August 28 - September 10 Grenoble, France

European School On Nanosciences and Nanotechnologies

PROGRAM of LECTURES

SESSION A

Quantum coherent transport and mesoscopic superconductivity Elke SCHEER, University of Konstanz

Electronic transport in low dimensional materials Luis HUESO, CIC NanoGUNE, San Sebastian

Spintronics

Sergio VALENZUELA, Catalan Institute of Nanoscience & Nanotechnology, Barcelona MOSFET physics and technology Enrico SANGLORGL University of Bologna

Enrico SANGÍORGI, University of Bologna

Nano-optics Val ZWILLER, KTH Royal Institute of Technology, Stockholm & Single Quantum, Delft Technologies of nanofabrication Guillermo VILLANUEVA, EPFL, Lausanne

SESSION B

Advanced biophysics to study molecular systems Ruud HOVIUS, EPFL, Lausanne Joachim PIGUET, KTH Royal Institute of Technology, Stockholm Mechanics of molecules and biological structures Bart HOOGENBOOM, University College London

Introduction to nanomedicine Hervé HILLAIREAU, University of Paris-Saclay

Assessment of the toxicity of nanomaterials - A case study: TiO2 Armelle BAEZA, University of Paris

Nanostructured composite materials: from biological hard tissues to biomimetic and artificial systems Elena STURM, University of Munich APPLICATIONS online Open from February 28 until May 08, 2022 www.esonn.fr

ESONN'2022 (19th edition) is a two-week course aimed at providing training for graduate students, postdoctoral and junior scientists coming from universities and laboratories all around the world and working in the fields of Nanosciences and Nanotechnologies.

This 2022 edition of the school offers academic lectures, seminars and practicals delivered by leading experts covering different aspects on elaboration, characterization and functionalities of nano-objects

Significant part of the program is devoted to the laboratory courses, providing unique hands-on learning opportunities.

ORGANIZING COMMITTEE

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EUROPEAN SCHOOLS OFFICE Clotilde BONHOURE-EFFANTIN Isabelle GAUVIN



Particle-based agents for cell tracking using imaging Mangala SRINIVAS, Cenya Imaging BV & WUR, Wageningen

Nano-oncology Barbara STELLA, University of Torino

COMMON PART

Near-field microscopies Hans Joseph HUG, EMPA, Dübendorf & University of Basel Self-assembly for nanotechnologies Wesley BROWNE, University of Groningen From research to business with nanotechnologies - Testimonies Vincent POHER, Biosynex Introduction to (nano) toxicology Armelle BAEZA, University of Paris Round Table Raphaël LEVY, University of Sorbonne Paris Nord

ORGANIZED BY: UGA, Université Grenoble Alpes **Grenoble INP-UGA**, Institut d'ingénierie et de management

Co-ORGANIZED BY: CNRS, Centre National de la Recherche Scientifique **CEA**, Commissariat à l'Energie Atomique et aux énergies alternatives Joseph GERMIANO Youlia MAZET





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PRACTICALS

The program emphasizes the role of numerous "hands-on" practicals held at CIME Nanotech cleanroom facilities and in research laboratories of Grenoble.

Experiments in laboratories are presented by researchers on their current topics and are thus at the leading edge of the international research (please refer to the website for details).









