

2013 Microtechnologies

24-26 April 2013

Technical Programme

www.spie.org/mt

Location

Alpexpo
Grenoble, France

Conferences & Courses

24-26 April 2013

2013 Microtechnologies

Welcome to the meeting which showcases the latest research and technology developments.

SPIE Microtechnologies is the premier European meeting for the latest research, from bio-engineered and bio-inspired systems to developments in photonic materials, devices, and applications.

260+ PRESENTATIONS ON:

- Smart Sensors, Actuators, and MEMS
- VLSI Circuits and Systems
- Nanotechnology
- Bio-MEMS and Medical Microdevices
- Integrated Photonics: Materials, Devices, and Applications





Managed by SPIE Europe

SPIE Europe Ltd., a subsidiary of SPIE, is a not-for-profit UK-registered company serving SPIE constituents throughout Europe as an advocate and liaison to political and industry associations within the European optics and photonics community.

In addition to providing membership services, SPIE Europe Ltd. organises and manages internationally recognised conferences, education programmes, and technical exhibitions featuring emerging technologies in optics and photonics.

SPIE Europe
2 Alexandra Gate
Fford Pengam, Cardiff, CF24 2SA
Tel: +44 29 2089 4747
Fax: +44 29 2089 4750
info@spieeurope.org

2013 Symposium Chair



Thomas Becker
EADS Innovation Works
(Germany)

2013 Symposium Co-chairs



Christos Tsamis
National Ctr. for Scientific
Research Demokritos (Greece)



Gerhard Krötz
University of Applied
Sciences in Kempten (Germany)

2013 Symposium Local Chair



Marc Belleville
CEA-Leti (France)

Contents

Daily Schedule	2
Special Events	3-4

Technical Conferences

8763 Smart Sensors, Actuators, and MEMS VI	5
8764 VLSI Circuits and Systems VI	10
8765 Bio-MEMS and Medical Microdevices	12
8766 Nanotechnology VI	14
8767 Integrated Photonics: Materials, Devices, and Applications II	16
General Information	27-32
Proceedings of SPIE	32

Register today: www.spie.org/mt

SPIE would like to express its deepest appreciation to the symposium chairs, conference chairs, programme committees, session chairs, and authors who have so generously given their time and advice to make this symposium possible.

The symposium, like our other conferences and activities, would not be possible without the dedicated contribution of our participants and members. This programme is based on commitments received up to the time of publication and is subject to change without notice.

Daily Schedule

WEDNESDAY		THURSDAY		FRIDAY
Conferences				
Conf. 8763: Smart Sensors, Actuators, and MEMS VI p. 5				
Conf. 8764: VLSI Circuits and Systems VI p. 10				
		Conf. 8765: Bio-MEMS and Medical Microdevices p. 12		
Conf. 8766: Nanotechnology VI p. 14				
Conf. 8767: Integrated Photonics: Materials, Devices, and Applications II p. 16				
Special Events				
Plenary Session 1 p. 3	Welcome Reception p. 4	Plenary Session 2 p. 3	Poster Session and Reception p. 4	Plenary Session 3 p. 4



Plenary presentations will occur throughout the week.

Wednesday 24 April

10:00

An autonomous structural health monitoring solution



Carol Featherston et al.
Cardiff Univ. (United Kingdom)

Abstract: Combining advanced sensor technologies, with optimised data acquisition and diagnostic and prognostic capability, structural health monitoring (SHM) systems provide real-time assessment of the integrity of bridges, buildings, aircraft, wind turbines, oil pipelines and ships, providing improved safety and reliability and reduced inspection and maintenance costs. The implementation of power harvesting, using energy scavenged from ambient sources such as thermal gradients and sources of vibration, alongside wireless transmission enables truly autonomous systems, reducing the need for batteries and associated maintenance in often inaccessible locations, alongside bulky and expensive wiring looms.

The design and implementation of such a system however presents numerous challenges. A suitable energy source or multiple sources capable of meeting the power requirements of the system, over the entire monitoring period, in a location close to the sensor must be identified. Efficient power management techniques must be used to condition the power and deliver it, as required, to enable appropriate measurements to be taken. Energy storage may be necessary, to match a continuously changing supply and demand for a range of different monitoring states including sleep, record and transmit. An appropriate monitoring technique, capable of detecting, locating and characterising damage and delivering reliable information, whilst minimising power consumption, must be selected. Finally a wireless protocol capable of transmitting the levels of information generated at the rate needed in the required operating environment must be chosen.

This paper considers solutions to some of these challenges, and in particular examines SHM in the context of the aircraft environment.

Biography: **Dr Carol Featherston** is a Reader in Mechanical Engineering at Cardiff School of Engineering. Following time spent in industry, working in the area of structural performance in the aircraft and chemical industries with British Aerospace and ICI, she returned to academia to study the 'Stability of Lightweight Structures' at Exeter College Oxford in association with Rolls Royce. She now leads the Aerospace Research Theme at Cardiff concentrating on the design and optimisation, modelling, testing and structural health monitoring of a range of structures, with partners including Airbus, Boeing and EADS.

Thursday 25 April

13:30

Biologically inspired large scale chemical sensor arrays and embedded data processing



Santiago Marco
Univ. of Barcelona (Spain), et al.

Abstract: Biological olfaction outperforms chemical instrumentation in specificity, response time, detection limit, coding capacity, time stability, robustness, size, power consumption, and portability. This biological function provides outstanding performance due, to a large extent, to the unique architecture of the olfactory pathway, which combines a high degree of redundancy, an efficient combinatorial coding along with unmatched chemical information processing mechanisms. The last decade has witnessed important advances in the understanding of the computational primitives underlying the functioning of the olfactory system.

EU Funded Project NEUROCHEM (Bio-ICT-FET- 216916) has developed novel computing paradigms and biologically motivated artefacts for chemical sensing taking inspiration from the biological olfactory pathway. To demonstrate this approach, a biomimetic demonstrator has been built featuring a large scale sensor array (65K elements) in conducting polymer technology mimicking the olfactory receptor neuron layer, and abstracted biomimetic algorithms have been implemented in an embedded system that interfaces the chemical sensors. The embedded system integrates computational models of the main anatomic building blocks in the olfactory pathway: the olfactory bulb, and olfactory cortex in vertebrates (alternatively, antennal lobe and mushroom bodies in the insect). For implementation in the embedded processor an abstraction phase has been carried out in which their processing capabilities are captured by algorithmic solutions. Finally, the algorithmic models are tested with an odour robot with navigation capabilities in mixed chemical plumes

Biography: **Santiago Marco** completed his university degree in Applied Physics in 1988 and received a PhD in Microsystem Technology from the University of Barcelona in 1993. He held a European Human Capital Mobility grant for a postdoctoral position at the Department of Electronic Engineering at the University of Rome "Tor Vergata". Since 1995, he is Associate Professor of Electronic Instrumentation at the Department of Electronics at the University of Barcelona. In 2004 he had a sabbatical leave at EADS-Corporate Research, Munich, working on Ion Mobility Spectrometry. In 2008 he was appointed leader of the Artificial Olfaction Lab at the Institute of Bioengineering of Catalonia. His research concerns the development of signal/data processing algorithmic solutions for smart chemical sensing based in sensor arrays or microspectrometers integrated typically using Microsystem Technologies.

Special Events

Friday 26 April

13:30

Micro- and nanoscale thermoelectrics: an overview over basic concepts and recent advances



Markus Winkler

Fraunhofer Institute for Physical Measurement Techniques IPM (Germany), et al.

Abstract: Micro- and nanostructuring thermoelectric materials have opened new fields for the applications of thermoelectricity. Micro-thermoelectrics are a general variant of thermoelectrics to enable special applications like localized cooling and small-scale energy harvesting to power autonomous sensor systems. In contrast, nano-thermoelectrics is a term generally applied to the art of nanostructuring materials, aiming at an increased figure of merit ZT and thus an improvement in device efficiency.

In the talk recent advances in the field of micro-thermoelectrics are presented. Furthermore, the theoretical principles and concepts behind nanostructured materials will be elucidated. This will be followed by selected examples of the application of nanostructuring in thermoelectric materials research and device fabrication. Results reported previously in literature as well as recent results obtained within our group will be presented, illustrating the diversity of thermoelectric material research.

Biography: **Markus Winkler** is a PhD student and member of the department “Thermoelectric Systems” at the Fraunhofer Institute for Physical Measurement Techniques. He received his diploma in 2008 after researching the deposition and doping of lead telluride based compounds by molecular beam epitaxy. Since then, he has been working on and managing several projects with a focus on the synthesis and characterization of (nanostructured) V2VI3 based thin-film materials for thermoelectric applications. Currently, his main work is funded by the SPP1386 initiated by the Deutsche Forschungsgemeinschaft and the program frame “Werkstoffinnovationen für Industrie und Gesellschaft”, funding program “Nanochance”, 03X4506B initiated by the Bundesministerium für Bildung und Forschung.

