

## Visiting Researchers

### Short visits

#### Prof. Istvan Nagy

Technical University of Budapest, Hungary  
04/01–31/01/2010, 23/08–18/09/2010,  
03/01–29/01/2011, 26/04–21/05/2011,  
22/08–18/09/2011  
Various aspects of correlations in extended fermionic systems; spice-fluctuation, pair-correlation, one-particle damping, impurity-screening.

#### Prof. Lawrence Glasser

Clarkson University, New York, USA  
11/01–16/01/2010, 09/01–14/01/2011  
Mathematical physics applied to condensed matter.

#### Prof. Yanming Ma

State Key Lab of Superhard Materials, Jilin University, Changchun, China  
28/01–28/01/2010  
Novel high pressure structures from first principles.

#### Prof. Fernando Cossio Mora

UPV/EHU, Donostia-San Sebastián, Spain  
29/01–29/01/2010  
Cycloaddition chemistry as a tool for the preparation of valuable molecules and materials.

#### Prof. Richard Arinero

Université Montpellier 2, France  
31/01–03/02/2010, 21/06–24/06/2011  
Dielectric spectroscopy at nano-scale by atomic force microscopy (AFM) techniques.

#### Doctorand Jhon Wilfer González Salazar

Instituto de Ciencia de Materiales de Madrid, Spain  
07/02–13/02/2010  
Electronic structure calculations in nanotubes.

#### Dr. Leonor Chico Gómez

Instituto de Ciencia de Materiales de Madrid, Spain  
07/02–12/02/2010, 23/05–25/05/2011,  
20/06–25/06/2011  
Electronic structure calculations in nanotubes.

#### Dr. Jorge Lobo Checa

CIN2, Universidad Autónoma de Barcelona, Spain  
08/02–20/02/2010, 15/06–18/06/2010  
Study of the electronic structure of thin organic molecular layers on metal and semiconductor substrates.

#### Prof. Zhenchao Dong

Hefei National Laboratory for  
Physical Sciences at the Microscale,  
University of Science and Technology of China  
09/02–11/02/2010  
Molecular fluorescence in scanning tunneling microscopy cavities.

#### Dr. Juliane Loichen

Goodyear Technical Center, Luxembourg  
09/02–11/02/2010, 25/01–27/01/2011  
Nano-dielectric spectroscopy.

#### Dr. Stephan Westermann

Goodyear Technical Center, Luxembourg  
09/02–11/02/2010, 25/01–27/01/2011  
Nano-dielectric spectroscopy.

#### Prof. Marijan Sunjic

University of Zagreb, Croatia  
11/02–26/02/2010  
Dynamical response and surface excitations in thin films.

#### Dr. Simona Achilli

University of Milano-Bicocca, Italy  
12/02–28/02/2010, 31/05–03/06/2011  
Electronic and magnetic properties of single adatoms on metal surfaces.

#### Dr. Maider Machado

Fundación Inasmet, San Sebastián  
12/02–12/02/2010  
Building integrated photovoltaics: technology and applications.

#### Dr. Miguel Angel Muñoz Marqués

Instituto Ciencia de Materiales de Sevilla, Spain  
14/02–15/02/2010  
Surface structural studies with MEIS.

#### Doctorand Grethe Vestergaard

Jensen Aarhus University, Denmark  
17/02–24/02/2010  
Small angle x-ray scattering applied to soft condensed matter systems.

#### Dr. Leonardo Marusic

University of Zadar, Croatia  
21/02–26/02/2010  
Surface science. Casimir forces between metallic slabs. Polariton spectra.

#### Prof. Malcolm Stott

Queen's University, Kingston, Canada  
22/02–26/02/2010  
2D electron gas.

#### Prof. Mario Trioni

CNR, University of Milano-Bicocca, Italy  
22/02–26/02/2010, 21/10–28/10/2011,  
17/11–19/11/2011  
Electronic and magnetic properties of thin solid film on metals.

#### Prof. Alexander Buzdin

Université Bordeaux I, France  
01/03–2/03/2010  
Coexistence of ferromagnetism and superconductivity.

#### Prof. Javier Tejada Palacios

Universidad de Barcelona, Barcelona, Spain  
04/03–5/03/2010  
Quantum Rotational Motion in mesoscopic systems.

#### Dr. Pawel Rejmak

Institute of Catalysis and Surface Chemistry of  
Polish Academy of Science, Poland  
24/03–27/03/2010  
First-principles calculations on nanostructures.

#### Dr. Andrey Vasenko

LPMMC, Université Joseph Fourier and CNRS, France  
25/03–27/03/2010  
Electron cooling by diffusive normal metal - superconductor tunnel junctions.

#### Dr. Marten Piantek

Freie Universität Berlin, Germany  
09/04–9/04/2010  
Switchable molecules on metallic surfaces.

#### Prof. Dieter Richter

IFF-FZ, Forschungszentrum Jülich, Germany  
10/04–18/04/2010  
Polymer dynamics by neutron techniques.

#### Dr. Fernando Ruipérez Cillán

Stockholm University, AlbaNova University Centre, Stockholm, Sweden  
12/04–12/04/2010  
Quantum chemical study of lanthanide and actinide impurities in ionic crystals.

#### Dr. Remi Avriller

Facultad de Ciencias, Universidad Autónoma de Madrid, Spain, CEA Grenoble and Université Joseph Fourier, France  
15/04–17/04/2010  
Quantum transport in nanostructures in presence of strong external perturbations.

