

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-Díaz

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 Universität, 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. Alessandro 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 University of Technology, 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 disease

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