Seminars

1 Random light induced interactions between nanoparticles
20/12/2017
Dr. Jorge Luis Hita
Universidad Autónoma de Madrid, Spain

2 What we gain with aberration-correctors and monochromators — probing bonding, magnetism, temperature & an harmonicity at the nanoscale
19/12/2017
Juan Carlos Idrobo
Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, USA

3 Wavefront shaping techniques to improve the detection of breast cancer
18/12/2017
Alba Paniagua-Diaz
Physics and Astronomy, University of Exeter, UK

4 Light defies geometry in near-zero-index media
05/12/2017
Dr. Iñigo Liberal
Universidad Pública de Navarra, Spain

5 Parameter and state estimation in open quantum systems: new perspectives
04/12/2017
Eliska Greplova
Aarhus University, Denmark

6 Quantum information with Black Boxes
27/11/2017
Prof. Antonio Acin
ICFO, Instituto de Ciencias Fotónicas, Castelldefels, Spain

7 Attosecond physics at the nanoscale: the next frontier
24/11/2017
Dr. Marcelo Ciappina
ELI-Beamlines and Institute of Physics, Czech Academy of Sciences, Czech Republic

8 Shaping wave functions with parallel magnetic fields: carbon nanotube quantum dots
23/11/2017
Dr. Magdalena Marganska-Lyzniak
Universität Regensburg, Institute for Theoretical Physics, Germany

9 In vivo application of upconverting force sensors to elucidate neuromuscular pump action in C. elegans
22/11/2017
Alice Lay
Stanford University, California, USA

10 Art in Science/Science in Art
21/11/2017
Prof. Krisján Leósson
Innovation Center Iceland

11 Einstein's errors, triumphs and misconceptions
17/11/2017
Prof. Álvaro de Rújula
IFT UAM-CSIC Madrid and CERN, Geneva, Switzerland

12 The bistability transition induced by a strong nano-electromechanical coupling
14/11/2017
Dr. Fabio Pistolesi
Laboratoire Ondes et Matière d'Aquitaine, Université Bordeaux & CNRS

13 The methane challenge c-h bond activation by metal oxides: theory and experiment in concert
13/11/2017
Prof. Helmut Schwarz
Technische Universität Berlin, Germany

14 Non-adiabatic molecular dynamics in molecular structures
10/11/2017
Vladimir Zobac
Institute of Physics, Czech Academy of Sciences, Prague Czech Technical University, Prague, Czech Republic

15 Exploring interacting topological insulators with ultracold atoms: the synthetic creutz-hubbard model
09/11/2017
Prof. Matteo Rizzi
Institut für Physik, Johannes Gutenberg Universitat, Mainz, Germany

16 Recent advances and new prospects on thin-film organic lasers
08/11/2017
María A. Díaz García
Universidad de Alicante, Spain

17 Computational modelling and scanning transmission electron microscopy of Fe/MgO magnetic tunnel junctions
17/10/2017
Jonathan Bean
University of York, UK

18 Critical phenomena with interacting photons in driven-dissipative systems
16/10/2017
Dr. Said Rahimzadeh-Kalaleh Rodriguez
AMOLF, Utrecht University, Holland

19 Surface diffusion and dynamics on Dirac materials.
11/10/2017
Dr. Anton Tamtögl
Institute of Experimental Physics, Graz University of Technology, Graz, Austria

20 Optical forces and torques at the nanoscale: fundamentals and bio-applications
06/10/2017
Prof. Daniel Jaque
Universidad Autónoma de Madrid, Spain

21 Quantum size effects in molecular wires and Kondo chains
29/09/2017
Prof. Richard Korytár
Charles University, Prague, Czech Republic

22 Current-induced heating and cooling in molecular junctions
28/09/2017
Dr. Giuseppe Foti
Institute of Physics, Czech Academy of Sciences, Czech Republic

23 Hot carrier generation in plasmonic nanoparticles
27/09/2017
Dr. Lucas Vazquez Besteiro
IFFS, UESTC, Chengdu / INRS-EMT, Université du Québec, Varennes, Canada

24 Molecular assembly at surfaces
19/09/2017
Prof. Rasmita Raval
Surface Science Research Centre, University of Liverpool, UK

25 Plasmonics in alkali-intercalated graphene
15/09/2017
Prof. Vito Despoja
University of Zagreb, Croatia

26 Metallic nanoparticles: growth, morphology and functionalization
14/09/2017
Dr. Magali Benoit
CEMES, Toulouse, France

27 Chiral interface states in graphene pn-junctions in magnetic field
12/09/2017
Prof. Alessando de Martino
City, University of London, United Kingdom

28 Intra-atomic delays in attosecond time-resolved solid state photoemission
06/09/2017
Prof. Walter Pfeiffer
Universität Bielefeld, Germany

29 Vertical resonant tunneling transistors with molecular quantum dots
04/09/2017
Ryoma Hayakawa
NIMS, Tsukuba, Japan

30 Two quantized non-linear effects
29/08/2017
Dr. Adolfo G. Grushin
UC Berkeley / Néel Institute, University of California, USA

31 Probing the interaction of magnetic nanoparticles with biological entities by magnetic means
28/08/2017
Francisco J. Terán
Mdea Nanociencia y Unidad Asociada al Centro Nacional de Biotecnología-CSIC, Cantoblanco, Madrid, Spain

32 Magnetoelectric response from first-principles: microscopic understanding and design rules
01/08/2017
Dr. Eric Bousquet
Université de Liège, Belgium

33 Non-symmorphic symmetry-protected topological phases
27/07/2017
Dr. Jenifer Cano
Princeton University, New Jersey, USA