#### Prof. Jean Jaques Greffet

Institut d'Optique Graduate School,  
Institut Universitaire de France, Palaiseau, France  
22/04–24/04/2010  
Nano-optics: Theory of nanoparticle resonances from visible to THz.

#### Prof. Enrique Solano Villanueva

UPV/EHU, Leioa, Spain  
30/04–30/04/2010  
Quantum Technologies with Circuit QED.

#### Prof. José Luis Vicent López

Facultad CC. Físicas, Universidad Complutense, Madrid, Spain  
13/05–15/05/2010  
Dynamics effects in superconducting/magnetic nanostructures.

#### Dr. Peter Koval

CPMOH, Université de Bordeaux, France  
17/05–18/05/2010  
Extension of the LCAO method SIESTA to excited states: application to organic solar cells

#### Prof. Dietrich Foerster

CPMOH, Université de Bordeaux, France  
17/05–18/05/2010, 20/04–22/04/2011,  
13/07–15/07/2011, 26/07–29/07/2011  
Extension of the LCAO method SIESTA to excited states: application to organic solar cells.

#### Dr. Daniele Stradi

Universidad Autónoma de Madrid  
06/05–7/05/2010  
Self-assembly and reactivity on the graphene/Ru[0001] surface.

#### Dr. Arthur Ernst

Max-Planck-Institut für Mikrostrukturphysik, Germany  
11/05–15/05/2010  
Magnetism from first principles: a multiple scattering approach.

#### Dr. Aaron Bostwick

Advanced Light Source, Lawrence Berkeley Lab, USA  
12/05–19/05/2010  
Graphene band structure with angle resolved photoemission.

**Prof. James D. Talman**

University of Western Ontario, Canada  
12/05–26/05/2010, 10/07–17/07/2011,  
24/07–30/07/2011  
Efficient methods in quantum chemistry.

**Prof. Bo Hellsing**

Chalmers and Göteborg University, Sweden  
24/05–28/05/2010  
Electron-phonon interactions on metal surfaces.

**Dr. Vitaly Pipich**

JCNS/FRMII c/o TU Muenchen, Garching, Germany  
27/05–05/06/2010  
Small-angle neutron scattering applied to soft matter systems.

**Prof. Garnett W. Bryant**

NIST, Gaithersburg, Maryland, USA  
29/05–04/06/2010  
Nanophotonics

**Prof. Luciano Colombo**

University of Cagliari and SLACS (INFN-CNR), Italy  
26/05–29/06/2010  
Growth phenomena in mixed amorphous/crystalline silicon nanosystems.

**Dr. Miguel Angel Gosálvez Ayuso**

Nagoya University, Japan  
31/05–07/06/2010  
Macroscopic and microscopic kinetics in surface processing: heterogeneous catalysis, heteroepitaxial growth and anisotropic etching.

**Dr. Remi Vincent**

Institut Langevin Ondes et Images, CNRS - ESPCI  
Paris, France  
03/06–20/06/2010  
Study and control of fluorescence with magneto-optical nanostructures.

**Dr. Sergey Ostanin**

Max-Planck-Institut für Mikrostrukturphysik, Germany  
07/06–13/06/2010  
Magnetism from first principles: a multiple scattering approach.

**Prof. Frank Hekking**

Laboratoire de Physique et de Modélisation des Milieux Condensés, Université Joseph Fourier and CNRS, Grenoble, France  
06/06–09/06/2010  
Phase-charge duality in Josephson junction circuits: Role of inertia and effect of microwave irradiation.

**Dr. Jürgen Henk**

Max-Planck-Institut für Mikrostrukturphysik, Germany  
08/06–11/06/2010  
Ferroelectric control of Rashba spin-orbit coupling.

**Prof. Pedro de Andres Rodriguez**

Instituto de Ciencia de Materiales de Madrid CSIC, Spain  
14/06–16/06/2010  
Adsorption and diffusion of atomic and molecular hydrogen on graphene and graphite.

**Prof. Avelino Corma Canós**

Instituto de Tecnología Química, UPV-CSIC, Universidad Politécnica de Valencia, Spain  
15/06–16/06/2010  
Multifunctional materials design for catalysis.

**Dr. Anders Mathias Lunde**

ICMM, CSIC, Madrid, Spain  
17/06–18/06/2010  
Interaction induced edge channel equilibration.

**Dr. Alexander Yaresko**

Max-Planck-Institut für Festkörperforschung, Germany  
20/06–27/06/2010, 05/09–04/10/2011  
Theoretical study of x-ray absorption and magnetic circular dichroism in novel materials.

**Prof. Mario Rocca Agostino**

Università degli Studi di Genova, Italy  
21/06–23/06/2010  
Surface science spectroscopy.

**Prof. Lin-Wang Wang**

Lawrence Berkeley National Laboratory, USA  
27/06–30/06/2010  
Electronic quantum transport

**Dr. Oleg Tereshchenko**

Institut of Semiconductor Physics, Novosibirsk, Russia  
30/06–04/07/2010  
Two-dimensional plasmons and electric transport in metal layers deposited on semiconductors.

**Doctorand Petra Bacova**

Charles University, Czech Republic  
01/07–15/07/2010  
Dynamics of branching points in complex polymers.