Welcome Reception

Date: Wednesday 24 April
Time: 18:30 to 20:00

All attendees are invited to relax, socialize, and enjoy light refreshments. Please remember to wear your conference registration badges. Dress is casual.

Poster Session

Date: Thursday 25 April
Time: 14:30 to 16:30

Location: *Pelvoux Salle de Reception*

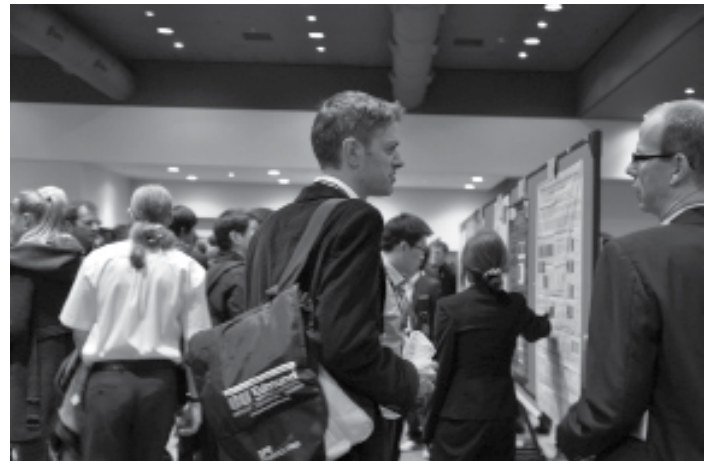
Setup

Authors are encouraged to display their posters beginning at 10.00 on Wednesday for extended viewing. Each poster author will have a 1m x 1m (39 inches x 39 inches) area in which to display their poster presentation.

Interactive Poster Session

Date: Thursday 25 April
Time: 14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.



Smart Sensors, Actuators, and MEMS VI

Conference Chair: **Ulrich Schmid**, Technische Univ. Wien (Austria)

Conference Co-Chairs: **José Luis Sánchez de Rojas Aldavero**, Univ. de Castilla-La Mancha (Spain); **Monika Leester-Schaedel**, Technische Univ. Braunschweig (Germany)

Programme Committee: **Ali Badar M. Alamin Dow**, Univ. of Toronto (Canada); **Eduard Arzt**, Leibniz-Institut für Neue Materialien GmbH (Germany); **Joan Bausells**, Ctr. Nacional de Microelectrónica (Spain); **Christian Bolzmacher**, Commissariat à l'Énergie Atomique (France); **Carles Cané**, Ctr. Nacional de Microelectrónica (Spain); **Viorel Dragoi**, EV Group (Austria); **Guido Faglia**, Univ. degli Studi di Brescia (Italy); **Georg E. Fantner**, Ecole Polytechnique Fédérale de Lausanne (Switzerland); **Carles Ferrer Ramis**, Univ. Autònoma de Barcelona (Spain); **Pavel J. Fiala**, Brno Univ. of Technology (Czech Republic); **Maximilian Fleischer**, Siemens AG (Germany); **Friedrich Franek**, Technische Univ. Wien (Austria); **Sören Fricke**, Robert Bosch GmbH (Germany); **Gerald Gerlach**, Technische Univ. Dresden (Germany); **Katia M. Grenier**, Ctr. National de la Recherche Scientifique (France); **Moustapha Hafez**, Commissariat à l'Énergie Atomique (France); **Henning Heuer**, Fraunhofer-Institut für Zerstörungsfreie Prüfverfahren (Germany); **Arno C. Hoogerwerf**, Ctr. Suisse d'Electronique et de Microtechnique SA (Switzerland); **Jacopo Iannacci**, Fondazione Bruno Kessler (Italy); **Enrique Iborra**, Univ. Politécnica de Madrid (Spain); **Bernhard Jakoby**, Johannes Kepler Univ. Linz (Austria); **Konrad Kapsner**, Infineon Technologies AG (Germany); **Roy Knechtel**, X-FAB Semiconductor Foundries AG (Germany); **Andreas Kugi**, Technische Univ. Wien (Austria); **Robert J. Lad**, Univ. of Maine (United States); **Jeong-Bong Lee**, The Univ. of Texas at Dallas (United States); **Michael Leitner**, amn AG (Austria); **Anita Lloyd Spetz**, Linköping Univ. (Sweden); **Dean P. Neikirk**, The Univ. of Texas at Austin (United States); **Sergio P. Pacheco**, Freescale Semiconductor, Inc. (United States); **Erwin Peiner**, Technische Univ. Braunschweig (Germany); **Thilo Sauter**, Austrian Academy of Sciences (Austria); **Gabriele Schrag**, Technische Univ. München (Germany); **Andreas Schütze**, Univ. des Saarlandes (Germany); **Pietro Siciliano**, Istituto per la Microelettronica e Microsistemi (Italy); **Christos Tsamis**, National Ctr. for Scientific Research Demokritos (Greece); **Gabriel Vanko**, Slovak Academy of Sciences (Slovakia); **Michael J. Vellekoop**, Univ. Bremen (Germany); **Jürgen Wöllenstein**, Fraunhofer-Institut für Physikalische Messtechnik (Germany)

Wednesday 24 April

Plenary Session

Room: Pelvoux auditorium Wed 9:30 to 11:00



Symposium Opening
Thomas Becker, EADS Deutschland GmbH (Germany) and nta Isny (Germany)



Welcome by Local Co-Chair
Marc Belleville, CEA-Leti (France)



Session Chair: **Marc Belleville**, CEA-Leti (France)
10:00: **An autonomous structural health monitoring solution**, Carol A. Featherston, Karen Holford, Rhys Pullin, Jonathan Lees, Mark J. Eaton, Matthew Pearson, Cardiff Univ. (United Kingdom) . . . [8763-501]

Session 1

Room: Pelvoux auditorium Wed 11:00 to 12:40

Energy Scavengers

Session Chairs: **Jacopo Iannacci**, Fondazione Bruno Kessler (Italy); **Ulrich Schmid**, Technische Univ. Wien (Austria)

11:00: **A MEMS vibration energy harvester for automotive applications** (*Invited Paper*), Rob van Schaijk, Interuniversity MicroElectronics Ctr. (Netherlands) [8763-1]

11:40: **Wearable and flexible thermoelectric generator with enhanced package**, Luca Francioso, Chiara De Pascali, Pietro Siciliano, Consiglio Nazionale Delle Ricerche (Italy) . . . [8763-2]

12:00: **Hybrid energy storage system for wireless sensor node powered by aircraft specific thermoelectric energy harvesting**, Karthik Thangaraj, Cardiff Univ. (United Kingdom); Alexandros Elefsiniotis, Sarmad Aslam, Thomas Becker, EADS Deutschland GmbH (Germany); Ulrich Schmid, Technische Univ. Wien (Austria); Carol A. Featherston, Jonathan Lees, Rhys Pullin, Cardiff Univ. (United Kingdom) . . . [8763-3]

12:20: **Nanostructured zinc oxide piezoelectric energy generators based on semiconductor P-N junctions**, Steve Dunn, Joe Briscoe, Queen Mary, Univ. of London (United Kingdom); Mark Stewart, Paul M. Weaver, Markys G. Cain, National Physical Lab. (United Kingdom) . . . [8763-4]

Lunch Break Wed 12:40 to 13:40

Session 2

Room: Pelvoux auditorium Wed 13:40 to 15:00

Packaging

Session Chairs: **Jürgen Wöllenstein**, Fraunhofer-Institut für Physikalische Messtechnik (Germany); **Robert J. Lad**, Univ. of Maine (United States)

13:40: **Ceramic joints for pressure sensors development**, Radovan Novotný, Jaroslav Kadlec, Radek Kuchta, Radek Vlach, Brno Univ. of Technology (Czech Republic) . . . [8763-5]

14:00: **Cu-Sn transient liquid phase wafer bonding for MEMS applications**, Christoph Floetgen, Marta Pawlak, EV Group (Austria); Eric Pabo, EV Group Inc. (United States); Bart van de Wiel, Greg Hayes, TNO (Netherlands); Viorel Dragoi, EV Group (Austria) . . . [8763-6]

14:20: **Analysis of thermal vias in molded interconnect devices**, Joerg Reitterer, Franz Fidler, Ferdinand Saint Julien-Wallsee, TriLite Technologies GmbH (Austria); Ulrich Schmid, Technische Univ. Wien (Austria) . . . [8763-7]

14:40: **Characterization of a quartz-based chip capping package for RF MEMS**, Guido Sordo, Alessandro Faes, Giuseppe Resta, Jacopo Iannacci, Fondazione Bruno Kessler (Italy) . . . [8763-8]

