference proceedings with special thanks to Professors Vladimir Kresin and Stuart Wolf. The organizing and international advisory committees are very grateful to the

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Table 1 Plenary talks presented at ICSM2012

Presenter	Title
Alex K. Müller Physics Institute, University of Zurich Switzerland	Some Unique Superconductive Properties of Cuprates
A. Nihat Berker Sabancı University, İstanbul, Turkey	Phase Separation and Charge-Ordered Phases in Electronic Conduction Models.
Sadamichi Maekawa Japan Atomic Energy Agency, Japan	Conservation Laws and Spin-Motive Force in Magnetic Nanostructures
Ivan Bozovic Brookhaven National Laboratory, USA	Deciphering The Enigma of High- T_c Superconductivity in Cuprates—One Atomic Layer at a Time
René Flukiger University of Geneva, Switzerland	The Present State of Superconducting Materials in view of Applications in Energy and Accelerators
John Clarke University of California, USA	Fifty Years of Josephson Tunneling: From Slugs to Axions
Vladimir Kresin Lawrence Berkeley Laboratory, University of California, USA	Superconducting State of Metallic Clusters: Potential for Room Temperature Superconductivity, Novel Nano-Based Tunneling Networks
Naoyuki Amemiya Kyoto University, Japan	Challenge to Accelerator Magnets Using High T_c Superconductors
Alexander Buzdin University of Bordeaux, France	Superconductor—Ferromagnet Nanostructures
Roland Wiesendanger University of Hamburg, Germany	From Single-Atom Magnetometry to Tailor-Made Magnets and Atomic-Scale Spintronic Devices
Nuh Gedik MIT, USA	Ultrafast Probing of Topological Insulators and Superconductors

invited speakers, reviewers and the authors who have made contributions with their cooperation, which has made the conference a truly international one with a unique success. I would also like to thank Professor Mehmet Ali Aksan for the proceedings and abstracts handling and Dr. Ali Bozbey for his invaluable efforts for the conference as the general secretary. The financial management of the conference was particularly challenging. We are most grateful to the members of finance committee and their wise council concerning strategic aspects of budget management.

For logistics of the conference, special thanks are for Prof. Yıldırım Aydoğdu, Dr. Haluk Koralay, Dr. Sükrü Çavdar, Dr. Hakan Güngüneş, Mr. Zülfiyar Gençer, Ms. Duygu Gökdağ and Mr. Ercan Ertekin.

The immensely rich and diverse scientific program composed of focused sessions which were mostly chaired by the invited speakers. The focused sessions included are given below with corresponding session chairs (names given in the parentheses) and plenary speakers are gratefully acknowledged for their invaluable contribution, without their active involvement and support, this conference could not have been a real success:

- 50 Years of Josephson Effect (Francesco Tafuri, Italy)
- AC Losses of Superconductors (Enric Pardo/Fedor Gömöry, Slovakia)

- Advances in Thin Films, Multi-Layers, and Patterned Nanostructures (Yüksel Köseoğlu, Turkey)
- Bio-Inspired Nano-Magnetic Materials, Biomagnetism and Med. App. (Tanya Prozorov, USA)
- Bulk Superconductivity I (Wai-Kwong Kwok, USA)
- Bulk Superconductivity II (Andres Sotelo/Florinda Mendes, Spain)
- Carbon Related Superconductivity and Magnetism (Junji Haruyama, Japan)
- Dilute Magnetic Semiconductors I (Tomasz Dietl/ Paola Alippi, Poland/Italy)
- Dilute Magnetic Semiconductors II (Costa da Cunha Lima, Brazil)
- Ferrites/Rare Earth Magnetic Materials (Muhammad Anis-ur-Rehman, Pakistan)
- Functional Magnetic Materials and Applications (Arcady Zhukov, Spain)
- High T_c Cuprates I (Ivan Bozovic, USA)
- High T_c Cuprates II (John Wei, Canada)
- Iron Pnictides: Fundamental Properties and Mechanisms I (Carlo Ferdeghini/Marina Putti, Italy)
- Iron-Based Pnictides: Fundamental Properties and Mechanisms II (Dirk Johrendt, Germany)
- Iron-Based Pnictides: Materials and Potential Applications (Athena Safa-Sefat, USA)
- Junctions and SQUIDS (Francesco Tafuri, Italy)