**Dr. Kiron Burke**

University of California, Irvine, USA  
04/07–06/07/2010  
Density-Functional Theory

**Dr. Martin Brodeck**

Forschungszentrum Jülich GmbH, Germany  
07/07–15/07/2010  
MD simulations of polymers confined by walls.

**Dr. Rene Gaudoin**

Universität Wien, Austria  
09/07–17/07/2010, 12/09–16/09/2011  
Reciprocal-space finite-size corrections for Quantum Monte Carlo calculations. Diffusion Monte Carlo.

**Dr. Lucian Constantin**

Theoretical and Computational division of the National Nanotechnology Laboratory of CNR-INFN, Lecce, Italy  
13/07–17/07/2010  
Density-Functional theory.

**Prof. Andrei Postnikov**

Paul Verlaine Université-Metz, France  
13/07–14/07/2010  
Phonons in mixed semiconductors.

**Dr. Mau-scheng Zei**

National Central University, Taiwan  
19/07–20/07/2010  
Electrochemical deposition of metallic films and nanoparticles on thin oxides and metallic surfaces.

**Prof. Emilio Artacho Cortés**

University of Cambridge, United Kingdom  
19/07–11/08/2010  
Electronic stopping power in insulators. LDA+U, SIC, exact-exchange in DFT calculations.

**Prof. Fernando Sols**

Universidad Complutense de Madrid, Spain  
21/07–23/07/2010  
Electron cooling in nanostructures.

**Doctorand Gregor Michalicek**

Forschungszentrum Jülich GmbH, Germany  
21/07–23/07/2010  
Magnetic properties of low dimensional systems and nano-structures by ab initio methods.

**Prof. Stefan Blügel**

Forschungszentrum Jülich GmbH, Germany  
21/07–23/07/2010  
Magnetic properties of low dimensional systems and nano-structures by ab initio methods.

**Doctorand Thomas Zinn**

Forschungszentrum Jülich GmbH, Germany  
23/07–03/08/2010  
Chain exchange kinetics of n-alkane-PEO block copolymer micelles.

**Dr. Mario Cuomo**

CNR-SPIN "E.R.Caianiello", Università di Salerno, Italy  
27/07–29/07/2010  
Competing broken symmetries due to magnetism and unconventional superconductivity in hybrid structures.

**Prof. Godfrey Gumbs**

Hunter College, The City University of New York, USA  
02/08–28/08/2010, 09/08–3/09/2011  
Plasmons in nanostructures.

**Doctorand Jorge Zuloaga Franco**

Rice University, Texas, USA  
06/08–10/08/2010  
TDDFT calculation of plasmon response in metallic nanostructures.

**Dr. Hugo Dil**

Universität Zürich, Switzerland  
18/08–23/08/2010, 17/04–19/04/2011  
New developments in topological insulators and other low dimensional systems with strong spin-orbit interaction. Spin structure investigations in topological insulators.

**Prof. Gustav Bihlmayer**

Forschungszentrum Jülich GmbH, Germany  
27/08–02/09/2010  
Magnetism in low dimensions: Overlayers, wires and atoms.

**Prof. Stetzer MacKenzie**

University of Washington, USA  
31/08–31/08/2010  
New insights into student understanding of electric circuits and analog electronics.

**Dr. Rajendra Singh Dhaka**

Max-Planck-Institut für Mikrostrukturphysik, Germany  
04/09–06/09/2010  
Photoemission study of rare gas nano-bubbles in Al(111): core-levels and plasmon excitation.

**Prof. Akira Ishii**

Tottori University Koyama, Japan  
08/09–11/09/2010  
Theory of solid state physics, mainly performing calculations of new materials and processes within density functional theory. Examples of his last topics related to surfaces are (i) reconstructions in semiconductor surfaces and (ii) adatom adsorption and migration in graphene.

**Prof. Vladimir Nazarov**

RCAS, Academia Sinica, Taipei, Taiwan  
08/09–05/10/2010  
Time-dependent density-functional theory of particle-solid interactions.

**Dr. Jan Ingo Flege**

Institute of Solid State Physics, University of Bremen, Germany  
11/09–15/09/2010  
Surface oxidation and oxidation catalysis on metal surfaces.

**Doctorand Axel Meyer**

Institute of Solid State Physics, University of Bremen, Germany  
11/09–15/09/2010  
Surface oxidation and oxidation catalysis on metal surfaces.

**Prof. Juan Rojo**

Universidad Complutense de Madrid, Spain  
16/09/2010–17/09/2010  
Surface defects: from mechanical properties to the origin of life.

**Dr. Steffen Ruettinger**

PicoQuant GmbH, Berlin, Germany  
23/09/2010–23/09/2010  
Modern approaches to time-resolved single molecule microscopy.

**Prof. Roderic Quirk**

The University of Akron, Ohio, USA  
26/09–06/10/2010, 08/10–15/10/2011  
Synthesis of functional polymers.

**Dr. Alejandro Reyes Coronado**

Foundation for Research & Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL), Crete, Greece  
26/09–09/10/2010  
Optical response of resonant metallic nanostructures in surface-enhanced microscopy and spectroscopy. Forces in metallic particles induced by fast electrons.

**Prof. Archie Howie**

Cavendish Laboratory, Cambridge, United Kingdom  
26/09–10/10/2010, 01/09–14/09/2011  
Theory of valence electron excitations by fast electrons.