Coffee Break Wed 15:00 to 15:30

Session 3

Room: Pelvoux auditorium Wed 15:30 to 16:50

Materials

Session Chairs: **Ulrich Schmid**, Technische Univ. Wien (Austria); **Arno C. Hoogerwerf**, Ctr. Suisse d'Electronique et de Microtechnique SA (Switzerland)

15:30: **Novel applications of piezoresistive thin film systems based on hydrogenated carbon**, Saskia N. Biehl, Christian Rumposch, Christian Recknagel, Fraunhofer-Institut für Schicht- und Oberflächentechnik (Germany) . . . [8763-9]

15:50: **Optical properties of copper oxide thin films as selective sensing principle for hydrogen sulfide detection**, Janosch Kneer, Univ. Freiburg (Germany); Jürgen Wöllenstein, Univ. Freiburg (Germany) and Fraunhofer-Institut für Physikalische Messtechnik (Germany) . . . [8763-10]

16:10: **Stable conducting nanocomposite electrodes for sensors used in high temperature harsh environments**, Robert J. Lad, Scott C. Moulzolf, David J. Frankel, Mauricio Pereira Da Cunha, Univ. of Maine (United States) . . . [8763-11]

16:30: **Fabrication and properties of SmFe₂-PZT magnetoelectric thin films**, Ioanna Giouroudi, Technische Univ. Wien (Austria); Mohammed Al Nassar, Jürgen Kosel, King Abdullah Univ. of Science and Technology (Saudi Arabia) . . . [8763-12]

Thursday 25 April

Session 4

Room: Pelvoux auditorium Thu 9:00 to 10:20

Optical Devices and Systems

Session Chairs: **Jürgen Wöllenstein**, Fraunhofer-Institut für Physikalische Messtechnik (Germany); **Erwin Peiner**, Technische Univ. Braunschweig (Germany)

9:00: **High-speed ultra-broad tuning MEMS-VCSELs for imaging and spectroscopy** (*Invited Paper*), Vijaysekhar Jayaraman, Praevium Research, Inc. (United States); Benjamin Potsaid, James Y. Jiang, Thorlabs Inc. (United States); Garrett D. Cole, Advanced Optical Microsystems (United States); Martin Robertson, Christopher Burgner, Demis John, Praevium Research, Inc. (United States); Ireneusz Grulkowski, Massachusetts Institute of Technology (United States); Scott T. Sanders, Univ. of Wisconsin-Madison (United States); James G. Fujimoto, Massachusetts Institute of Technology (United States); Alex E. Cable, Thorlabs Inc. (United States) [8763-13]

9:40: **High-precision optoelectronic sensor device for monitoring fermentation kinetics and maceration of wine**, Francisco Jiménez-Márquez, Javier Vázquez, Juan Ubeda, José Luis Sánchez de Rojas Aldavero, Univ. de Castilla-La Mancha (Spain) [8763-14]

10:00: **Optical position feedback of 2D MOEMS mirrors**, Andreas Tortschanoff, Marcus Baumgart, Dominik Holzmann, Martin Lenzhofer, Carinthian Tech Research AG (Austria); Thilo Sandner, Fraunhofer-Institut für Photonische Mikrosysteme (Germany); Andreas Kenda, Carinthian Tech Research AG (Austria) [8763-15]

Coffee Break Thu 10:20 to 10:50

Session 5

Room: Pelvoux auditorium Thu 10:50 to 12:10

Fluidic MEMS

Session Chairs: **José Luis Sánchez de Rojas Aldavero**, Univ. de Castilla-La Mancha (Spain); **Pavel J. Fiala**, Brno Univ. of Technology (Czech Republic)

10:50: **Influence of fluid-structure interaction on microcantilever vibrations: applications to rheological fluid measurement and chemical detection** (*Invited Paper*), Isabelle Dufour, E. Lemaire, B. Caillard, H. Debéda, C. Lucat, Univ. Bordeaux 1 (France); Stephen M. Heinrich, Fabien J. Josse, Marquette Univ. (United States); Oliver Brand, Georgia Institute of Technology (United States) [8763-16]

11:30: **Comparison of quartz tuning forks and AlN-based extensional microresonators for viscosity measurements in oil/fuel mixtures**, Javier Toledo Serrano, Tomás Manzanque, Jorge Hernandez García, Javier Vázquez, Univ. de Castilla-La Mancha (Spain); Abdallah Ababneh, Yarmouk Univ. (India); Helmut Seidel, Univ. des Saarlandes (Germany); Magín Lapuerta, José Luis Sánchez de Rojas Aldavero, Univ. de Castilla-La Mancha (Spain) [8763-17]

11:50: **The concept of microfluidic microchemomechanical integrated circuits**, Andreas Richter, Merle Allerdissen, Rinaldo Greiner, Andreas Voigt, Technische Univ. Dresden (Germany) [8763-18]

Lunch Break Thu 12:10 to 13:30

Plenary Session

Room: Pelvoux auditorium Thu 13:30 to 14:30

Session Chair: **Christos Tsamis**, National Ctr. for Scientific Research Demokritos (Greece)



13:30: **Biologically inspired large scale chemical sensor arrays and embedded data processing**, Santiago Marco, A. Gutiérrez-Gálvez, Univ. de Barcelona (Spain) and Institute for Bioengineering of Catalonia (Spain); Anders Lansner, Royal Institute of Technology (Sweden); Dominique Martinez, LORIA (France); J. P. Rospars, Institut National de la Recherche Agronomique (France); Romeo Beccherelli, Istituto per la Microelettronica e Microsistemi (Italy); Alexandre Perera, Univ. Politècnica de Catalunya (Spain); Tim C. Pearce, Univ. of Leicester (United Kingdom); Paul Vershure, Univ. Pompeu Fabra (Spain); Krishna Persaud, The Univ. of Manchester (United Kingdom) [8763-502]

Poster Session

Room: Pelvoux Salle de Reception Thu 14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Poster authors are encouraged to display their posters beginning at 10:00 on Wednesday for extended viewing.

On a high potential variable flexural stiffness device, Markus Henke, Gerald Gerlach, Technische Univ. Dresden (Germany) [8763-34]

MEMS sensors for microscale piezoelectric metrology, Jenny Wooldridge, Andres Muniz-Piniella, Mark Stewart, Tamaryn A. V. Shean, Paul M. Weaver, Markys G. Cain, National Physical Lab. (United Kingdom) [8763-35]

Optical device for precision topography of MOEMS by Moiré interferometry, Saïd Meguellati, Smail Djabi, Univ. Ferhat Abbas de Sétif (Algeria) [8763-36]

A miniaturized linear shaker system for MEMS sensor characterization, Jörg Encke, Wilfried F. Hortschitz, Austrian Academy of Sciences (Austria); Andreas Kainz, Harald Steiner, Franz Kepflinger, Technische Univ. Wien (Austria); Thilo Sauter, Austrian Academy of Sciences (Austria) [8763-37]

Controlled fabrication of advanced functional structures on the nanoscale by means of electron beam-induced processing, Johann Foucher, CEA-LETI (France); Sebastian W. Schmidt, Christian Penzkofer, Bernd Irmer, nanotools GmbH (Germany) [8763-38]

Rotational micro actuator for microsurgery, Monika Leester-Schädel, Jan-Wilhelm Thies, Thomas Schubert, Stephanus Büttgenbach, Andreas H. Dietzel, Technische Univ. Braunschweig (Germany) [8763-39]

Integrated lenses in polystyrene microfluidic device, Yiqiang Fan, Huawei Li, Ian G. Foulds, King Abdullah Univ. of Science and Technology (Saudi Arabia) [8763-41]

Miniaturized wireless passive sensor with polymer coated nanowire fabric for hydrocarbon detection, Sheng P. Zhang, Brad Leonhardt, Catherine Shipman, Praveen Pasupathy, Brian A. Korgel, John G. Ekerdt, Dean P. Neikirk, The Univ. of Texas at Austin (United States) [8763-42]

Magnetic tunnel junction sensors with pTesla sensitivity for biomedical imaging, Luis Gameiro, Diana C. Leitao, Filipe Cardoso, INESC-MN (Portugal); Ricardo Ferreira, Elvira Paz, International Iberian Nanotechnology Lab (Portugal); Paulo P. Freitas, International Iberian Nanotechnology Lab (Portugal) and INESC-MN (Portugal); Susana Cardoso, INESC-MN (Portugal) [8763-43]

