

**CALENDAR OF EVENTS** <http://physics.illinois.edu/bluesheet.asp>

**Monday, December 19, First Day of Instruction, Winter Session**

**Monday, April 16, ICMT Seminar:** "Magnetic Ordering on Topological Crystalline Insulator Surfaces" Prof. Herb Fertig; 12:00 pm in 190 ESB

**Monday, April 16, High Energy/ Medium Energy Physics Seminar:** "Color Fluctuations in Nucleons and pA Collisions at LHC and RHIC" Mark Strikman; 1:00 pm in 464 Loomis

**Tuesday, April 17, Astronomy Colloquium:** "Gender Harassment in Science: Is it Just Me?" Dr. Kathryn Clancy; 3:45 pm in 134 Astronomy

**Wednesday, April 18, QI/AMO Seminar:** "Ion traps and Multi-Level Quantum Systems" Crystal Senko; 1:00 pm in 276 LLP

**Wednesday, April 18, Physics Colloquium:** "Searching for Dark Matter" Xiangdong Ji; 4:00 pm in 141 Loomis

**Visitors:**

# European School of Magnetism

## International Workshop 17 – 28 September 2018

As with previous editions of ESM, the 2018 School aims at providing a thorough insight into magnetism through a broad series of fundamental lectures, and to address a specific topic of current interest in more detail. We intend to cover modern aspects overlapping a broad series of fundamental lectures on one side, and the latest insights into up-to-date aspects of magnetism on the other side. The topic chosen for the 2018 School is: "Magnetism by Light". This covers a wide range of fundamental phenomena deeply rooted in condensed matter physics, specific instrumentation and opportunities for applications. Focused lectures will cover ultrafast light-induced magnetization processes, magnetoplasmonics, microwave magnetism, magneto-optics, spectroscopic and synchrotron-based techniques etc. The School will be an opportunity for young scientists from the two fields, to meet, share their expertise and build networks.

The School is addressed mainly at PhD students and post-docs, both experimentalists and theoreticians. It will consist of approximately 40 hours of lectures, plus many practicals (15 hours), open question sessions (approximately 10 hours), and free access to a library on magnetism. Attendees will be able to present their own work during poster sessions. The detailed program is available from the website: <http://www.esm2018.agh.edu.pl>.

Request for participation in the school is already open. Potential attendees are expected to provide, along with their application form, a motivation letter and, for PhD students and post-docs, a recommendation letter from their supervisor. The forthcoming important dates are:

**April 20<sup>th</sup>, 2018: deadline for the requests for participation**

<http://www.esm2018.agh.edu.pl>



# Emergent Phenomena in Quantum Matters Summer School

**12 – 15 June 2018**

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**Visitors:**

The Emergent Phenomena in Quantum Matters summer school at Cornell University brings together experts, postdocs, and students in the field of strongly correlated quantum materials. We have had 3 successful years and wish to continue the experience.

<https://epqm.lassp.cornell.edu/previous-summer-schools>

Building on the experience and the excellent feedback we are hosting another summer school this year thanks to the generous continued support from the Gordon and Betty Moore Foundation the Kavli Institute at Cornell.

We have seven exceptional lecturers coming this year and want to bring in a body of attendants to match.

Lecturers:

Balent, Leon (UCSB/KITP)  
Gull, Emanuel (U Michigan)  
Kivelson, Steven (Stanford)  
Martin, Ivar (Argonne National Lab)  
Rafael, Gil (Caltech)  
Trivedi, Nandini (OSU)  
Zhang, Yi (Cornell)



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**Visitors:**

# Italy 2018

## ICTP: Advanced Workshop and School Correlations in Electron Systems: From Quantum Criticality to Topology 30 Jul-5 Aug 2017 Quy Nhon (Vietnam)

Organisers:

Andrey Chubukov (University of Minnesota),  
Piers Coleman (Rutgers University),  
Dmitrii L. Maslov (University of Florida),  
Naoto Nagaosa (RIKEN Tokyo),  
Andy Schofield (University of Birmingham),  
Hide Takagi (MPI Stuttgart),  
Rosario Fazio (ICTP, Trieste)

This School and Workshop will bring graduate and postdoctoral students in condensed matter physics together with experts in the field to discuss the existing challenges and the latest theoretical and experimental developments in correlated electron systems and topological materials. The meeting will be held in the main auditorium of the ICTP, Miramare, Trieste. The research talks will be held mostly during the first week (Aug. 6-10). On Friday, August 10, we will hold a mini workshop devoted to the 60th birthday of Prof. Piers Coleman. The tutorial lectures on various aspects of strongly correlated and topological electron systems, particularly those arising in the workshop, will be given during the second week (Aug. 13-17). See accompanying poster for details of lecturers.

A number of travel grants will be available, with priority given to junior applicants. Low cost housing is available at the Institute Guest houses. There is no registration fee.

Application Deadline: 15 May 2018

Applications: smr 3232

<http://indico.ictp.it/event/8330/>



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**Visitors:**

# Job Opportunity

## Postdoctoral positions at University of Amsterdam

We would like to advertise **one postdoctoral position** at the Institute of Physics of the University of Amsterdam, the Netherlands.

The successful candidate will join an interdisciplinary scientific environment, in the groups of [Corentin Coulais and Jasper van Wezel](#), with the aim of investigating the [physics of topological active metamaterials, both experimentally and theoretically.](#)

We seek an exceptional candidate with a background in physics, applied mathematics, engineering or related field, and with a strong taste for combining experimental, computational and theoretical approaches. The following areas of expertise are particularly welcome. On the experimental and numerical sides: rapid prototyping, mechanical testing, control/automation/robotics, image processing, data mining and computer programming (Python, Matlab, or equivalent). And as theoretical background: condensed matter theory, topological phases of matter, nonlinear physics and mechanics. Recently graduated Ph.D. candidates and graduate students in their last year of studies are especially welcomed to apply.