**Prof. Satoshi Koizumi**

Japan Atomic Energy Agency, Ibaraki-ken, Japan  
27/09–06/10/2010  
Dynamical and structural features in systems with strong dynamic asymmetry.

**Dr. Maria Blanco Rey**

University of Cambridge, United Kingdom  
27/09–08/10/2010  
Metal oxide surface chemistry with applications in catalysis and physical properties of intrinsically chiral surfaces.

**Dr. Otto Muskens**

University of Southampton, United Kingdom  
27/09–02/10/2010  
Ultrafast optical switchers.

**Dr. Vojislav Krstic**

College Green, Trinity College Dublin, Ireland  
30/09–02/10/2010  
Magnetotransport in carbon nanotube-based mesoscopic systems.

**Dr. Daniele Stradi**

Universidad Autónoma de Madrid  
01/10–23/10/2010  
Self-assembly and reactivity on the graphene/Ru[0001] surface.

**Prof. Valery Tyuterev**

Tomsk State Pedagogical University, Toms, Russia  
01/10–28/10/2010  
Phonones and electron dynamics in solids.

**Prof. Tadaaki Nagao**

National Institute of Materials Science, Tsukuba, Japan  
02/10–07/10/2010  
Plasmons in atomic chains and in atomic sheets.

**Prof. Branko Gumhalter**

University of Zagreb, Croatia  
02/10–08/10/2010  
Ultrafast electron dynamics on metal surfaces.

**Dr. Fabio Busnengo**

Universidad de Rosario, Argentina  
04/10–23/10/2010  
Dissociation of diatomic molecules at surfaces.

**Dr. Jörg Meyer**

Fritz-Haber-Institut, Berlin  
04/10–05/10/2010  
Gas/surface dynamic

**Prof. Artem R. Oganov**

Stony Brook University, New York, USA  
08/10–10/10/2010  
Novel phenomena at high pressure.

**Dr. Nikolai Gaponik**

Technical University Dresden, Germany  
17/10–19/10/2010  
Strongly emitting colloidal nanocrystals and their assemblies.

**Dr. Fabio Pistolesi**

Université Bordeaux / CNRS, Talence, France  
20/10–22/10/2010  
Euler buckling instability and enhanced current blockade in suspended single-electron transistors.

**Dr. Iñigo Garcia Yoldi**

Instituto de Ciencia y Tecnología (CSIC) Madrid  
21/10–21/10/2010  
Computer simulation of molecular crystals and polymers. From abinitio methods to molecular dynamics.

**Dr. Jordi Fraxedas Calduch**

Centre d' Investigació en Nanociència i Nanotecnologia CIN2(CSIC-ICN)  
21/10–22/10/2010  
Water-solid interfaces at ambient conditions.

**Prof. Dietrich Foerster**

CPMOH, Université de Bordeaux, France  
24/10–26/10/2010  
Extension of the LCAO method SIESTA to excited states: application to organic solar cells.

**Prof. Garnett W. Bryant**

NIST, Gaithersburg, Maryland, USA  
26/10–30/10/2010  
Nanophotonics

**Prof. Peter Apell**

Chalmers University of Technology, Sweden  
26/10–30/10/2010, 29/11–3/12/2011  
Biophysics: from surfaces modes to wound healing.

**Prof. Antonio Hernando Grande**

Instituto de Magnetismo Aplicado, UCM-CSIC-ADIF, Madrid, Spain  
02/11–04/11/2010  
Magnetism in functionalized nanoparticles.

**Dr. Davide Donadio**

Max-Planck-Institut für Polymerforschung, Germany  
08/11–12/11/2010  
Thermal transport and thermoelectric materials.

**Prof. Stefan Blügel**

Forschungszentrum Jülich GmbH, Germany  
08/11–12/11/2010  
Magnetic properties of low dimensional systems and nano-structures by ab initio methods.

**Dr. Blanca Arizti Garcia**

Procter & Gamble, Spain  
11/11–11/11/2010  
Presentation of the Procter & Gamble's PhD Seminars

**Prof. Ivan Chernov**

Politechnic University of Tomsk, Russia  
15/11–21/11/2010  
Dynamics of hydrogen in metals under external irradiation.

**Prof. Pol Van Dorpe**

IMEC, Leuven, Belgium  
17/11–19/11/2010  
Synthesis and characterisation of plasmonic devices.

**Dr. Ivan Shelykh**

University of Iceland, Iceland  
18/11–20/11/2010  
Plasmonics: integrated devices and cavities for biosensing applications.

**Prof. Mahammad Babanly**

Baku State University, Baku, Azerbaijan  
19/11–30/11/2010  
Topological insulators: materials and properties.

**Prof. Félix Yndurain Muñoz**

Universidad Autónoma de Madrid, Spain  
21/11–04/12/2010  
Magnetism in low dimensional systems.

**Doctorand Néstor Ferrando Jódar**

Universidad Politécnica de Valencia  
01/12–06/12/2010  
Speeding up cellular automata simulations by using GPUs.

**Dr. Patrizia Borghetti**

Universita Cattolica del Sacro Cuore, Brescia, Italy  
08/12–10/12/2010  
Self-assembly and electronic properties of macromolecular systems: ordered ultrathin porphyrin layers vs hierarchically assembled eumelanin thin films.

