

School and Workshop on Patterns of Synchrony: Chimera States and Beyond



6 - 17 May 2019
Trieste, Italy

Further information:
<http://indico.ictp.it/event/8656/>
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The study of nonlinear systems continues to yield new and fascinating phenomena. Recently, a striking development has emerged in complex systems research: bringing together concepts from statistical and nonlinear physics allowed for the prediction and discovery of a novel effect, called the chimera state. Chimera states are a nice example of unexpected, counter-intuitive dynamics where the interplay of synchronization, long-range interactions and pattern formation mechanisms are essential.

Description:

The aim of the school is to review the progress in this field, where physics and applied mathematics strongly overlap with life sciences; find new interconnections and general analytic, numerical, and statistical approaches; and identify novel directions and cross-disciplinary applications. The targeted audience includes advanced undergraduate and PhD students, as well as post-doctoral fellows and junior researchers. Special attention will be devoted to the training of scientists from developing countries in line with the fundamental mission of the ICTP.

The workshop brings together a mix of world-leading experts in the field and young researchers to cover most important recent achievements in understanding of complex structures and the nature of synchrony in nonequilibrium systems.

Topics:

- Synchronization
- Patterns
- Networks
- Chimera states
- Spatio-temporal complexity
- Long-range interactions
- Multistability
- Active matter
- Nonlinear waves

How to apply:

Online application:
<http://indico.ictp.it/event/8656/>

Female students and scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Directors:

Y. MAISTRENKO
National Academy of Sciences of Ukraine, Kyiv, Ukraine
S. SINHA
Indian Institute of Science Education and Research, Mohali, India
A. PIKOVSKY
Potsdam University, Potsdam, Germany

Local Organizer:

R. FAZIO, ICTP

Lecturers at the School:

P. ASHWIN (University of Exeter)
R. BURIONI (University of Parma)
H. CHATE, (CEA-Saclay, Paris)
S. GUPTA (Ramakrishna Mission Vivekananda University, India)
E. KNOBLOCH (UC Berkeley)
K. KRISCHER (TU München)
J. KURTHS (PIK Potsdam)
C. LAING (Massey University, New Zealand)
L. LARGER (University of Franche-Comté)
E. MARTENS (DTU, Denmark)
S. OLMI (INRIA Sophia Antipolis Méditerranée)
O. OMELCHENKO (Potsdam University, Germany)
T. PEREIRA (University of São Paulo)
A. POLITI (University of Aberdeen)
R. RAMASWAMY (Jawaharlal Nehru University, New Delhi, India)
E. SCHÖLL (TU Berlin)

Speakers (Partial List*):

R. ANDRZEJAK (Universitat Pompeu Fabra, Barcelona)
T. BANERJEE (University of Burdwan, India)
I. BELYKH (Georgia State University)
C. BICK (University of Exeter)
S. BOCCALETTI (Institute for Complex Systems, Florence)
D. GHOSH (Indian Statistical Institute, Kolkata)
D. GOLDOBIN (Perm State University)
J. HART (University of Maryland, College Park)
J. HIZANIDIS (University of Crete)
K. KANEKO (University of Tokyo)
T. KAPITANIAK (Politechnika Łódzka)
H. KOEPL (TU Darmstadt)
Y-C. LAI (Arizona State University)
V. MAISTRENKO (NAS of Ukraine, Kyiv)
A. MOTTER (Northwestern University)
G. MEDVEDEV (Drexel University)
M. PANAGGIO (Hillsdale College)
P. PARMANANDA (Indian Institute of Technology Bombay, Powai)
M. ROSENBLUM (Potsdam University)
A. ROULET (University of Basel)
L. SMIRNOV (Institute of Applied Physics, Nizhny Novgorod, Russia)
S. THUTUPALLI (Tata Institute for Fundamental Research)
M. TIMME (TU Dresden)
A. TORCINI (Université de Cergy-Pontoise)
M. WOLFRUM (WIAS, Berlin)
S. YANCHUK (TU Berlin)
A. ZAKHAROVA (TU Berlin)

Deadline:

For applications needing financial support and/or visa:
28 February 2019

For applications not needing financial support and/or visa:
15 March 2019



The Abdus Salam
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