



Workshop on Synergies between Field Theory and Exact Computational Methods in Strongly Correlated Quantum Matter

25 - 29 July 2011

Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) is organizing a **Workshop on Synergies between Field Theory and Exact Computational Methods in Strongly Correlated Quantum Matter**, which will be held at ICTP, Trieste, Italy, from 25 to 29 July, 2011.

This workshop aims to explore the rich physics of strongly-correlated quantum systems from the perspective of an interplay between low-energy field theories and unbiased numerical "simulations" (quantum Monte Carlo, density-matrix renormalization, exact diagonalization, etc.) of microscopic models (hamiltonians). Researchers from both areas will discuss recent progress and open issues in quantum magnetism, quantum Hall physics, and exotic bosonic many-body states, and also explore how the numerical-analytical synergies could be further exploited. Leading experimentalists will provide guidance to challenging real-world correlated systems.

CONFIRMED SPEAKERS: PARTICIPATION

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the School. As it will be conducted in English, participants should have an adequate working knowledge of that language.

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| 1. Fabien Alet (Toulouse) | 15. Olexei Motrunich (Caltech) |
| 2. Leon Balents (KITP/UCSB) | 16. Flavio Nogueira (Berlin) |
| 3. Kevin Beach (Alberta) | 17. Didier Poilblanc (Toulouse) |
| 4. John Chalker (Oxford) | 18. Nikolai Prokof'ev (UMass Amherst) |
| 5. Radu Coldea (Oxford) | 19. Christian Rüegg (LCN London) |
| 6. Kedar Damle (TIFR, Mumbai) | 20. Subir Sachdev (Harvard) |
| 7. Adrian Feiguin (Wyoming) | 21. T. Senthil (MIT) |
| 8. Matthew Fisher (UCSB) | 22. Donna Sheng (California State) |
| 9. Stephen Hayden (Bristol) | 23. Rajiv Singh (UC Davis) |
| 10. Naoki Kawashima (ISSP, Tokyo) | 24. Erik Sørensen (McMaster, Ontario) |
| 11. Valeri Kotov (Vermont) | 25. Frank Verstraete (Vienna) |
| 12. Andreas Läuchli (MPIPKS, Dresden) | 26. Ettore Vicari (Pisa) |
| 13. Roger Melko (Waterloo) | 27. Thomas Vojta (Missouri) |
| 14. Roderich Moessner (MPIPKS, Dresden) | 28. Uwe Wiese (Bern) |

The main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation. However, scientists from developed countries are most welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited ICTP funds are available for some participants who are nationals of, and working in, a developing country. Such support is available only for those who attend the entire activity.

Furthermore, the Institute for Complex Adaptive Matter (ICAM) will support a limited number of junior scientists, preferably with ICAM affiliations or from emerging nations. Further instructions on how to apply to such funds will be given upon selection of participants.

There is no registration fee.

HOW TO APPLY

The application form can be accessed at the activity website:

<http://agenda.ictp.it/smr.php?2253>

Once in the website, comprehensive instructions will guide you step-by-step on how to fill out and submit the application form.

The closing date for receipt of requests of participation is **10 April 2011**.

Secretariat: (Ms. F. Delconte) e-mail: smr2253@ictp.it; phone: +39-040-2240-9932;
fax: +39-040-2240-7932 Workshop web page: <http://agenda.ictp.it/smr.php?2253>
ICTP Home Page: www.ictp.it

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and



ORGANIZERS

R.K. KAUL
(University of Kentucky)

A.W. SANDVIK
(Boston University)

M. VOJTA
(Technical University of Dresden)

LOCAL ORGANIZER

M. MÜLLER
(ICTP, Italy)

DEADLINE

10 APRIL 2011