APPLICATION FORM
Course CLXXXIII

QUANTUM SPINTRONICS AND RELATED PHENOMENA

19 – 29 June

Topics:

- Electronical and optical spin manipulation in solid state systems
- Quantum information processing with spin qubit systems
- Spin relaxation and decoherence
- Spin-dependent transport
- Spin-orbit interactions in semiconductors
- Quantum spin Hall effect and topological insulators

Lecturers and Seminar Speakers:

D. Apselholm – University of California, Santa Barbara, CA (USA)
B. Braunecker – Departamento de Física Teórica de la Materia Condensada, Facultad de Ciencias, Universidad Autónoma de Madrid (Spain)
G. Burkard – Fachbereich Physik, Universität Konstanz (Germany)
W. Cossi – Department of Physics, McGill University, Montreal (Canada)
S. De Franceschi – SPSMS/LaTEQS, CEA-INAC/UJF, Grenoble (France)
D. Divincenzo – Institut für Quanteninformation, Physikzentrum, RWTH Aachen, Department of Theoretical NanoElectronics, Peter Grünberg Institute Forschungszentrum Jülich (Germany)
C. Eguí – Instituto de Física de Sao Carlos, Universidade de Sao Paulo (Brazil)
M. Jenck – Departement of Physics, Harvard University, Cambridge, MA (USA)
A. Macdonald – Department of Physics, The University of Texas at Austin, TX (USA)
C. Marcus – Department of Physics, Harvard University, Cambridge, MA (USA)
L. Molenkamp – Experimentelle Physik III am Hubland, Universität Würzburg (Germany)
J. R. Petta – Department of Physics, Princeton University, NJ (USA)
S. Trebst – Departement of Applied Physics, The University of Tokyo (Japan)
T. Trauzettel – Institut für Theoretische Physik und Astrophysik, Universität Würzburg (Germany)
Y. Tserkovnyak – Department of Physics, University of California, Los Angeles, CA (USA)
R. Warburton – Department Physik, Universität Basel (Switzerland)
A. Yacoby – Department of Physics, Harvard University, Cambridge, MA (USA)

Directors of the Course:

D. Loss – Departement Physik, Universität Basel (Switzerland)
P. Simon – Laboratoire de Physique des Solides, Université Paris Sud, Orsay (France)

Scientific Secretary:

F. Eukdgiog – Departement Physik, Universität Basel (Switzerland)

Deadline for application:

20 April 2012

Correspondence and application forms should be sent to:

P. Simon
Laboratoire de Physique des Solides, Université Paris Sud
91405 ORSAY Cedex (France)
Tel.: +33-1-69156090
pascal.simon@u-psud.fr

Opening of the Course:

Tuesday, 19 June 2012 – 9.00 a.m.

Closing of the Course:

Friday, 29 June 2012 – 12.30 a.m.

Participation fee:

€ 1300.00 (for attendance, full board, lodging and Proceedings)

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Course CLXXXIV

PHYSICS OF COMPLEX COLLOIDS

3 – 13 July

Topics:

- Colloidal interactions and phase diagrams
- Hydrodynamics in colloids
- Simulation techniques
- Colloidal arrested states of matter
- Structural investigations of colloids
- Synthesis
- Non-equilibrium phenomena
- Active Brownian motion
- Applications

Lecturers and Seminar Speakers:

P. Chakr – Center for Soft Condensed Matter Research NYU, New York, NY (USA)
M. Derjuka – Soft Condensed Matter, Debye Institute for NanoMaterials Science, Utrecht University (The Netherlands)
D. Freire – Department of Chemistry, University of Cambridge (UK)
V. Fuchs – Fachbereich Physik, Universität Konstanz (Germany)
L. A. Hojch – Complex Assemblies of Soft Matters, CNR-Rhodia-UPenn, Bristol, PA (USA)
C. N. Ikos – Fakultät für Physik, Universität Wien (Austria)
G. Nageli – Institut für Festkörperforschung, Soft Matter Division, Forschungszentrum Jülich (Germany)
R. Piazza – Dipartimento di Chimica, Materiali e Ingegneria Chimica, Politecnico di Milano (Italy)
W. Poos – SUPA and School of Physics & Astronomy, The University of Edinburgh (Scotland)
E. Tiedt – Laboratoire de Physique Theorique et Modeles Statistiques, Université Paris Sud, Orsay (France)
C. Van den Broeck – Hasselt University, Campus Diepenbeek, Hasselt (Belgium)
P. G. Yeklov – Department of Chemical and Biomolecular Engineering and Department of Chemistry, University of Houston, TX (USA)
B. Vincent – School of Chemistry, University of Bristol (UK)
A. G. Yodh – Laboratory for Research on the Structure of Matter and Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, PA (USA)
E. Zaccarelli – CNR-ISC c/o Dipartimento Di Fisica, Università Di Roma “La Sapienza” (Italy)

Directors of the Course:

C. Behinder – Universität Stuttgart, Physikalisches Institut Fachbereich Physik, Stuttgart (Germany)
F. Scortino – Dipartimento di Fisica, Università di Roma “La Sapienza” (Italy)
P. Zerbi – Department of Theoretical Physics, Jozef Stefan Institute, Ljubljana (Slovenia)

Scientific Secretary:

F. Scortino – Dipartimento di Fisica, Università di Roma “La Sapienza” (Italy)

Deadline for application:

10 April 2012

Correspondence and application forms should be sent to:

F. Scortino
Dipartimento di Fisica,
Università di Roma “La Sapienza”
Piazzale A. Moro 2
00185 ROMA (Italy)
Tel.: +39-06-4913799 Fax: +39-06-4463158
francesco.scortino@uniroma1.it

Opening of the Course:

Tuesday, 3 July 2012 – 9.00 a.m.

