



## TENTATIVE PROGRAM (as of 22/09/2014)

K: Keynote lecture / I: Invited Lecture / O: Oral contribution - Official language: English



### TUESDAY

08:30 – 10:00: Registration

10:00 – 11:00: Opening Ceremony

Excmo. y Mgfc. Sr. D. Carlos Conde Lázaro  
Rector  
Universidad Politécnica Madrid (UPM) (Spain)

Excmo. Sr. D. Ignacio Cosidó Gutiérrez  
Director General de la Policía  
Ministerio del Interior (Spain)

Excmo. Sr. D. Alfonso de la Rosa  
Director  
CESEDEN (Spain)

Excmo. Sr. D. Juan Manuel García Montaña  
Director General de Armamento y Material  
Ministerio de Defensa (Spain)

Sr. D. Marceliano Gutiérrez Rodríguez  
Director de la Escuela Nacional de Policía  
Ministerio de Interior (Spain)

Sr. D. Antonio Correia  
Presidente  
Fundación Phantoms (Spain)

Excmo. Sr. D. Guillermo Velarde Pinacho  
Presidente  
Instituto Fusión Nuclear (Spain)

Sr. D. Emilio Mínguez Torres  
Director  
Escuela Técnica Superior de Ingenieros Industriales  
UPM (Spain)

Sr. D. Jose-Luis Cortina  
Presidente  
Grupo Atenea (Spain)

Sr. D. Jose Manuel Perlado  
Director  
Institute of Nuclear Fusion  
UPM (Spain)

Sr. D. Isaac Martín Barbero  
Dir. General de Internacionalización  
Empresa ICEX, España Exportación e Inversiones (Spain)

11:00 – 11:30: Coffee Break

### Chairman: Glenn A. Fox (USA)

11:30 – 12:00: **Steven Savage** (Swedish Defense Research Agency, Sweden) **K**  
*Nanotechnology – an enabling technology, a critical technology or simply a new technology with inflated ego?*

12:00-12:30: **Margaret E. Kosal** (Georgia Tech, USA) **K**  
*Nanotechnology and Diffusion of Innovation: Security Challenges for the 21st Century*

12:30 – 13:00: **Nava Swersky Sofer** (ICA, Israel) **K**  
*Best practices in commercializing nanotechnologies in defense*

13:00 – 13:20: **Jose Maria Riola Rodriguez** (DGAM, Spain) **I**  
*Nanotechnologies: applications of interest for the Ministry of Defense*

### Training course (in Spanish) / Parallel session

11:30 – 13:20: **Pedro. A. Serena** (ICMM-CSIC, Spain) **I**  
*Nanotechnology: the ongoing revolution / Nanotecnología: la revolución en marcha*

13:20 – 15:20. Lunch

**Chairman: Jose Manuel Perlado (Spain)**

- 15:20 – 15:50: **Glenn A. Fox** (Lawrence Livermore National Laboratory, USA) **K**  
*Forensic Science at the Nanoscale*
- 15:50 – 16:20: **Ian Turner** (University of Derby, UK) **K**  
*Applications of Nanotechnology in Forensic Science*
- 16:20 – 16:35: **Luis Valles** (Guardia Civil – UCO, Spain) **O**  
*Technology applied to criminal investigation: What to expect from nanotechnologies*
- 16:35 – 16:50: **Juan Carlos Castellanos** (Tecnobit, Spain) **O**  
*Galileo PRS service, the Spanish technology approach*

16:50 – 17:30: Coffee Break

**Chairman: Jose Maria Riola Rodriguez (Spain)**

- 17:30 – 17:45: **Felipe Orgaz** (Instituto de Ceramica y Vidrio, CSIC, Spain) **O**  
*Transparent ballistic armour ceramics. Recent advances and issues to be overcome*
- 17:45 – 18:00: **Carlos Campos Cuerva** (Nanoscience Institut of Aragon (INA), Spain) **O**  
*Nanotechnology as a tool to end counterfeiting*
- 18:00 – 18:15: **Soraya Artiles Burgos** (Guardia Civil - SEDEX-NRBQ (CBRN Unit), Spain) **O**  
*Nanotechnology as an innovation strategy of Civil Guard*



