Monday, January 14: Instruction Begins for Spring Semester

Monday, January 21: Martin Luther King Jr. Day, Designated University Holiday.

Perimeter Institute for Theoretical Physics: Available Faculty Positions and Fellowships

Available Faculty Positions and Fellowships
Last year, Perimeter Institute was voted by its employees as one of the top Canadian workplaces for its inspiring, healthy, and family-focused environment. If you or anyone you know is looking for a position or student opportunity, we are currently accepting applications for a number of openings. For position details and application deadlines, see individual career postings below:

Fellowships
- Postdoctoral Fellowships: Pioneering the Future of Radio Astronomy
- Simons Emmy Noether Visiting Fellows Program

Student Opportunities
- Perimeter Scholars International - Graduate Program
- Undergraduate Summer School - Two weeks (fully-funded)
- Summer Undergraduate Research Internship (paid)

Faculty Positions
- Faculty positions in quantum information science
- Tenure-track assistant professor and associate faculty in theoretical high energy physics - McMaster University and Perimeter Institute
- Visiting Researchers - Sabbatical Program
Entanglement in Strongly Correlated Systems

2019, Feb 24 -- Mar 09

Organizers:
R. Orús (DIPC)
D. Poilblanc (CNRS / U. Toulouse)
N. Regnault (ENS Paris)
N. Schuch (Max-Planck-Institute of Quantum Optics)

The study of entanglement in strongly correlated systems has lived a series of important advances in recent years, in turn underpinning a better understanding of the quantum properties of matter. Concerning numerics, examples of these are e.g. new numerical methods based on tensor networks (MPS, PEPS, MERA), as well as advances in quantum Monte Carlo, exact diagonalizations, and continuous unitary transformations. From an analytical perspective there are also recent relevant developments regarding e.g. AdS/CFT methods, entanglement spectrum, string-net models, and the tensor network description of chiral topological phases.

The aim of this 2-week meeting is to bring together specialists in the field as well as newcomers at the interface of quantum information and condensed matter theory. The format of the event will alternate introductory lectures with specialized talks. During these days, spontaneous informal discussions will be encouraged by the organizers and announced throughout the day. Our plan is to have a very rich and collaborative meeting.

The Center offers comfortable office spaces for everyday work. Major topics will be e.g. entanglement and entanglement-based methods, topological phases and fractional quantum Hall states, low-dimensional magnetism and frustrated spin systems, quantum simulators and cold atoms, etc.

The list of invited speakers, as well as further information about the registration, are available at the workshop’s website (http://benasque.org/2019scs/). We welcome also contributed talks and posters.

We look forward to seeing you in Benasque!
University of Pittsburgh Department of Physics & Astronomy

Postdoc Positions in Theoretical Condensed Matter and Cold Atom Physics

We invite applications for postdoctoral appointments. The area is broadly defined in theoretical quantum physics. There will be some preference given to those interested in the interface of Cold Atom, Condensed Matter, and Particle Physics. The candidate should have a strong background or future interest in many body physics/field theoretical methods. The position can start September in every academic year or earlier. The initial appointment will be one year, and is expected renewable for another one or two years, subject to funding availability and mutual agreement. The position is funded by continuing and new grants provided by ARO, AFOSR, MURI, etc., together with new support initiatives from the Dean’s office.

Applicants should email a statement of interest, a CV, and a list of publications, and arrange for three letters of reference to be emailed to Professor W. Vincent Liu (University of Pittsburgh, wvliu@pitt.edu). Informal inquiries are also welcome. The position will remain open until filled. But to receive full consideration candidates should apply before **February 1, 2019**.


The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.
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BANGALORE SCHOOL ON STATISTICAL PHYSICS - X
17 June 2019 to 28 June 2019

This is a pedagogical school, intended for Ph.D. students, post-doctoral fellows and interested faculty members at the college and university level. The following courses will be offered.

1. Elastomers and isostatic lattices (Tom Lubensky)
2. Statistical physics of hard rods (Deepak Dhar)
3. Statistical physics of biological evolution (Joachim Krug)
4. Random matrix theory and related topics (Satya N. Majumdar)
5. Heat transport in low-dimensional systems (Abhishek Dhar)
6. Extremes and records (Sanjib Sabhapandit)

Details: https://www.icts.res.in/program/bssp2019
From: Abhishek Dhar <abhishek.dhar@icts.res.in>
Postdoctoral positions on soft-mater physics, biophysics, and statistical-mechanics for the following research groups from Tel Aviv University, Israel

Roy Beck – roy@tauex.tau.ac.il | http://www3.tau.ac.il/beck/ |
Yael Roichman - roichman@tauex.tau.ac.il | https://m.tau.ac.il/~roichman/
Yoav Lahini - lahini@tauex.tau.ac.il | https://en-exact-sciences.tau.ac.il/profile/lahini

Applications should be submitted via email to the relevant PI and include a single PDF containing: A cover letter, Curriculum vitae including a list of publications, A short research statement (<1 page) describing how the candidate’s current achievements is correlated to the research he/she is applying for. In addition, 3 recommendation letters should be sent directly from the recommender to the relevant PIs.
Two Postdocs in Complex Materials applied to Quantum Technologies
The Rome-Sapienza Unit of the Institute for Complex Systems (ISC-CNR)

The Rome-Sapienza Unit of the Institute for Complex Systems (ISC-CNR) is looking for two outstanding postdocs one experimental and one theoretical. Both postdocs will join an interdisciplinary team of nanoscience scientists, material science specialists, and theoreticians with the aim to study and characterize complex materials for quantum technologies. The team will study unconventional and strongly disorder superconductors to exploit the extreme sensitivity and non-linearity of these materials for quantum technological applications like kinetic inductance detectors. The experimental postdoc will characterize the superconducting insulator transition on some selected materials and their response to external perturbations like THz radiation. He/She will assist in the fabrication of devices and perform their low-temperature characterization. The theoretical postdoc will do material modeling using techniques such as density functional theory, quantum field theories, Lanczos exact diagonalization, and Monte Carlo simulations. He/She will also assist in the design of the devices and interpretation of the experimental results.