34 Synthesis, structure and tunable electronic properties of pure and doped graphene
26/07/2017
Prof. Dmitry Yu. Usachov
Saint Petersburg State University, St. Petersburg, Russia

35 Magnetism at the nanoscale: Engineering spin and correlations with an atomically precise probe
24/07/2017
Dr. Markus Ternes
Max Planck Institute for solid state research, Stuttgart, Germany

36 Science and contemporary theater. A symbiotic relationship?
21/07/2017
Prof. Gabriel Cwilich
Yeshiva University, New York, USA

37 Many-body perturbation theory for excited electrons: from materials to molecules
20/07/2017
Prof. Fabien Bruneval
Service de Recherche en Métallurgie Physique, Gif-sur-Yvette, France

38 Carbon nanotubes as excitonic insulators
17/07/2017
Dr. Massimo Rontani
CNR NANO Istituto Nanoscienze, Modena, Italy

39 The role of electron-electron interactions in graphene
14/07/2017
Shaffique Adam
Yale-NUS College, Singapore

40 Biomass pyrolysis to produce biochar
06/07/2017
Dr. Andrés Anca Couce
Graz Univerity of Technoloy, Austria

41 Ab initio electron dynamics: from stopping power to non-linear conductivity of materials
05/07/2017
Prof. Alfredo Correa
Lawrence Livermore National Laboratory, California, USA

42 Spin-orbit and exchange proximity effects in 2D materials
23/06/2017
Prof. Jaroslav Fabian
Universität Regensburg, Germany

43 Can nanoscale computer simulations aid the rational design of new materials?
15/06/2017
Prof. Damien Thompson
Department of Physics and Energy, University of Limerick, Ireland

44 Optical properties of 2D semiconductors in van der Waals heterostructures
09/06/2017
Prof. Bernhard Urbaszek
CNRS, Toulouse University, France

45 Unconventional magnetotransport in Weyl semimetals
07/06/2017
Dr. Alberto Cortijo
Instituto de Ciencia de Materiales, CSIC, Spain

46 Topological invariants and boundary states in normal and superconducting carbon nanotubes
25/05/2017
Dr. Magdalena Marganska-Lyzniak
Universität Regensburg, Germany

47 Topological Dirac insulators
18/05/2017
Dr. Benjamin Wieder
Princeton University, Princeton, New Jersey, USA

48 Minimal excitations in the fractional quantum hall regime
12/05/2017
Prof. Thierry Martin
Centre de physique théorique, Université Aix-Marseille, France

49 Aluminium and Alzheimer aisease
11/05/2017
Prof. Chris Exley
The Birchall Centre, Lennard-Jones Laboratories, Keele University, Staffordshire, UK

50 Electron photoemission in time-domain and the role of bosonic excitations
09/05/2017
Prof. Yaroslav Pavlyukh
Institute of Physics, Martin-Luther-Universität Halle-Wittenberg, Germany

51 From nanoscale systems to neuromorphic computing:
a quick overview of S&T at IBM Research-Zurich
05/05/2017
Prof. Chris Rossel
IBM Research and European Physical Society

52 Simulating cosmic dark matter
25/04/2017
Dr. Raúl Angulo
Centro de Estudios de Física del Cosmos de Aragón, CEFCA, Teruel, Spain

53 Modern aspects of quantum physics and topology
07/04/2017
Prof. Miguel Angel Martín Delgado Alcántara
Universidad Complutense de Madrid, Spain

54 Charge transport in organic nanoscopic systems:
From organic semiconductors to 2d layered materials
06/04/2017
Prof. Thomas Weitz
AG Physics of Nanosystems, LMU Munich, Germany

55 Molecular magnetic coolers
24/03/2017
Dr. Marco Evangelisti Crespo
CSIC, Instituto de Ciencia de Materiales de Aragón, Universidad de Zaragoza, Spain

56 Tensor networks for quantum matter: basics, news and prospects
17/03/2017
Prof. Román Orús Lacort
Johannes Gutenberg-Universität Mainz, Germany

57 Enabling sensing technology with plasmonics
16/03/2017
Prof. François Lagugné-Labarthet
Western University, London, Ontario, Canada

58 Testing many-body world with a few strongly correlated ultra-cold fermions
02/03/2017
Prof. Tomasz Sowinski
Quantum Optics Group, Institute of Physics of the Polish Academy of Sciences, Warsaw, Poland

59 The Nobel Prize 2016: topology in nonrelativistic quantum mechanics
24/02/2017
Prof. Raffaele Resta
Università di Trieste, Italy

60 Weyl fermions from crystal symmetry
17/02/2017
Prof. Juan Luis Mañes
Facultad de Ciencia y Tecnología, UPV/EHU, Leioa, Spain

61 Charge transport: from Faraday to Thouless
10/02/2017
Prof. Raffaele Resta
Università di Trieste, Italy

62 Spontaneous natural optical activity in disordered media
06/02/2017
Prof. Felipe Pinheiro
Federal University of Rio de Janeiro, Brazil & Optoelectronics Research Centre, Southampton, UK

63 The knowledge and innovation community on raw materials
02/02/2017
Dr. Serge Monturet
EIT RawMaterials CLC Central, Metz, France

64 Topological chemistry
27/01/2017
Prof. Bogdan Andrei Bernevig
Princeton University, New Jersey, USA

65 On-surface synthesis and properties characterization of novel low-dimensional materials
25/01/2017
Dr. Oliver Gröning
EMPA, Switzerland

66 Giant edge spin accumulation in a symmetric quantum well with two subbands
19/01/2017
Prof. Alexander Khaetskii
University at Buffalo, New York, USA