**Dr. Andrew Ho**

Royal Holloway, University of London, United Kingdom  
04/01–10/01/2011  
Effects of disorder in one-dimensional quantum liquids, and phase diagram of binary mixtures of one-dimensional harmonic fluids, strongly correlated cold atom systems.

**Dr. Giulia Rossi**

Aalto University, School of Science and Technology, Helsinki, Finland  
12/01–15/01/2011  
Coarse-graining polymers with the MARTINI approach.

**Prof. Ralph Ernstorfer**

Fritz Haber Institute, Berlin, Germany  
23/01–26/01/2011  
Attosecond electron dynamics in solids.

**Prof. Juan José Saenz Gutierrez**

Universidad Autónoma de Madrid, Spain  
26/01–29/01/2011  
Nanophotonics. Modeling scanning probe microscopies.

**Doctorand Mikolaj Kajetan Schmidt**

Copernico University, Torun, Poland  
31/01–18/02/2011  
Nanophotonics.

**Dr. Tapio Ala-Nissila**

Aalto University School of Science and Technology, Helsinki, Finland  
12/01–15/01/2011  
Collaboration: Coarse-grained simulations of polymer systems.

**Prof. Adnen Mlayah**

Université Paul Savatier, Toulouse, France  
31/01–01/02/2011  
Plasmon and acoustic phonon coupling.

**Dr. Guillermo Romero Huenchufar**

UPV/EHU, Leioa, Spain  
31/01–04/02/2011  
Andreev qubit in a cavity.

**Dr. Alvise Verso**

Ulm University, Germany  
13/01–15/01/2011  
Readout of a superconducting qubit: a problem of quantum escape processes for driven systems.

**Dr. Guido Goracci**

University of Perugia, Italy  
03/02–05/02/2011  
Dynamics of DNA and DNA with water in the picosecond range by neutron scattering.

**Dr. Linda A. Zotti**

Universidad Autónoma de Madrid, Spain  
09/02–12/02/2011  
The role of anchoring groups in the electrical conduction through single molecule junctions.

**Doctorand Alexander Generalov**

Technische Universität Dresden, Germany  
02/02–16/02/2011  
Scanning tunnelling microscopy and photoemission of Cobalt nanodots.

**Doctorand Andrea Trabattoni**

Università degli Studi di Milano Bicocca, Milano, Italy  
07/02–12/02/2011  
Trapping photons by photonic quasi-crystals.

**Prof. Vladimir Hiznjakov**

University of Tartu, Estonia  
13/02–19/02/2011  
Molecular spectroscopy in Helium droplets.

**Prof. Akio Kimura**

University of Hiroshima, Japan  
22/02–01/03/2011  
Electronic structure and properties of topological insulators.

**Prof. John Ellis**

Cavendish Laboratory, University of Cambridge, United Kingdom  
23/02–25/02/2011  
3He spin-echo spectroscopy of surface dynamical phenomena.

**Dr. Clémence Le Coeur**

Laboratoire de Physique des Solides, Paris, France  
24/02–25/02/2011  
Influence of macromolecular crowding on protein stability.

**Prof. Taichi Okuda**

University of Hiroshima, Japan  
22/02–01/03/2011  
Electronic structure and properties of topological insulators.

**Prof. Franz J. Himpsel**

University of Wisconsin, USA  
23/02–04/03/2011  
Using synchrotron radiation to shed light on solar cells.

**Prof. Dietrich Menzel**

Technische Universität München and Fritz-Haber-Institut der Max-Planck-Gesellschaft, Germany  
02/03–05/03/2011  
Ultrafast charge transfer at graphene surfaces.

**Prof. Richard O. Prum**

Yale University, Peabody Museum of Natural History, Connecticut, USA  
07/03–11/03/2011  
Optical properties of natural structures: an evolutionist approach.

**Dr. Ralph Vogelgesang**

Max-Planck-Institut für Festkörperforschung, Nano-Optics, Stuttgart, Germany  
10/03–11/03/2011  
Study of plasmonics by means of near-field optical microscopy.

**Prof. Roderic Quirk**

The University of Akron, Ohio, USA  
12/03–18/03/2011  
Synthesis of functional polymers.

**Dr. Laurent Bonnet**

Institut des Sciences Moleculaires, Université de Bordeaux I, France  
16/03–18/03/2011  
Classical reaction dynamics in quantum spirit.

**Dr. Roberto Otero Martín**

Univ. Autónoma de Madrid, Spain  
18/03–18/03/2011  
Structural and chemical effects of charge-transfer across metal-organic interfaces.

**Dr. Alexey Kuzmenko**

Université de Genève, Switzerland  
22/03–25/03/2011  
Optics of Graphene.

**Dr. Marisa Michelini**

University of Udine, Italy  
23/03–23/03/2011  
The methodology of research in physics education used in the university of Udine.

**Prof. Maria Silvia Gravielle**

Instituto de Astronomía y Física del Espacio, Universidad de Buenos Aires, Argentina  
27/03–01/04/2011  
Interaction of laser pulses with metallic surfaces.

**Prof. Alexander Eychmüller**

Technical University of Dresden, Germany  
30/03–01/04/2011  
Optoelectronic properties in low-dimensional systems.

**Dr. Elena Bichoutskaia**

University of Nottingham, United Kingdom  
05/04–05/04/2011  
New approach to studying the interaction between charged particles and its impact on science.