The positions are for two years. ISC-CNR operates in the Department of Physics of Sapienza University, ranked among top Physics Departments in the world (https://www.usnews.com/education/best-global-universities/physics?page=2).

Applications should be sent to jose.lorenzana@cnr.it. They should contain a cv and the contacts of senior scientists who can provide recommendation letters (only upon our request). Earlier applications will be given higher priority. Interested candidates are encouraged to send the application immediately.
Postdoctoral Positions, the SISSA Statistical Physics Group

postdoctoral positions within the SISSA Statistical Physics Group are available starting in autumn 2019. The positions have a total duration of two years and the successful candidates are expected to work on the general area of quantum field theory and statistical physics. Some positions are fully funded within the European ERC project NEMO (New Entangled states of Matter Out of equilibrium) with PI Pasquale Calabrese and can be extended to three years.

Short-listed candidates will be contacted to be informed on which positions they are considered.

The scientific interests of the group include quantum and conformal integrable models, tensor network calculations, entanglement in many-body systems, cold atoms, classical and quantum non-equilibrium statistical physics, quantum quenches and thermalization, classical and quantum disorder systems.

A description of the research interests of the group and of the current members can be found at [http://www.sissa.it/statistical/](http://www.sissa.it/statistical/)

We would be grateful if you bring these postdoctoral positions to the attention of potential strong candidates and encourage them to apply.

The application deadline is January 31, 2019, but earlier applications are encouraged.

Applications (which should include a CV with list of publications, a brief research statement, and the names of at least two referees) should be done via the Academic Jobs Online Service
Postdoctoral Researchers at Technion, Israel Institute of Technology

The statistical mechanics / soft condensed matter group at the Technion physics department is looking for exceptional postdoctoral candidates. The group, consisting of Guy Bunin, Yariv Kafri, and Dov Levine, has a broad range of research interests in systems far from equilibrium, including active matter, dynamics of interacting biological populations, and order and self-organization. We enjoy active collaborations with the strong experimental biophysics and theoretical hard condensed matter groups in the department, and we encourage interactions.

Qualified candidates are requested to send a CV, a brief description of research interests, and three letters of reference to Yariv Kafri (yarivkafri@gmail.com)
Constrained Many Body Dynamics
International Workshop
March 26-30, 2019

The Max Planck Institute for the Physics of Complex Systems Dresden, Germany

Constraints form a constitutive element of many theories of matter, such as in gauge theories in high energy and correlated electron physics, frustrated systems in condensed matter physics, or a range of archetypal models in statistical physics. At present, the dynamics in many-body systems with constraints is seeing a rapid progress, driven by developments both in theory and experiment. This workshop aims to provide a platform for discussing and advancing these developments.

**Topics include**
- Gauge theory dynamics
- Quantum scars
- Dynamics of spin liquids
- Kinetically constrained systems
- Confinement dynamics
- Fractons
- Many-body localization
- Disorder-free localization

Applications are accepted until **Friday, February 1, 2019** at [https://www.pks.mpg.de/condyn19/](https://www.pks.mpg.de/condyn19/)
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New Generation in Strongly Correlated Electrons Systems

The 10th international Conference “New Generation in Strongly Correlated Electron Systems” (NGSCES 2019) will be held at the "Centro Congressi Abruzzo Berti Hotels", Silvi Marina (TE), close to Pescara city, Italy, on September 2-6, 2019. The aim of the conference is to review the state of the art and new trends in the theoretical understanding and experimental investigation of strongly correlated electron systems and of novel materials.

Topics include:
Resonant Inelastic X-ray Scattering
Out-of-equilibrium dynamics
Time- and Spin-Resolved Angle-Resolved Photoemission Spectroscopy
Materials for Applications to Energy and Environment
Topological Order
Topological and Unconventional Superconductivity
Density-Functional Theory for Strong Correlations
Low-dimensional Systems

Important Dates:
Registration: 1st February - 30th May 2019
Abstract submission: 1st February - 30th April 2019
Payment (300 euros): until 30th June 2019

For more information and to register, please visit:
https://sites.google.com/view/ngsces2019
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CALANDER OF EVENTS http://physics.illinois.edu/bluesheet.asp

SNS 2019 Conference in Tokyo

the 12th International Conference on Spectroscopies in Novel Superconductors (SNS 2019), to be held in Tokyo, June 16-21, 2019: http://sns2019.t.u-tokyo.ac.jp/ Registration and abstract submission will be open in January, 2019.


Following the SNS tradition, there will be no parallel sessions. The schedule will comprise invited talks as well as oral presentations selected from submitted abstracts.

SNS 2019 Important dates:
March 22, 2019: Early registration
April 26, 2019: Abstract submission
May 31, 2019: Regular registration

SNS 2019 Scientific highlights
• cuprates, ruthenates, and iridates
• iron pnictides and chalcogenides
• heavy fermions
• organic compounds
• hydrides
• superconductivity and competing order
• superconductivity in 2D materials, at surfaces, and interfaces
• spectroscopy of collective modes
• topological superconductivity
• non-equilibrium superconductivity and its dynamical control
• new experimental methods
• experiments under extreme conditions
• prospects for new superconductors

Visitors:

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