**WEDNESDAY**

**Chairman: George Palikaras (Canada)**

- 09:00 – 09:30: **Raquel Gonzalez-Arrabal** (IFN-ETSII / UPM, Spain) **K**  
*Coatings production for military applications*
- 09:30 – 09:50: **Ovidio Peña Rodriguez** (IFN-ETSII / UPM, Spain) **I**  
*Invisibility cloaking using thin all-dielectric multilayer coatings*
- 09:50 – 10:20: **Denis Spitzer** (ISL-CNRS-UdS, France) **K**  
*Nanostructured energetic materials: opportunities to enhance performances*
- 10:20 – 10:35: **Miguel Ribeiro** (CENTI - Centre for Nanotechnology and Smart Materials, Portugal) **O**  
*Keys to improve flexible organic bulk-heterojunction solar cells*

10:35 – 11:35: Coffee Break

**Chairman: Paolo Bondavalli (France)**

- 11:35 – 12:05: **George Palikaras** (Metamaterial Technologies Inc., Canada) **K**  
*Safety & Security Applications of Optical Metamaterials*
- 12:05 – 12:35: **Paul Reip** (Intrinsiq Materials Ltd, UK) **K**  
*Defense Applications for Plastic Electronics*
- 12:35 – 13:05: **Jerome Bourderionnet** (Thales Research & Technology, France) **K**  
*Integrated photonics for RF filters*

13:05 – 15:00. Lunch

**Chairman: Jerome Bourderionnet (France)**

- 15:00 – 15:30: **Paolo Bondavalli** (Thales Research & Technology, France) **K**  
*Thales efforts in developing applications based on nanomaterials and nanotechnology : energy, spintronics, NVM memories and sensors*
- 15:30 – 15:45: **Luis Sanz Tejedor** (Oficina Española de Patentes y Marcas (OEPM), Spain) **O**  
*Industrial Property as a key factor in the Security and Defense industry*
- 15:45– 16:00: **Christopher Lillotte** (Grupo Antolin, Spain) **O**  
*Large scale production of graphenic materials by Grupo Antolin and their applications development*
- 16:00– 16:15: **Denis Guilhot** (ICFO, Spain) **O**  
*Salient Technologies @ ICFO with potential for the Aerospace, Defence & Security sector*
- 16:15 – 16:35: **Julio Gomez Cordon** (Avanzare, Spain) **I**  
*Nanomaterials industrial applications in security and defense*

16:35 – 17:35: Coffee Break

**Chairman: Paul Reip (UK)**

17:35 – 17:55: **Miguel Roncales** (alphaSIP, Spain) I  
*"Nanotechnology on the road" detecting ORAL DUI driving under influence of Drugs of Abuse in Saliva both qualitative and quantitative solutions plus new developments in tracing liquid explosives on police controls*

17:55 – 18:15: **Ambiorn Wennberg** (nano4energy, Spain) I  
*Innovative approach to thin film sensor development*

18:15 – 18:30: **Rogelio Zubizarreta Jiménez** (Yflow, Spain) O  
*Active substances encapsulated by Electro-Hydrodynamic techniques. Textile applications.*

21:00 – Conference Gala Dinner



**THURSDAY**

**Chairman: Jean-Pierre Simonato (France)**

09:00 – 09:30: **Antonio Hernando** (IMA – UCM, Spain) K  
*Microwires multilayers structure for two frequencies absorption*

09:30 – 10:00: **Fabrice Pardo** (LPN – CNRS, France) K  
*The Optical Helmholtz Resonator: a breakthrough for extreme light confinement from IR to RF*