Closing of the Course:

Friday, 13 July 2012 – 12.30 a.m.

Participation fee:

€ 1300.00 (for attendance, full board, lodging and Proceedings)
Course CLXXXV
METROLOGY AND PHYSICAL CONSTANTS
17 – 27 July

Topics:
• Metrology: the mission and role of the International Bureau of Weights and Measures
• New definition of units
• Physical constants
• Quantum information and quantum metrology
• Biological standards
• Gas analysis
• Chemical and food metrology
• Ionizing radiation for health
• Accurate radiometry from space: an essential tool for climate study
• Time and frequency
• Cold atoms and optical clocks
• Optical methods for environment and art and archaeology

Lecturers and Seminar Speakers:

A. BAUH – PTB, Physikalisch – Technische Bundesanstalt, Braunschweig, (Germany)
P. BECKER – PTB, Physikalisch – Technische Bundesanstalt, Braunschweig, (Germany)
G. BEROTTI – INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)
W. BELL – INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)
P. DE NATALE – INO del CNR, Firenze (Italy)
M. DE PESSÉ – NPL, National Physical Laboratory, Teddington, Middlesex (UK)
N. FOX – NPL, National Physical Laboratory, Teddington, Middlesex (UK)
K. HELMBERG – Monash University, Melbourne (Australia)
F. LATTANO – ENEA, Roma (Italy)
F. LEVI – INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)
L. E. LOCASCIO – NIST, National Institute of Standard and Technology, Gaithersburg, MD (USA)
M. MILTON – NPL, National Physical Laboratory, Teddington, Middlesex (UK)
F. NEZ – LKB, Laboratoire Kastler Brossel and Université Pierre et Marie Curie, Paris (France)
T. QUINN – BIPM, Bureau International des Poids et Mesures, Sèvres (France)
M. RASTELLO – INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)
M. STOCK – BIPM, Bureau International des Poids et Mesures, Sèvres (France)
P. TASSIA – INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)
A. TALENCHOUK – NPL, National Physical Laboratory, Teddington, Middlesex (UK)
K. VON KLEITZING – Max-Planck-Institut für Festkörperforschung, Stuttgart (Germany)
S. A. WISE – NIST, National Institute of Standard and Technology, Gaithersburg, MD (USA)

Directors of the Course:

E. RAVA – Politecnico di Torino e INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)
M. KÜHN – BIPM, Bureau International des Poids et Mesures, Sèvres (France)

Scientific Secretary:

A. M. ROSSI – INRIM, Istituto Nazionale di Ricerca Metrologica, Torino (Italy)

Deadline for application:
5 May 2012

Correspondence and application forms should be sent to:

A. M. ROSSI
INRIM, Istituto Nazionale di Ricerca Metrologica
Strada delle Cacce 91
10135 TORINO (Italy)
Tel: +39-011-3919342 Fax: +39-011-346384
varennainrim.it

Opening of the Course:
Tuesday, 17 July 2012 – 9.00 a.m.

Closing of the Course:
Friday, 27 July 2012 – 12.30 a.m.

Participation fee:
€ 1,300.00 (for attendance, full board, lodging and Proceedings)

GENERAL INFORMATION

A) – In addition to the official lectures, several seminars on related subjects will be held by visiting scientists.

B) – The scientific organization and direction of the Course are entrusted to the Directors.

C) – The number of students at each Course is limited to about 60. Students are requested to attend all lectures and seminars.

D) – Whoever may be interested in attending the Course and is not entitled – for his age or other reasons – to be considered a student, may follow the Course as observer. Registration fee charged to observers is € 500.00. Observers should provide for their board and lodging; if required, the School may take care of their hotel accommodation.

E) – Applicants will be informed of the decision on their admittance within 30 days from the beginning of each Course.

F) – Owing to the limited number of places available in the lecture hall, it will not be possible to allow any person not selected by the Committee of the School to follow the Courses.

G) – Students are requested to arrive at Varenna the day preceding the opening of the Course, i.e. respectively on Monday, 18 June (1st Course), Monday, 2 July (2nd Course), Monday, 16 July (3rd Course). Accommodation for the students will be provided in rooms with 2 beds in hotels at Varenna. Meals will be served at the hotels.

H) – Fees should be paid by students and observers following the instruction and within the date indicated in the letter of admittance.

I) – Scholarships may be granted to deserving students who need financial help. Such requests must be specified in the application and justified in the recommendation letter. Some of the Scholarships will be granted to SIF and/or EPS Members. Scholarships will be assigned by the President of the Italian Physical Society.

J) – Students should avoid being accompanied by relatives. In view of the holiday season local accommodation is very limited. Quite exceptionally the School could see to the accommodation of members of students’ families in local hotels. Hotel expenditure for students’ relatives will be payable separately and directly to the hotel management.

The President
Società Italiana di Fisica
LUIZA CIARELLI

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