The review of applications has already started and will continue until the position is filled. Interested candidates should contact [Corentin Coulais and/or Jasper van Wezel by email.](#)

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**Visitors:**

# Spin in Organic Semiconductors

**International Workshop 13 – 16 August 2018**

I would like to inform you that the deadline for the 7th international meeting on spins in organic semiconductors has been extended until April 24, 2018.

The conference will be held in Halle/Saale, Germany from August 13, to August 16, this year. Spinos covers spins in organic and carbon based materials so also graphene and diamond are included. You can submit your abstract and find more information at

[spinos.physik.uni-halle.de](http://spinos.physik.uni-halle.de)

Topics are:

- Organic spintronics
- New methods of generating spin currents, including spin Hall effects and spin pumping
- Magnetic field effects in organic materials
- Organic magnets
- Spin chemistry
- Spin statistics in organic semiconductor materials and devices and other spin-related phenomena in carbon based materials



# Trieste Summer School on Collective Behaviour in Quantum Matter

**27 August – 14 September 2018**

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**Visitors:**

We are organizing a three-week Summer School on Collective Behaviour in Quantum Matter at ICTP in Trieste (27 August - 14 September 2018), and we would be glad if you could forward this message to potential participants in your group, and perhaps display the attached poster in a suitable location.

The online application form is at <http://indico.ictp.it/event/8331/>.

**Deadline**

for application was 9 April (requesting financial support), or 14 May (otherwise). We will continue to review late applications which arrive until 20 April until the spaces for support are filled

The event, which addresses graduate students and junior researchers, aims to teach a modern course in condensed matter and statistical physics. It combines basic concepts with recent structural and interdisciplinary developments. It features a combination of theory and computational courses, and seminars on experimental progress in the field. The program will cover a broad variety of topics within condensed matter physics, emphasizing connections with related fields such as quantum information, atomic, optical and high energy physics:

- 1 - Statistical Mechanics: from foundations to quantum information
- 2 - Numerical methods: high-level programming and advanced numerical methods
- 3 - Coherent dynamics: entanglement, decoherence, phase transitions, driven systems
- 4 - Topological quantum matter: phases and diagnostics
- 5 - Physical implementations: cold atoms, trapped ions, nanophysics, materials.

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**Visitors:**

# ICMT Seminar

**Title:** “Magnetic Ordering on Topological Crystalline Insulator Surfaces”

**Speaker:** Professor Herb Fertig, University of Indiana

**Date:** Monday, April 4      **Time/Location:** 12:00 pm / 190 ESB

**Abstract:** See here

<https://physics.illinois.edu/calendar/event/4/16/2018/33296489>



# High Energy/ Medium Energy Physics Seminar

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**Visitors:**

**Title:** “Color Fluctuations in Nucleons and PA Collisions at LHC and RHIC”

**Speaker:** Mark Strikman (Penn State University)

**Date:** Monday, April 28

**Time/Location:** 1:00 pm / 464 Loomis

**Abstract:** See here <https://physics.illinois.edu/calendar/event/4/16/2018/33302593>



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# Astronomy Colloquium

**Title:** “Gender Harassment in Science: Is it Just Me?”

**Speaker:** Dr. Kathryn Clancy (University of Illinois)

**Date:** Tuesday, April 17

**Time/Location:** 3:45 pm / 134 Astronomy

**Abstract:** See here <https://physics.illinois.edu/calendar/event/4/17/2018/33292526>

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# QI/AMO Seminar

**Title:** “ION Traps and Multi-Level Quantum Systems”

**Speaker:** Betsy Greifenkamp (Dept. of Physics)

**Date:** Wednesday, April 18

**Time/Location:** 1:00 pm / 276 LLP

**Abstract:** I give an overview of trapped ion quantum information and discuss prospects for implementing multi-valued quantum logic using trapped ions. Qudits (the multi-state generalization of qubits) are attractive for quantum computing because they enable a much larger Hilbert space for the same number of trapped ions, which may allow us to improve the information capacity of a quantum processor. I describe possible advantages and disadvantages of using qudits in place of qubits, and lay out the protocols that my lab will test for implementing measurements, single-qudit operations, and two-qudit operations in a trapped ion system.



# Physics Colloquium

**Title:** “Searching for Dark Matter”

**Speaker:** Xiangdong Ji (Maryland University)

**Date:** Wednesday, April 18

**Time/Location:** 4:00 pm / 141 Loomis

**Abstract:** Dark matter is among the most important mysteries in physics and astronomy today. There are compelling arguments that dark matter particles are a class of weakly-interacting massive particles, or WIMPs, that arise naturally in physics beyond the Standard Model. WIMP searches using various low-energy detectors have been conducted around the globe for nearly thirty years, with dramatic improvements in scale and sensitivity. After a brief overview of the field, I will focus on a Chinese dark matter experiment, PandaX-II, running in the Jinping Underground Lab, in Sichuan Province. The PandaX-II detector uses 580kg ultrapure liquid xenon as the detection target, and has a record sensitivity about  $\sim 0.1$  events/ton  $\times$  day. The most recent results with an exposure of 54 ton  $\times$  day data will be shown and discussed. The future running and upgrading plan of the PandaX experiment will be presented, along with the prospect of building the world's “ultimate WIMP dark matter detector” in the next decade.

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