10:00 – 10:15: **Fernando de León Pérez** (Centro Universitario de la Defensa, Spain) O  
*Light harvesting structures optimized at infrared frequencies*

10:15 – 10:30: **José Jiménez Jiménez** (Universidad de Málaga, Spain) O  
*Solids luminescent based in Quantum Dots for fingerprint detection in different surfaces*

10:30 – 11:15: Coffee Break

**Chairman: Paul Reip (Intrinsiq Materials Ltd, UK)**

11:15 – 11:45: **Jean-Pierre Simonato** (CEA-Grenoble, France) K  
*Sensing traces of nerve agents like Sarin using nanomaterial based electrical detectors*

11:45 – 12:00: **Manel del Valle** (Universitat Autònoma de Barcelona, Spain) O  
*Electronic tongue sensing of explosives and its mixtures*

12:00 – 12:15: **Julio Plaza del Olmo** (Instituto Tecnológico La Marañosa, Spain) O  
*Recent development on dual-band uncooled PbSe sensors monolithically integrated on advanced interference filters*

12:15 – 12:30: **Joana Fonseca** (CeNTI - Centre for Nanotechnology and Smart Materials, Portugal) O  
*From R&D to product: development of new interactive products with integrated printed electronic solutions*

12:30 – 12:50: **Asha Peta Thompson** (Intelligent Textiles Limited, UK) I  
*What happens when you use textiles to make electronics for soldier systems?*

12:50 – 13:20: **Maria Pilar Pina Iritia** (INA, Spain) K  
*Nanoporous chemical receptors on microcantilever-like sensors for explosives detection in vapor phase*

13:20 – 15:00. Lunch

15:00 – 16:00: Posters session & Exhibition

16:00 – 16:30: Coffee Break

**Chairman: Miguel Roncales (Spain)**

16:30 – 17:00: **Brent Segal** (Lockheed Martin, USA) K  
*Nanotechnology from the Lab to the Fab*

17:00 – 17:30: **Frank Placido** (UWS – Thin Film Center, UK) K  
*Thin Film Technologies for Security and Defense Applications*

17:30 – 18:00: **Elvira Fortunato** (CENIMAT, Portugal) K  
*Recent Advances on Nano-materials and Technologies for Thin Film Transistors*

19:00 – Avila Guided Visit



FRIDAY

**Chairman: Luis Sanz Tejedor (Spain)**

- 09:00 – 09:15: **Jan Kolarik** (Palacky University, Czech Republic) **O**  
*Removal of arsenic compounds from water using iron-based materials*
- 09:15 – 09:30: **Aitana Tamayo** (Instituto de Cerámica y Vidrio – CSIC, Spain) **O**  
*Silicon Oxycarbide Nanoparticles as New Drug Delivery Materials for Infectious Disease Treatments*
- 09:30 – 09:50: **Nieves Murillo** (Tecnalia, Spain) **I**  
*Air Filtering Efficiency Evaluation of PC Nanofiber Filters for Capture of Biological Particles in Personal Dosimeters*
- 09:50 – 10:20: **Jose Maria de Teresa** (Universidad de Zaragoza, Spain) **K**  
*Epitaxial graphene on SiC substrates for potential application in Security and Defense*

10:20 – 11:20: Coffee Break

**Chairman: Nieves Murillo (Spain)**

- 11:20 – 11:35: **Effrosyni Vogli** (Foundation for Research and Technology, Hellas (FORTH) Institute of Chemical Engineering Sciences (ICE-HT), Greece) **O**  
*A New Concept of Carbon Nanotube based Textiles for Civil Protection Services*
- 11:35 – 12:05: **Jose Manuel Ramos** (AITEX, Spain) **K**  
*Textile, Nanotechnology and Defense*
- 12:05 – 12:35: **Ivano Soliani** (Soliani EMC, Italy) **K**  
*The textile electrically conductive as security solutions for several applications*

12:35 – Concluding remarks and nanoSD2015 announcement