Hydrogel plug for independent sample and buffer handling in continuous microchip capillary electrophoresis, Dietmar Puchberger-Engnigl, Technische Univ. Wien (Austria); Mireille Bipoun, Univ. Bremen (Germany); Martin Smolka, Technische Univ. Wien (Austria); Christian Krutzler, Integrated Microsystems Austria GmbH (Austria); Franz Kepflinger, Technische Univ. Wien (Austria); Michael J. Vellekoop, Univ. Bremen (Germany) [8763-44]

A new injection method for soil nutrient analysis in capillary electrophoresis, Martin Smolka, Dietmar Puchberger-Engnigl, Technische Univ. Wien (Austria); Mireille Bipoun, Univ. Bremen (Germany); Georg Fercher, s:can Messtechnik GmbH (Austria); Andrzej Klasa, Univ. of Warmińsko-Mazurski (Poland); Kaan Ozer, Integrated Microsystems Austria GmbH (Austria); Franz Kepflinger, Technische Univ. Wien (Austria); Michael J. Vellekoop, Univ. Bremen (Germany) [8763-45]

Simulation and optimization of the magnetic field in an electroplated copper microcoils, Maher Matar, Alaaldeen T. Al-Halhouli, Stephanus Büttgenbach, Andreas H. Dietzel, Technische Univ. Braunschweig (Germany) [8763-46]

Micro-fluorescent activated cell sorter (FACS) for isolation of genetically modified cells, Haifeng Shang, Kyung-A Hyun, Yonsei Univ. (Korea, Republic of); Kwon Soo Ha, Mi-Hye Kwon, Kangwon National Univ. (Korea, Republic of); Suho Ryu, Chulmin Joo, Hyo-Il Jung, Yonsei Univ. (Korea, Republic of) [8763-47]

Development of energy harvester system for avionics, Zdenek Hadas, Vojtech Vetiřka, Zdenek Ancik, Cestmir Ondrusek, Vladislav Singule, Brno Univ. of Technology (Czech Republic) [8763-48]

Optimized energy harvesting from mechanical vibrations through piezoelectric actuators, based on a synchronized switching technique, Petros M. Tsampas, Ioannis Roditis, Vasilis A. Papadimitriou, Panagiotis Chatzakos, Innora Ltd. (Greece); Tat-Hean Gan, TWI Ltd. (United Kingdom) [8763-49]

Flexible piezoelectric microgenerators based on nanotextured ZnO films, Eleni Makarona, George Niarchos, George Voulazeris, Christos Tsamis, National Ctr. for Scientific Research Demokritos (Greece) [8763-50]

CMOS compatible low-frequency aluminium nitride MEMS piezoelectric energy harvesting device, Nathan M. Jackson, Rosemary O'Keefe, Finbarr Waldron, Tyndall National Institute (Ireland); Mike O'Neill, Analog Devices Ireland Ltd. (Ireland); Alan Mathewson, Tyndall National Institute (Ireland) [8763-51]

Comparison of low-power single-stage boost rectifiers for sub-milliwatt electromagnetic energy harvesters, Gyorgy Szarka, Bernard H. Stark, Stephen G. Burrow, Plamen Proynov, Univ. of Bristol (United Kingdom) [8763-52]

Load optimised piezoelectric generator for powering battery-less TPMS, David Blažević, Saša Zelenika, Ervin Kamenar, Univ. of Rijeka (Croatia) . . [8763-53]