- Large Scale Applications of Superconductors (Naoyuki Amemiya/Mathias Noe, Japan/Germany)
- Lattice and Isotope Effects in Layered Superconductors I (Annette Bussmann-Holder, Germany)
- Low Dimensional Magnetism (Vladislav Kataev, Germany)
- Magnetism of Molecules, Nanoparticles and Nanostructures (Dino Fiorani, Italy)
- Magnetization Dynamics and Resonance (Farkhad Aliev, Spain)
- Manganites (Abdelwaheb Cheikhrouhou, Tunisia)
- Measurement and Characterization: Techniques and Instrumentation (Ekrem Yanmaz, Turkey)
- MgB_2 : Materials, Mechanisms and Applications (René Flukiger, Switzerland)
- Miscellaneous: Magnetism and Materials (Hakan Köçkar, Turkey)
- Multiferroics and Magnetic Oxides (Reinhard Kremer, Germany)
- New/Organic/Magnetic/Heavy Fermion Superconductors (Nejat Bulut, Turkey)
- Overview of the Current Status of Pnictides Superconductors- All Invited (Ruslan Prozorov, USA)
- Quantum Coherence and Computation (Bernard Barbara, France)
- Soft/Hard Magnetic Materials and Soft Magnetic Matter (Bulat Rameev, Turkey)
- Spin Magnonics (Matt Probert, UK)
- Spintronics and Magneto-Transport (Koki Takanashi, Japan)
- Strongly Correlated Electrons/Systems (Tuson Park, South Korea)
- Superconducting Circuits and Devices (Hannes Toepfer)
- Superconducting Thin Films (Davor Pavuna, Switzerland)
- Superconductivity and Magnetism in Perovskite Oxides (Chang UK Jung, South Korea)
- Superconductivity Theory I (Jun Akimitsu, Japan)
- Superconductivity Theory II (Vladimir Kresin, USA)
- Superconductor–ferromagnet hybrids (Alexander Buzdin, France)
- Superconductor–insulator transition (Valerii Vinokur, USA)
- Theoretical Magnetism (Ali Zaoui, France)
- Vortex Matter (In Honor of Prof. Ernst Helmut Brandt) (Rudolf Huebener/Ali Gencer, Germany/Turkey)
- Vortices and Nanostructured Superconductors (Adrian Crisan, UK)
- Wires & Tapes and Coated Superconductor (Wilfred Goldacker, Germany)

The conference has provided a forum where the many matters of interest to the superconductivity and magnetism community have been debated in a series of fruitful meetings with greater success in bridging the gap between the delegates. The delegates and companions also enjoyed the social program in the touristic and historical places of the surrounding area of Istanbul with the excursion of Bosphorus boat tour.

The list of supporters and contributors is as follows:

- TÜBİTAK
- Boren
- CESUR
- Columbus Superconductors
- Ankara University Research Fund
- Super-Mag Ltd.
- Republic of Turkey Ministry of Development
- Turkish Airlines
- Vaksis R&D and Engineering
- Super Power Inc.
- Nanomagnetics Instruments
- LakeShore
- Cryomech
- Teknogem
- High Voltage Products, HVP
- Teknis Teknolojik Sistemler
- Tetra Teknolojik Sistemler
- Biostar Ahmet Öğretmen
- Quantum Design Inc.
- Cryogenics Ltd.
- Pavezyum Ltd.

It is a pleasure and responsibility for us to thank them all for their pivotal role in the organization of the conference. We would also like to thank the speakers, the participants, the exhibitors and the Ankara University staff and students (Mr. Hasan Ağıl, Ms. Özlem Çiçek, Dr. Serap Safran, Mrs. Zeliha Ertekin, Mrs. Solmaz Khankeshizadeh and Ms. Öykü Nihal Kabukçu) for their efforts which made ICSM2012 run smoothly. Last not but not least, I owe a lot to the family and special thanks are for Şadiye, Emine Begüm and Metehan for their understanding and sacrifice.

More information about the conference can be found at <http://www.icsm2012.org>. The 4th International Conference on Superconductivity and Magnetism (ICSM2014) is scheduled for April 2014, in Antalya. Further details will be announced and circulated soon. For updates on the next conference, you may visit the website <http://www.icsm2014.org>. We will be very happy to host the next conference and look forward to welcoming you again.