**Prof. José Angel Martín Gago**

Instituto de Ciencia de Materiales de Madrid, Spain  
07/04–09/04/2011  
Adsorption, cyclo-dehydrogenation and graphene formation from molecular precursors on single-crystal surfaces.

**Dr. Oleg Zazyev**

University of California, Berkeley, USA  
15/04–17/04/2011  
One-dimensional structural irregularities in graphene-chiral edges and grain boundaries.

**Dr. Gabriel Landolt**

Swiss Light Source, Paul Scherrer Institut and Physik Institut, Universität Zürich, Switzerland  
17/04–19/04/2011  
Spin structure investigations in topological insulators.

**Dr. María José Calderón Prieto**

Instituto de Ciencia de Materiales de Madrid CSIC, Spain  
27/04–29/04/2011  
Magnetic state and anisotropies in iron based superconductors.

**Prof. Dr. Aart W. Kleijn**

HIMS, University of Amsterdam, The Netherlands  
02/05–05/05/2011  
Dynamics of hyperthermal atoms scattered off metal surfaces.

**Prof. Rogério de Sousa**

University of Victoria, BC, Canada  
04/05–07/05/2011  
Electromagnon excitations in multiferroics.

**Dr. David O'Regan**

University of Cambridge, United Kingdom  
07/05–10/05/2011  
Nonorthogonal Wannier function optimisation: geometric aspects and linear-scaling applications to strongly-correlated materials and spectroscopy.

**Dr. Valerie Anderson**

Schlumberger Cambridge Research, United Kingdom  
10/05–12/05/2011  
Polymers under confinement.

**Dr. Andrew Clarke**

Schlumberger Cambridge Research, United Kingdom  
10/05–12/05/2011  
Polymers under confinement.

**Dr. Kepa Ruiz-Mirazo**

Universidad del País Vasco / Euskal Herriko Unibertsitatea, (CSIC-UPV/EHU), San Sebastián, Spain  
13/05–13/05/2011  
On life and its origins: when boundary conditions become more important than laws.

**Dr. José Ignacio Latorre**

Universitat de Barcelona, Spain  
17/05–17/05/2011  
Divulgación Avanzada, incluyendo la emisión del documental "Universo Extremo".

**Dr. Ramón Tena-Zaera**

New Materials Department, CIDETEC, Donostia-San Sebastián, Spain  
27/05–27/05/2011  
Nanostructured semiconductors: low cost deposition techniques and integration in solar cells.

**Doctorand Danny Boettcher**

Max-Planck-Institut für Mikrostrukturphysik, Germany  
29/05–31/05/2011  
Magnetization dynamics and equilibrium properties based on the Heisenberg model.

**Prof. Bo Hellsing**

Chalmers and Göteborg University, Sweden  
29/05–2/06/2011  
Electron-phonon interactions on metal surfaces.

**Dr. Guillaume Schull**

CNRS – Institut de Physique et Chimie des Matériaux de Strasbourg, France  
06/06–10/06/2011  
Atomic-scale control of molecular contacts.

**Prof. Ricardo Garcia Garcia**

Instituto de Microelectronica de Madrid, Spain  
07/06–07/06/2011  
Molecular resolution, nanomechanics and nanomedicine.

**Dr. Laurent Bonnet**

Institut des Sciences Moleculaires,  
Université de Bordeaux I, France  
08/06–10/06/2011  
Classical reaction dynamics in quantum spirit.

**Doctorand Martina Abb**

University of Southampton, United Kingdom  
13/06–07/07/2011  
Theory of gaploading of Fano resonances in dimer nanoantennas and dimer nanorings. Antenna and gold layer coupling with semiconductor layer in between, theoretical investigations to support experiments done in Southampton.

**Dr. Carla Castellarin Cudia**

Sincrotrone Elettra de Trieste, Italia  
13/06–15/06/2011  
A common denominator in catalysis, photovoltaic and electronic applications: the role of interfaces.

**Dr. Oleg Tereshenko**

Institut of Semiconductor Physics, Novosibirsk, Russia  
16/06–19/06/2011  
Two-dimensional plasmons and electric transport in metal layers deposited on semiconductors.

**Dr. Pawel Buczek**

Max-Planck-Institut für Mikrostrukturphysik, Germany  
19/06–04/07/2011  
Magnon electron scattering in scanning tunneling microscopy.

**Dr. Eric Suarez Morell**

Universidad Técnica Federico Santa María, Valparaiso, Chile  
20/06–25/06/2011  
Electronic structure calculations in nanotubes.

**Dr. Orkhan Osmani**

Universität Duisburg-Essen, Duisburg, Germany  
26/06–29/06/2011  
Simulation of ion tracks.

**Prof. Andrey Rogach**

Hong Kong University, China  
09/07–14/07/2011  
Morphology control and application aspects of gold nanoparticles.

**Dr. Luca Perfetti**

École Polytechnique, Palaiseau cedex, France  
10/07–12/07/2011  
Time resolved photoemission spectroscopy of bismuto.

**Dr. Ziya Aliyev**

Baku State University, Azerbaijan  
11/07–17/07/2011  
Materials physics of topological insulators.

**Doctorand Soren Ulstrup**

Technical University of Denmark, Denmark  
11/07–19/07/2011  
First principles transport calculations.