- Flat inductors for human motion energy harvesting**, Juris Blums, Galina Terlecka, Ilgvars Gornevs, Ausma Vilumsons, Riga Technical Univ. (Latvia) [8763-54]
- Modeling, simulation and experimental testing of the MEMS thermoelectric generators in wide range of operational conditions**, Zdenek Ancik, Radek Vlach, Ludek Janak, Brno Univ. of Technology (Czech Republic); Pavel Kopecek, UNIS, spol. s.r.o. (Czech Republic); Zdenek Hadas, Brno Univ. of Technology (Czech Republic) [8763-55]
- Design and material aspects for thermoelectric energy harvesting devices in aircrafts**, Alexandros Elefantiotis, Nikolaos Kokorakis, Thomas Becker, EADS Deutschland GmbH (Germany); Ulrich Schmid, Technische Univ. Wien (Austria) [8763-56]
- A nano-power energy harvesting IC for arrays of piezoelectric transducers**, Michele Dini, Matteo Filippi, Aldo Romani, Univ. degli Studi di Bologna (Italy); Valeria Bottarel, Giulio Ricotti, STMicroelectronics (Italy); Marco Tartagni, Univ. degli Studi di Bologna (Italy) [8763-57]
- Design, fabrication and characterization of a very low frequency piezoelectric energy harvester designed for heart beat vibration scavenging**, Mikaël Colin, Libor Rufer, Skandar Basrouf, TIMA Lab. (France) [8763-58]
- A miniaturised autonomous sensor based on nanowire materials platform: the SiNAPS mote**, Naser Koshro-Pour, Maher Kayal, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Guobin Jia, Fritz Falk, Institut für Photonische Technologien e.V. (Germany); Erik Puik, Cees J. M. van Rijn, Nanosens B. V. (Netherlands); Adrian Nightingale, John C. de Mello, Imperial College London (United Kingdom); Nikolay Petkov, Yordan M. Georgiev, Tyndall National Institute (Ireland); Justin D. Holmes, Univ. College Cork (Ireland); Michael Nolan, Giorgos Fagas, Tyndall National Institute (Ireland) [8763-59]
- Optimal composition of bistable piezoelectric plates for maximised broadband energy harvesting performance**, David N. Betts, Christopher R. Bowen, Hyunsun A. Kim, Univ. of Bath (United Kingdom); Daniel J. Inman, Univ. of Michigan (United States) [8763-60]
- Design, fabrication and characterization of a micromachined piezoelectric energy harvester excited by ambient vibrations**, Ali Badar M. Alamin Dow, Univ. of Toronto (Canada); Achim Bittner, Ulrich Schmid, Technische Univ. Wien (Austria); Nazir P. Kherani, Univ. of Toronto (Canada) [8763-61]
- Photovoltaic energy harvesting for smart sensor systems**, Martin Kasemann, Albert-Ludwigs-Univ. Freiburg (Germany); Karola Rühle, Albert-Ludwigs-Univ. Freiburg (Germany) and Fraunhofer-Institut für Solare Energiesysteme (Germany); Karim M. Gad, Albert-Ludwigs-Univ. Freiburg (Germany); Stefan W. Glunz, Fraunhofer-Institut für Solare Energiesysteme (Germany) [8763-62]
- Parametrization of ambient energy harvesters for complementary balanced electronic applications**, Yannick Verbelen, Abdellah Touhafi, An Braeken, Erasmus Univ. College Brussels (Belgium) [8763-63]
- Study of hybrid organic-inorganic thin films deposited by PECVD for gas sensors applications**, Julien Piccot, Muriel Matheron, CEA Grenoble (France); Christophe Licitra, Nevine Rochat, Commissariat à l'Énergie Atomique (France); Julien El Sabahy, CEA Grenoble (France); Vincent Jousseau, CEA-LETI (France) [8763-64]
- Zero power Humidochromic sensor based on polymeric photonic structures**, Ioannis Raptis, National Ctr. for Scientific Research Demokritos (Greece); Margarita Chatzichristidi, Univ. of Athens (Greece); Isidora Georgaki, Athanasios Botsialas, Panagiotis Argitis, Nikolaos Papanikolaou, National Ctr. for Scientific Research Demokritos (Greece) [8763-65]
- Investigation on the dielectric breakdown behavior of aluminum nitride thin films at different temperatures applying a time-zero approach**, Michael Schneider, Achim Bittner, Ulrich Schmid, Technische Univ. Wien (Austria) [8763-66]
- Interfacial adhesion between iron fillers and the silicone matrix in magneto-rheological elastomers at high deformations**, Tobias Pössinger, CEA LIST (France); Christian Bolzmacher, Commissariat à l'Énergie Atomique (France); Laurence Bodelot, Nicolas Triantafyllidis, Ecole Polytechnique (France) . . [8763-67]
- Investigations on the high temperature compatibility of various adhesion layers for platinum**, Abdallah Ababneh, Ahmad N. Al-Omari, Yarmouk Univ. (Jordan); MySa Marschibois, Dara Feili, Helmut Seidel, Univ. des Saarlandes (Germany) [8763-68]
- 2-2 composites based on [011]-poled relaxor-ferroelectric single crystals: piezoelectric anisotropy to hydrostatic response**, Christopher R. Bowen, Univ. of Bath (United Kingdom); Vitaly Y. Topolov, Southern Federal Univ. (Russian Federation); David N. Betts, Hyunsun A. Kim, Univ. of Bath (United Kingdom) [8763-69]
- Simulation and characterization of silicon nanopillar-based nanoparticle sensors**, Hutomo S. Wasisto, Stephan Merzsch, Andrej Stranz, Kai Huang, Andreas Waag, Erwin Peiner, Technische Univ. Braunschweig (Germany) [8763-71]
- Simulation, design and fabrication of a planar micro thermoelectric generator**, Silvia Pelegrini, Univ. Federal de Santa Catarina (Brazil); Andrea Adami, Cristian Collini, Paolo Conci, Leandro Lorenzelli, Fondazione Bruno Kessler (Italy); André Pasa, Univ. Federal de Santa Catarina (Brazil) [8763-72]
- Advanced modeling of AlN-based micromachined energy harvesters driven by beta-emitting radioisotopes**, Ali Badar M. Alamin Dow, Nazir P. Kherani, Univ. of Toronto (Canada); Ulrich Schmid, Technische Univ. Wien (Austria) [8763-73]
- Modeling methods of MEMS microspeaker, with capacitive working principle**, David Tumpold, Manfred Kaltenbacher, Technische Univ. Wien (Austria); Christoph Glacer, Mohsin Nawaz, Alfons Dehé, Infineon Technologies AG (Germany) [8763-74]
- Experimental methodology to measure damping in microstructures by using the actuation force hysteresis curve**, Giorgio De Pasquale, Aurelio Soma, Politecnico di Torino (Italy) [8763-75]
- A large deflection model of silicon membranes for testing intrinsic stress of MEMS microphones by measuring pull-In voltage**, Florian Oesterle, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); Alfons Dehé, Franz Fink, Harald Kuhn, Infineon Technologies AG (Germany); Robert Weigel, Alexander Kölpin, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany) [8763-77]
- Analysis of local deformation effects in resistive strain sensing of a submicron-thickness AFM cantilever**, Jonathan Adams, Georg E. Fantner, Ecole Polytechnique Fédérale de Lausanne (Switzerland) [8763-78]
- Magnetic circuit design for miniaturized magnetic shape memory alloy actuators**, Christian Bolzmacher, Commissariat à l'Énergie Atomique (France) [8763-79]
- Exploiting infrared transparency of silicon for the construction of advanced MOEMS vibration sensors**, Wilfried F. Hortschitz, Jörg Encke, Franz Kohl, Thilo Sauter, Austrian Academy of Sciences (Austria); Franz Keplinger, Harald Steiner, Andreas Kainz, Technische Univ. Wien (Austria) [8763-80]
- A resonance-based solar element: a numerical model and micro/nano technology application**, Pavel J. Fiala, Petr Drexler, Dusan Nespor, Brno Univ. of Technology (Czech Republic) [8763-81]
- Biomimetic MEMS sensor array for navigation and water detection**, Oliver Futterknecht, Technische Univ. Wien (Austria); Mark O. Macqueen, Aramis Technologies (Malaysia); Salmah B. Karman, Univ. Kebangsaan Malaysia (Malaysia) and Univ. of Malaya (Malaysia); S. Zaleha B. M. Diah, Univ. Kebangsaan Malaysia (Malaysia); Ille C. Gebeshuber, Univ. Kebangsaan Malaysia (Malaysia) and Technische Univ. Wien (Austria) and Aramis Technologies (Malaysia) [8763-82]
- Simulation and design optimization of transparent heaters for spectroscopic micro cells**, Henning Völlm, Jonathan Herrmann, Dara Feili, Helmut Seidel, Univ. des Saarlandes (Germany); Reinhard Maier, Volker Häublein, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); Heiner Ryssel, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany) and Friedrich-Alexander-Systeme. Erlangen-Nürnberg (Germany) [8763-83]
- Flip chip packaging of piezoresistive barometric pressure sensors**, Tobias Waber, Hochschule München für Angewandte Wissenschaften (Germany); Wolfgang Pahl, Matthias Schmidt, EPCOS AG (Germany); Gregor Feiertag, Hochschule München (Germany); Stefan Stuffer, EPCOS AG (Germany); Rainer Dudek, Fraunhofer-Institut für Elektronische Nanosysteme (Germany); Anton Leidl, EPCOS AG (Germany) [8763-84]
- A lorentz force actuated magnetic field sensor with capacitive read-out**, Michael Stifter, Technische Univ. Wien (Austria) and Austrian Academy of Sciences (Austria); Harald Steiner, Andreas Kainz, Franz Keplinger, Technische Univ. Wien (Austria); Wilfried F. Hortschitz, Integrated Microsystems Austria GmbH (Austria); Thilo Sauter, Austrian Academy of Sciences (Austria) [8763-85]
- Mid-infrared rib waveguide absorption sensors based on Si**, Ventsislav M. Lavchiev, Johannes Kepler Univ. Linz (Austria); Peter Irsigler, Ursula Hedenig, Thomas Grille, Infineon Technologies Austria AG (Austria); Bernhard Jakoby, Johannes Kepler Univ. Linz (Austria) [8763-86]
- MEMS sensors for mm-range displacement measurements with sub-nm resolution**, Vladimir T. Stavrov, AMG Technology Ltd. (Bulgaria); Vencislav M. Todorov, Techproject Co. (Austria); Assen Shulev, Institute of Mechanics, Bulgarian Academy of Sciences (Bulgaria); Chavdar Hardalov, Technical Univ. of Sofia (Bulgaria) [8763-87]
- Detection of bad indoor environment with a miniaturized gas sensor system**, Jochen Huber, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Jürgen Wöllenstein, Albert-Ludwigs-Univ. Freiburg (Germany) [8763-88]
- Noise as diagnostic tool for quality and reliability of thick-film pressure sensors**, Petr Sedlak, Vlasta Sedlakova, Jiri Majzner, Josef Sikula, Brno Univ. of Technology (Czech Republic); Marina Santo Zarnik, Darko Belavic, Jožef Stefan Institute (Slovenia) [8763-89]
- A FPGA-based measurement system with QCM for real-time fluctuation-enhanced gas sensing**, Petr Sedlak, Marek Vondra, Josef Sikula, Vlasta Sedlakova, Jiri Majzner, Brno Univ. of Technology (Czech Republic) [8763-90]
- Optical-thermal actuation of silicon cantilevers: modelling and experimental investigation**, Fei Jiang, Adrian J. Keating, Mariusz Martyukin, Dilusha K. Silva, Lorenzo Faraone, John M. Dell, The Univ. of Western Australia (Australia) [8763-91]
- MEMS-based silicon cantilevers with integrated electrothermal heaters for airborne ultrafine particle sensing**, Hutomo S. Wasisto, Stephan Merzsch, Andreas Waag, Erwin Peiner, Technische Univ. Braunschweig (Germany) [8763-92]
- Design and fabrication of a 5 MHz ultrasonic phased array probe with curved transducer**, Julia Fischer, Thomas Herzog, Susan Walter, Henning Heuer, Fraunhofer-Institut für Zerstörungsfreie Prüfverfahren (Germany) [8763-93]

MEMS pressure sensor with maximum performances by using novel back-side direct-exposure concept featuring through glass vias, Ha-Duong Ngo, Technische Univ. Berlin (Germany); Klaus-Dieter Lang, Technical Univ. Berlin (Germany); Mathias Fritz, Fraunhofer-Institut für Zuverlässigkeit und Mikrointegration (Germany); Biswajit Mukhopadhyay, Technical Univ. Berlin (Germany); Piotr Mackowiak, Technische Univ. Berlin (Germany) [8763-94]

Stacked PZT linear arrays for high intensity ultrasound transducers, Rico Schumann, Thomas Herzog, Susan Walter, Henning Heuer, Norbert G. Meyendorf, Fraunhofer-Institut für Zerstörungsfreie Prüfverfahren (Germany) [8763-95]

From nature to MEMS: towards the detection limit of crickets' hair sensors, Ahmad Dagamseh, Yarmouk Univ. (Jordan) [8763-96]

Counting line detectors with one monolithically integrated readout circuit: two applications, Thomas Lohse, Peter Krüger, Henning Heuer, Fraunhofer-Institut für Zerstörungsfreie Prüfverfahren (Germany); Martin Oppermann, Technische Univ. Dresden (Germany); Hannes Torlee, Fraunhofer Institut für Photonische Mikrosysteme (Germany); Norbert G. Meyendorf, Fraunhofer-Institut für Zerstörungsfreie Prüfverfahren (Germany) [8763-97]

Design strategies of opto-mechanical micro oscillators for the detection of the ponderomotive squeezing, Antonio L. Borrielli, Istituto dei Materiali per l'Elettronica ed il Magnetismo (Italy) and Gruppo Collegato di Trento (Italy); Enrico Serra, Univ. degli Studi di Trento (Italy) and Gruppo Collegato di Trento (Italy); Francesco Saverio Cataliotti, Univ. degli Studi di Firenze (Italy) and European Lab. for Non-Linear Spectroscopy (Italy) and Istituto Nazionale di Fisica Nucleare (Italy); Francesco Marin, European Lab. for Non-Linear Spectroscopy (Italy) and Istituto Nazionale di Fisica Nucleare (Italy) and Univ. degli Studi di Firenze (Italy); Francesco Marino, European Lab. for Non-Linear Spectroscopy (Italy) and Istituto Nazionale di Fisica Nucleare (Italy) and CNR-ISC (Italy); Antonio Pontin, Giovanni A. Prodi, Istituto Nazionale di Fisica Nucleare (Italy) and Univ. degli Studi di Trento (Italy); Michele Bonaldi, Istituto Nazionale di Fisica Nucleare (Italy) and Istituto dei Materiali per l'Elettronica ed il Magnetismo (Italy) [8763-98]

Measurement of the 1/f noise of lateral actuated MEMS with sidewall piezoresistors, Vladimir T. Stavrov, AMG Technology Ltd. (Bulgaria); Thilo Sauter, Institute for Integrated Sensor Systems (Austria); Philipp Philippov, Technical Univ. of Sofia (Bulgaria) [8763-99]

Modular high frequency eddy current sensor system and image preprocessing algorithms for CFRP testing, Martin H. Schulze, Henning Heuer, Norbert G. Meyendorf, Fraunhofer-Institut für Zerstörungsfreie Prüfverfahren (Germany) [8763-100]

MEMS pressure sensor fabricated by advanced bulk micromachining techniques, Gabriel Vanko, Institute of Electrical Engineering (Slovakia); Peter Hudek, Johann Zehetner, Fachhochschule Vorarlberg (Austria); Jaroslav Dzuba, Institute of Electrical Engineering (Slovakia); Pavlina Choleva, Fachhochschule Vorarlberg (Austria); Martin Vallo, Ivan Rýger, Tibor Lalinsky, Institute of Electrical Engineering (Slovakia) [8763-101]

Industrial use of a cantilever-based microprobe for the characterization of tribological surfaces, Thomas Frank, Lutz Döring, Stefan Völlmeke, CiS Forschungsinstitut für Mikrosensorik und Photovoltaik GmbH (Germany); Steffen Reich, CiS Forschungsinstitut für Mikrosensorik und Photovoltaik GmbH. (Germany) [8763-102]

Chemical microsensors based on hydrogels with adjustable measurement range, Willi Haas, Johann W. Bartha, Wolf-Joachim Fischer, Andreas Richter, Technische Univ. Dresden (Germany) [8763-103]

Self-aligned single-mask fabrication process for electro-thermal microactuators using ICP-RIE, Ali Badar M. Alamin Dow, Univ. of Toronto (Canada); Adel B. Gougam, Masdar Institute of Science & Technology (United Arab Emirates); Nazir P. Kherani, Univ. of Toronto (Canada) [8763-104]

Fabrication of an array like freeform molding tool for UV-replication using a step and repeat process, Jens Dunkel, Frank C. Wippermann, Andreas Brückner, Andreas Reimann, Andreas Bräuer, Fraunhofer-Institut für Angewandte Optik und Feinmechanik (Germany) [8763-105]

Fabrication of double-sided micro structured mechanical sensors based on SU-8 resist using a new micro molding process, Alexa Oerke, Stephanus Büttgenbach, Andreas H. Dietzel, Technische Univ. Braunschweig (Germany) [8763-106]

Multilayer micromachined bandpass filter for L/S band satellite communication systems, Abdul Qader Ahsan Qureshi, Fondazione Bruno Kessler (Italy); Luca Pelliccia, Univ. degli Studi di Perugia (Italy); Sabrina Colpo, Jacopo Iannacci, Fondazione Bruno Kessler (Italy); Paola Farinelli, Univ. degli Studi di Perugia (Italy); Benno Margesin, Fondazione Bruno Kessler (Italy) [8763-107]

Contour and flexure-actuated in-plane modes of AIN-based piezoelectric vibrating MEMS, Victor Ruiz, Tomás Manzanque, Jorge Hernando García, Univ. de Castilla-La Mancha (Spain); Abdallah Ababneh, Yarmouk Univ. (Jordan); Martin Kucera, Technische Univ. Wien (Austria); Ahmad N. Al-Omari, Yarmouk Univ. (India); Achim Bittner, Ulrich Schmid, Technische Univ. Wien (Austria); Helmut Seidel, Univ. des Saarlandes (Germany); José Luis Sánchez de Rojas Aldavero, Univ. de Castilla-La Mancha (Spain) [8763-108]

Pressure dependence of the quality factor of piezoelectrically driven AIN/Si-microcantilevers, Abdallah Ababneh, Ahmad N. Al-Omari, Yarmouk Univ. (Jordan); HuaCheng Qiu, Univ. des Saarlandes (Germany); Tomás Manzanque, Jorge Hernando García, José Luis Sánchez de Rojas Aldavero, Univ. de Castilla-La Mancha (Spain); Achim Bittner, Ulrich Schmid, Technische Univ. Wien (Austria); Helmut Seidel, Univ. des Saarlandes (Germany) [8763-109]

Microgalvanic nickel pulse plating processes for the production of thermal actuators, Wolfgang Hansal, Happy Plating GmbH (Austria); Harald Steiner, Technische Univ. Wien (Austria); Rudi Mann, Martina Halmdienst, Happy Plating GmbH (Austria); Johannes Schalko, Franz Keplinger, Technische Univ. Wien (Austria) [8763-110]

Control of cavitation density through gas and acoustic uniformity in a proximity megasonic pre-bond cleaning system, Donald Dussault, Eric Liebscher, ProSys, Inc. (United States); Frank Fournel, CEA-LETI (France); Viorel Dragoi, EV Group (Austria) [8763-111]

Surface damage monitoring using electro-magnetic sensors, Seok-Jin Kwon, Korea Railroad Research Institute (Korea, Republic of) [8763-112]

Formation of a deposit on workpiece surface in polishing nonmetallic materials, Yuriy D. Filatov, V. Bakul Institute for Superhard Materials NASU (Ukraine); Guy Monteil, Institute FEMTO-ST (France); Volodymyr I. Sidorko, Oleksandr Y. Filatov, V. Bakul Institute for Superhard Materials NASU (Ukraine) [8763-113]

A closed-loop system for frequency tracking of piezoresistive cantilever sensors, Hutomo S. Wasisto, Qing Zhang, Stephan Merzsch, Andreas Waag, Erwin Peiner, Technische Univ. Braunschweig (Germany) [8763-114]

Simulation of thick film PZT actuators with interdigitated electrodes, Mohanad Mohammed Zaki, Sandy Zähringer, Norbert Schwesinger, Technische Univ. München (Germany) [8763-115]

Vacuum packaging of MEMS sensors, Jae Hong Park, Tae Hyun Kim, Woo Choong Kim, Myeongho Song, Eunmi Park, Hee Yeoun Kim, Kwyro Lee, National Nanofab Ctr. (Korea, Republic of) [8763-116]

Session 6

Room: Pelvoux auditorium Thu 16:30 to 17:50

Thermal Sensors

Session Chairs: **Monika Leester-Schädel**, Technische Univ. Braunschweig (Germany); **Gerald Gerlach**, Technische Univ. Dresden (Germany)

16:30: **Flexible hot-film anemometer arrays for flow measurements on curved structures**, Tobias T. Beutel, Martin Schwerter, Monika Leester-Schädel, Andreas H. Dietzel, Stephanus Büttgenbach, Technische Univ. Braunschweig (Germany) [8763-119]

16:50: **Microthermal sensors for determining fluid composition and flow rate in fluidic systems**, Andreas Schütze, Christian Kiefer, Bastian Schmitt, Univ. des Saarlandes (Germany) [8763-20]

17:10: **A high thermal resistance MEMS-based Pirani vacuum sensor chip**, Florian Dams, Rupert Schreiner, Fachhochschule Regensburg (Germany) [8763-21]

17:30: **Microfluidic low cost calorimeters for biological and chemical applications**, Martin Jaegle, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Jürgen Antes, Fraunhofer-Institut für Chemische Technologie (Germany) [8763-22]

Friday 26 April

Session 7

Room: Pelvoux auditorium Fri 9:00 to 10:20

Microactuators

Session Chairs: **Jacopo Iannacci**, Fondazione Bruno Kessler (Italy); **Erwin Peiner**, Technische Univ. Braunschweig (Germany)

9:00: **Electromagnetic microactuators (Invited Paper)**, Stephanus Büttgenbach, Alaalden T. Al-Halhouli, Marco Feldmann, Volker Seidemann, Andreas Waldschik, Technische Univ. Braunschweig (Germany) [8763-23]