**Prof. Mads Brandbyge**

Technical University of Denmark, Denmark  
11/07–31/07/2011  
First principles transport calculations.

**Prof. Antonio Hernando**

Instituto de Magnetismo Aplicado ADIF, and Universidad Complutense de Madrid, Spain  
12/07–13/07/2011  
Magnetism on gold-thiolate nanoparticles.

**Dr. Otto Muskens**

University of Southampton, United Kingdom  
12/07–31/07/2011  
Theory of gaploading of Fano resonances in dimer nanoantennas and dimer nanorings. Antenna and gold layer coupling with semiconductor layer in between, theoretical investigations to support experiments done in Southampton.

**Prof. Fernando Bartolomé**

Instituto de Ciencia de Materiales de Aragón, (CSIC)-Universidad de Zaragoza, Spain  
13/07–13/07/2011  
Magnetism of noble metal nanoparticles: a XAS and XMCD study.

**Prof. Gabriel Cwilich**

Yeshiva University, New York, USA  
15/07–22/07/2011  
Fluorescence and intensity correlations in random media.

**Prof. Tomas Sikola**

Brno University of Technology, Czech Republic  
15/07–19/07/2011  
Nanophotonics and plasmonics.

**Dr. Josef Bartos**

Polymer Institute of SAS, Bratislava, Slovak Republic  
18/07–29/07/2011  
PALS and polymer dynamics.

**Doctorand Mikolaj Kajetan Schmidt**

Copernicus University, Torun, Poland  
18/07–29/07/2011  
Radiative decay of emitters in the presence of magnetic dipoles.

**Dr. Aritz Leonardo**

ESS Bilbao, Spain  
21/07–21/07/2011  
Basic principles of accelerator physics: ESS-Bilbao light ion linear accelerator.

**Dr. Borja Sepulveda Martínez**

Centro de Investigación en Nanociencia y Nanotecnología CIN2 CISC-ICB, Barcelona, Spain  
24/07–26/07/2011  
Plasmonic sensing.

**Prof. Shiwu Gao**

University of Gothenburg, Sweden  
24/07–15/08/2011  
Optical response based on time dependent density functional.

**Doctorand Christine Gerstl**

Institut für Festkörperforschung Jülich, Garching, Germany  
25/07–6/08/2011  
Characterization of the dynamics of polyalkyleneoxides.

**Dr. Caroline Genix**

Université Montpellier II and CNRS Montpellier, France  
25/07–30/07/2011  
Effect of blending on the dynamics of a given polymer. In particular, the system poly(ethylene oxide) / poly(methyl methacrylate) has been chosen, due to the huge difference in the glass transition temperatures of the two components. A combination of quasielastic neutron scattering and fully atomistic molecular dynamics simulations is used to address the question of the dynamic miscibility in this system.

**Doctorand Alexandra Fuxman**

Institut für Festkörperforschung Jülich, Garching, Germany  
30/07–06/08/2011  
Characterization of the dynamics of polyalkyleneoxides.

**Prof. Wim Briels**

University of Twente, Enschede, The Netherlands  
07/08–11/08/2011  
A single particle model to simulate the dynamics of entangled polymer melts.

**Dr. Marco Laurati**

Laboratoire Polymères et Matériaux Avancés CNRS/Rhodia Recherche et Technologie, France  
07/08–12/08/2011  
Investigation, in collaboration with the company Rhodia, of the structure and dynamics of water adsorbed in polyamide (nylon) films, as a function of the percentage of crystalline phase and temperature. These studies aim at enhancing the barrier properties of polyamide with respect to the adsorption of water and other organic solvents, improving the durability of nylon-based products.

**Dr. Konstantin Koch**

Institute of Semiconductors Physics RAN, Novosibirsk, Russia  
30/08–31/08/2011  
Growth of high quality layered semiconductors.

**Dr. Roberto Robles Rodríguez**

CIN2: Centre d'Investigació en Nanociència i Nanotecnologia (CSIC-ICN), Universitat Autònoma de Barcelona, Spain  
07/09–8/09/2011  
Electronic and magnetic properties of transition metal phthalocyanines.

**Dr. Andrew Walter**

Lawrence Berkeley National Laboratory, USA and Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin, Germany  
10/09–14/09/2011  
Electronic Structure of Graphene: Simple but Complex

**Dr. Ioannis Zegkinoglou**

University of Wisconsin, Madison and Lawrence Berkeley National Laboratory, USA  
10/09–17/09/2011  
Surface chemistry in organic solar cells.

**Dr. Francisco Méndez Ruiz**

Universidad Autónoma Metropolitana, Mexico  
19/09–19/09/2011  
Chemical reactivity and density functional theory.

**Prof. Peter Saalfrank**

Institut für Chemie, Universität Potsdam, Germany  
18/09–20/09/2011  
Elastic, inelastic, and reactive scattering of atoms and molecules from surfaces.

**Prof. Julio Alonso Martín**

Universidad de Valladolid, Spain  
21/09–12/10/2011  
Electronic structure of carbon-based materials.

**Dr. Sandra García Gil**

Université Paris Sud, France  
26/09–29/09/2011  
DFT characterization of solid surfaces and interfaces: from metallic and semiconducting to H adsorption on silicates.