9:40: **Thermal design of a tristable electromagnetic linear microactuator with high displacement and low actuation force for mass storage applications**, Xin Xu, Ha-Duong Ngo, Piotr Mackowiak, Technische Univ. Berlin (Germany) [8763-24]

10:00: **Highly sensitive thermal actuators for temperature sensing**, Harald Steiner, Technische Univ. Wien (Austria); Wilfried F. Hortschitz, Austrian Academy of Sciences (Austria); Michael Stifter, Austrian Academy of Sciences (Austria) and Technische Univ. Wien (Austria); Franz Keplinger, Technische Univ. Wien (Austria); Thilo Sauter, Austrian Academy of Sciences (Austria) [8763-25]

Coffee Break Fri 10:20 to 10:50

Session 8

Room: Pelvoux auditorium Fri 10:50 to 12:10

Resonators

Session Chairs: **Andreas Schütze**, Univ. des Saarlandes (Germany);
Gerald Gerlach, Technische Univ. Dresden (Germany)

10:50: **Design of high-efficiency vibration energy harvesters and experimental functional tests for improving bandwidth and tunability**, Aurelio Soma, Giorgio De Pasquale, Politecnico di Torino (Italy) [8763-26]

11:10: **Fabrication of vertical nanowire resonators for aerosol exposure assessment**, Stephan Merzsch, Hutomo S. Wasisto, Andrej Stranz, Technische Univ. Braunschweig (Germany); Peter Hinze, Thomas Weimann, Physikalisch-Technische Bundesanstalt (Germany); Erwin Peiner, Andreas Waag, Technische Univ. Braunschweig (Germany) [8763-27]

11:30: **Quality factor enhancement for resonant MEMS applying an analogue feedback circuit driven by a lock-in amplifier**, Martin Kucera, Technische Univ. Wien (Austria) and AC²T research GmbH (Austria); Franz Hofbauer, Technische Univ. Wien (Austria); Tomás Manzaneque, Victor Ruiz, Univ. de Castilla-La Mancha (Spain); Achim Bittner, Technische Univ. Wien (Austria); José Luis Sánchez de Rojas Aldavero, Univ. de Castilla-La Mancha (Spain); Ulrich Schmid, Technische Univ. Wien (Austria) [8763-28]

11:50: **Multi-modal vibration based MEMS energy harvesters for ultra low power wireless functional nodes**, Jacopo Iannacci, Massimo Gottardi, Enrico Serra, Roberto Di Criscienzo, Fondazione Bruno Kessler (Italy); Antonio L. Borrielli, Istituto Nazionale di Fisica Nucleare (Italy) and Consiglio Nazionale delle Ricerche (Italy); Michele Bonaldi, Istituto Nazionale di Fisica Nucleare (Italy) and Istituto dei Materiali per l'Elettronica ed il Magnetismo (Italy) [8763-29]

Lunch Break Fri 12:10 to 13:30

Plenary Session

Room: Pelvoux auditorium Fri 13:30 to 14:30

Session Chair: **Marc Belleville**, CEA-Leti (France)



13:30: **Micro- and nanoscale thermoelectrics: an overview over basic concepts and recent advances**, Markus Winkler, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany); Martin Jaegle, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Xi Liu, Christian-Albrechts Univ. zu Kiel (Germany); Jan Koenig, Harald Boettner, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Lorenz Kienle, Christian-Albrechts-Univ. zu Kiel (Germany) . . . [8763-503]

Session 9

Room: Pelvoux auditorium Fri 14:30 to 15:50

Bio-MEMS

Session Chairs: **Monika Leester-Schädel**, Technische Univ. Braunschweig (Germany); **Georg E. Fantner**, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

14:30: **All-silicon micro-force sensor for bio applications**, Vladimir T. Stavrov, AMG Technology Ltd. (Bulgaria); Assen Shulev, Institute of Mechanics, Bulgarian Academy of Sciences (Bulgaria); Vencislav M. Todorov, Techproject Co. (Austria); Iliia R. Roussev, Institute of Mechanics, Bulgarian Academy of Sciences (Bulgaria) [8763-30]

14:50: **Efficient nanoparticle filtering using bioinspired functional surfaces**, Sebastian Busch, Manuel Ketterer, Albert-Ludwigs-Univ. Freiburg (Germany); Xenia Vinzenz, Christian Hoffmann, Institut für Bioprozess- und Analysenmesstechnik e.V. (Germany); Jürgen Wöllenstein, Albert-Ludwigs-Univ. Freiburg (Germany) [8763-31]

15:10: **Hydrogel-based labs-on-a-chip**, Merle Allerdissen, Stephan Klatt, Andreas Richter, Technische Univ. Dresden (Germany) [8763-32]

15:30: **A low complexity wireless microbial fuel cell monitor using piezoresistive sensors and impulse-radio ultra-wide-band**, Marco Crepaldi, Alessandro Chiolerio, Tonia Tommasi, Diana Hidalgo, Giancarlo Canavese, Istituto Italiano di Tecnologia (Italy); Danilo Demarchi, Fabrizio C. Pirri, Istituto Italiano di Tecnologia (Italy) and Politecnico di Torino (Italy) [8763-33]

VLSI Circuits and Systems VI

Conference Chair: **Teresa Riesgo**, Univ. Politécnica de Madrid (Spain)

Conference Co-Chair: **Massimo Conti**, Univ. Politecnica delle Marche (Italy)

Programme Committee: **Eduard Alarcon**, Univ. Politécnica de Catalunya (Spain); **Marco Caldari**, Korg (Italy); **João Canas Ferreira**, Univ. do Porto (Portugal); **Marcello Coppola**, STMicroelectronics (France); **Eduardo de la Torre-Arnanz**, Univ. Politécnica de Madrid (Spain); **Valerio Frascolla**, Intel GmbH (Germany); **Mohammed Ismail**, Khalifa Univ. of Science, Technology and Research (United Arab Emirates); **George Kornaros**, Technological Education Institute of Crete (Greece); **Jose Francisco Lopez Feliciano**, Univ. de Las Palmas de Gran Canaria (Spain); **Celia López-Ongil**, Univ. Carlos III de Madrid (Spain); **Mar Martínez**, Univ. de Cantabria (Spain); **Natividad Martínez**, Reutlingen Univ. (Germany); **Salvador Mir**, TIMA Lab. (France); **Pere Lluís Miribel-Català**, Univ. de Barcelona (Spain); **Simone Orcioni**, Univ. Politecnica delle Marche (Italy); **Ioannis Papaefstathiou**, Technical Univ. of Crete (Greece); **Jorge Portilla**, Univ. Politécnica de Madrid (Spain); **Franco Ripa**, Korg (Italy); **Ángel B. Rodríguez-Vázquez**, Univ. de Sevilla (Spain); **Ruben Salvador**, Univ. Politécnica de Madrid (Spain); **Sergio Saponara**, Univ. di Pisa (Italy); **Roberto Sarmiento Rodríguez**, Univ. de Las Palmas de Gran Canaria (Spain); **Ralf Seepold**, Hochschule Konstanz (Germany); **Walter Stechele**, Technische Univ. München (Germany); **Christian Stehno**, CoSynth GmbH & Co. KG (Germany); **Fabian Vargas**, Pontificia Univ. do Rio Grande do Sul (Brazil); **Alisson Vasconcelos de Brito**, Univ. Federal da Paraíba (Brazil)

Wednesday 24 April

Plenary Session

Room: **Pelvoux auditorium** Wed 9:30 to 11:00



Symposium Opening

Thomas Becker, EADS Deutschland GmbH (Germany) and nta Isny (Germany)



Welcome by Local Co-Chair

Marc Belleville, CEA-Leti (France)



Session Chair: **Marc Belleville**, CEA-Leti (France)

10:00: **An autonomous structural health monitoring solution**, Carol A. Featherston, Karen Holford, Rhys Pullin, Jonathan Lees, Mark J. Eaton, Matthew Pearson, Cardiff Univ. (United Kingdom) .. [8763-501]

Session 1

Room: **Chartreuse** Wed 11:00 to 12:40

Analog Circuit Design

Session Chair: **Massimo Conti**, Univ. Politecnica delle Marche (Italy)

11:00: **A 2.5 Gb/s low-voltage CMOS fully-differential adaptive equalizer**, Erick Guerrero Rodriguez, Cecilia Gimeno, Concepcion Aldea, Santiago Celma-Pueyo, Univ. de Zaragoza (Spain) [8764-1]

11:20: **Reducing flicker noise up-conversion in a 65-nm CMOS VCO in the 1.6-to-2.6 GHz band**, Andrea G. Bonfanti, Federico Pepe, Carlo Samori, Salvatore Levantino, Andrea L. Lacaita, Politecnico di Milano (Italy) [8764-2]