**Dr. José Ignacio Latorre**

Universitat de Barcelona, Spain  
05/10–06/10/2011  
Speed of light vs speed of neutrinos

**Dr. Stephen G. Hickey**

Technische Universität Dresden, Institut für Physikalische Chemie und Elektrochemie, Germany  
05/10–08/10/2011  
Semiconductor nanoparticles: their synthesis and attachment to substrates for optoelectronic characterisation.

**Dr. Laura Serkovic Loli**

Université de Nancy, France  
16/10–19/10/2011  
Reconstruction of the (001) Al<sub>2</sub>Cu surface + Adsorption of EP-PTCDI molecules on Si(111) 7x7 and Ag(111).

**Prof. Alexander Protogenov**

Russian Academy of Sciences, Russia  
31/10–30/11/2011  
Transport properties of 3D topological insulators

**Prof. Thomas Fauster**

Universität Erlangen-Nürnberg, Erlangen, Germany  
04/10–06/10/2011  
Image-potential states on graphene layers.

**Prof. Gregor Schiwietz**

Helmholtz Zentrum, Berlin, Germany  
04/10–07/10/2011  
Electron emission from surfaces and solids

**Prof. Michel Côté**

Université de Montréal, Canada  
19/10–20/10/2011  
Electronic properties of polymers for photovoltaic applications.

**Prof. Viktor Antonov**

Institute of Metal Physics, National Academy of Sciences, Kiev, Ukraine  
24/10–31/10/2011  
Topological insulators.

**Prof. Jeremy Baumberg**

Cavendish Laboratory, University of Cambridge, United Kingdom  
24/10–26/10/2011  
Nanophotonics

**Dr. Carlos Andrés Palma**

Max-Planck-Institut für Polymerforschung, Mainz, Germany  
31/10–14/11/2011  
Photodissociation of molecules in gas phase: An ab-initio study.

**Doctorand Carlo Motta**

Università di Milano-Bicocca, Italy  
03/11–29/11/2011  
Ab initio study of transport in nanojunctions: application to dye-sensitized solar cells.

**Prof. Ivan P. Chernov**

Politechnic University of Tomsk, Russia  
14/11–24/11/2011  
Dynamics of hydrogen in metals under external irradiation.

**Prof. Peter Nordlander**

Rice University, Houston, USA  
17/11–22/11/2011  
Fano resonances in plasmonics.

**Prof. Andrei Borisov**

Université Paris Sud, France  
17/11–19/11/2011  
Time dependent density functional theory calculations to address the optical response of plasmonic systems.

**Dr. Paolo Sessi**

University of Würzburg, Germany  
17/11–19/11/2011  
Topological insulator.

**Prof. Nicolas Lorente**

Centro de Investigación en Nanociencia y Nanotecnología (CIN2-CSIC), Bellaterra, Spain  
21/11–25/11/2011  
Inelastic electron tunnelling spectroscopy.

**Dr. Guido Fratesi**

Università di Milano-Bicocca, Italy  
21/11–24/11/2011  
Strain effect on electronic and structural properties of metal nanoislands grown on reconstructed Au(111).

**Doctorand Manuel Monasterio Jaqueti**

Universidad Politécnica de Madrid, Spain  
24/11–25/11/2011  
Characterization of Nanowires.

**Prof. Sydney Brenner**

Howard Hughes Medical Institute, Janelia Farm Campus, Virginia, USA  
27/11–29/11/2011  
Reading the Human Genome: the reconstruction of the past.

## Theses

2010

Molecular dynamics of poly(ethylene-alt-propylene) melts by means of neutron scattering and simulations: Bridging the gap between fully atomistic and coarse-grained models

**Roberto Perez Aparicio** (UPV/EHU)  
Supervisors: Juan Colmenero and Fernando Alvarez  
June 2010

Doped quantum dots and MnAs wires

**Carlos Echeverria-Arrondo** (Universidad Pública de Navarra)  
Supervisor: Andres Ayuela  
June 2010

Dielectric and mechanical properties of polymers at macro and nanoscale

**Clement Riedel** (Université Montpellier 2 - UPV/EHU)  
Supervisor: M. Philippe Tordjeman and Juan Colmenero  
October 2010

Structural relaxation and chain dynamics in polymer melts: a computational investigation on the role of the intramolecular barriers

**Marco Bernabei** (UPV/EHU)  
Supervisor: Angel José Moreno Segurado  
April, 2011

The structure and the dynamics of poly(vinyl methyl ether) PVME and PVME in concentrated water solution

**Sara Capponi** (UPV/EHU)  
Supervisors: Arantxa Arbe and Juan Colmenero  
May 2011

First principles study of the electronic and magnetic properties of defective carbon nanostructures

**Elthon José Gomes Santos** (UPV/EHU)  
Supervisors: Daniel Sánchez Portal and Andres Ayuela Fernández  
July 2011

Optical properties and high-frequency electron transport in plasmonic cavities

**Olalla Pérez González** (UPV/EHU)  
Supervisors: Nerea Zabala and Javier Aizpurua  
October 2011

Resonant Raman-Brillouin Scattering in Semiconductor and Metallic Nanostructures:

From Nano-Acoustics to Acousto-Plasmonics

**Nicolas Large** (UPV/EHU)  
Supervisors: Javier Aizpurua and Adnen Mlayah  
October 2011

Functionalized polymers as a tool for investigating the component dynamics of polymer blends

**Sandra Plaza García** (UPV/EHU)  
Supervisor: Angel Alegría  
December 2011

2011