11:40: **Rectennas design using DG-MOSFETs**, Raúl R. Rodríguez del Rosario, IUMA (Spain); Benito B. González Pérez, Javier A. García, IUMA (Spain) and Univ. de Las Palmas de Gran Canaria (Spain) [8764-33]

12:00: **Energy harvesting with piezoelectric applied on shoes**, Enrico Camilloni, Mirko Carloni, Marco Giammarini, Massimo Conti, Univ. Politecnica delle Marche (Italy) [8764-4]

12:20: **A 1.2 V low-power OpAmp for integrated lock-in amplifiers**, María Valero, Santiago Celma-Pueyo, Nicolás Medrano-Marques, Univ. de Zaragoza (Spain); Belen Calvo, Cecilia Gimeno, University of Zaragoza (Spain) [8764-5]

Lunch Break Wed 12:40 to 14:00

Session 2

Room: **Chartreuse** Wed 14:00 to 15:00

Multimedia Applications

Session Chair: **Roberto Sarmiento Rodríguez**, Univ. de Las Palmas de Gran Canaria (Spain)

14:00: **FPGA-based implementation for steganalysis: a JPEG-compatibility algorithm**, Eric Gutierrez-Fernandez, Marta Portela-García, Celia López-Ongil, Mario Garcia Valderas, Univ. Carlos III de Madrid (Spain) [8764-6]

14:20: **Implementation of scalable video coding deblocking filter from high-level SystemC description**, Pedro P. Carballo, Omar Espino, Romen Neris, Pedro Hernández, Tomasz M. Szydzik, Antonio Nunez, Univ. de Las Palmas de Gran Canaria (Spain) [8764-7]

14:40: **Network-on-chip emulation framework for multimedia SoC development**, Garbí Singla, Félix B. Tobajas Guerrero, Valentín De Armas, Univ. de Las Palmas de Gran Canaria (Spain) [8764-9]

Coffee Break Wed 15:00 to 15:30

Session 3

Room: **Chartreuse** Wed 15:30 to 16:50

Modeling and Simulation

Session Chair: **Concepción Aldea**, Univ. de Zaragoza (Spain)

15:30: **Protocol-level noise analysis of networked systems based on simulation/analytical approach**, Massimo Conti, Giovanni Battista Vece, Eros Mazza, Univ. Politecnica delle Marche (Italy) [8764-10]

15:50: **A simulation technique to compute phase noise induced from cyclostationary noises sources in RF oscillators**, Andrea G. Bonfanti, Federico Pepe, Salvatore Levantino, Carlo Samori, Paolo Maffezzoni, Andrea L. Lacaita, Politecnico di Milano (Italy) [8764-11]

16:10: **An IOMMU for hardware-assisted full virtualization of heterogeneous multicore SoCs**, George Kornaros, Kostantinos Harteros, M. Astrinaki, I. Christoforakis, Technological Educational Institute of Crete (Greece); Marcello Coppola, M. D. Grammatikakis, STMicroelectronics (France) [8764-12]

16:30: **Effective properties of multi-phase anisotropic systems**, Vladimir V. Shchennikov, Institute of Metal Physics (Russian Federation); Sergey V. Ovsyannikov, Univ. Bayreuth (Germany); Natalia V. Morozova, Igor V. Korobeynikov, Institute of Metal Physics (Russian Federation); Vsevolod V. Shchennikov Jr., Institute of Engineering Science (Russian Federation) .. [8764-13]

Thursday 25 April

Session 4

Room: Chartreuse Thu 9:00 to 10:00

Signal Processing

Session Chair: **Stefan Bosse**, Univ. Bremen (Germany)

- 9:00: **A low-cost PSoC architecture for long FFT**, Pietro Angelo Lomoio, Pasquale Corsonello, Univ. della Calabria (Italy) [8764-14]
- 9:20: **High speed Radix-4 soft-decision Viterbi decoder for MB-OFDM UWB system**, Guixuan Liang, Jorge Portilla, Teresa Riesgo, Univ. Politécnica de Madrid (Spain) [8764-15]
- 9:40: **A comparative study of continuous-time analog adaptive equalizers**, Carlos Sánchez-Azqueta, Santiago Celma-Pueyo, Univ. de Zaragoza (Spain) [8764-17]
- Coffee Break Thu 10:00 to 10:40

Session 5

Room: Chartreuse Thu 10:40 to 12:00

Reconfigurability and Virtualization (DREAMS)

Session Chair: **Celia López-Ongil**, Univ. Carlos III de Madrid (Spain)

- 10:40: **Architectural evaluation of dynamic and partial reconfigurable systems designed with DREAMS tool**, Andrés Otero, Ángel Gallego, Eduardo de la Torre-Ananz, Teresa Riesgo, Univ. Politécnica de Madrid (Spain) [8764-18]
- 11:00: **Virtual platform for power and security analysis of wireless sensor network**, Alvaro Diaz Suarez, Javier Gonzalez Bayon, Pablo Sanchez Espeso, Univ. de Cantabria (Spain) [8764-19]
- 11:20: **A hierarchical scheduling and management solution for dynamic reconfiguration in FPGA-based embedded systems**, Teresa G. Cervero García, Sebastian Lopez Suarez, Roberto Sarmiento Rodríguez, Univ. de Las Palmas de Gran Canaria (Spain); Julio Daniel Dondo, Fernando Rincón, Juan Carlos López, Univ. de Castilla-La Mancha (Spain); A. Gómez, Univ. de Las Palmas de Gran Canaria (Spain) [8764-20]
- 11:40: **Efficient and decentralized data transfer architecture for component based embedded systems**, Jesus Barba, Univ. de Castilla-La Mancha (Spain) [8764-21]
- Lunch Break Thu 12:00 to 13:30

Plenary Session

Room: Pelvoux auditorium Thu 13:30 to 14:30

Session Chair: **Christos Tsamis**,

National Ctr. for Scientific Research Demokritos (Greece)



- 13:30: **Biologically inspired large scale chemical sensor arrays and embedded data processing**, Santiago Marco, A. Gutiérrez-Gálvez, Univ. de Barcelona (Spain) and Institute for Bioengineering of Catalonia (Spain); Anders Lansner, Royal Institute of Technology (Sweden); Dominique Martinez, LORIA (France); J. P. Rospars, Institut National de la Recherche Agronomique (France); Romeo Beccherelli, Istituto per la Microelettronica e Microsistemi (Italy); Alexandre Perera, Univ. Politécnica de Catalunya (Spain); Tim C. Pearce, Univ. of Leicester (United Kingdom); Paul Vershure, Univ. Pompeu Fabra (Spain); Krishna Persaud, The Univ. of Manchester (United Kingdom) [8763-502]

Poster Session

Room: Pelvoux Salle de Reception Thu 14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Poster authors are encouraged to display their posters beginning at 10:00 on Wednesday for extended viewing.

- Processor core for real time background identification of HD video based on OpenCV Gaussian mixture model algorithm**, Mariangela Genovese, Ettore Napoli, Univ. degli Studi di Napoli Federico II (Italy) [8764-8]
- Transmission line pulse system for avalanche characterization of high power semiconductor devices**, Michele Riccio, Giovanni Ascione, Giuseppe De Falco, Luca Maresca, Martina De Laurentis, Andrea Irace, Giovanni Breglio, Univ. degli Studi di Napoli Federico II (Italy) [8764-30]
- State of the art direct digital frequency synthesis methodologies and their performance on FPGA**, Ettore Napoli, Mariangela Genovese, Univ. degli Studi di Napoli Federico II (Italy) [8764-31]
- Analysis of phase transitions using multi-phase model**, Vladimir V. Shchennikov, Institute of Metal Physics (Russian Federation); Sergey V. Ovsyannikov, Univ. Bayreuth (Germany); Igor V. Korobeynikov, Grigory V. Vorontsov, Natalia V. Morozova, Institute of Metal Physics (Russian Federation); Vsevolod V. Shchennikov Jr., Institute of Engineering Science (Russian Federation) [8764-32]
- MPPM system for indoor wireless optical communications with angle-diversity detection**, Alberto García-Viera Fernández, Silvestre Rodríguez Pérez, Beatriz Rodríguez Mendoza, Oswaldo B. González Hernández, Alejandro J. Ayala Alfonso, Univ. de La Laguna (Spain) [8764-34]

Session 6

Room: Chartreuse Thu 16:30 to 17:50

Test and Technology

Session Chair: **Marcello Coppola**, STMMicroelectronics (France)

- 16:30: **Hardening digital systems with distributed functionality: robust networks**, Anna Vaskova, Celia López-Ongil, Marta Portela-García, Mario Garcia Valderas, Univ. Carlos III de Madrid (Spain) [8764-22]
- 16:50: **Fault tolerant architectures by partial reconfiguration**, Luis Andrés Cardona, Univ. Autònoma de Barcelona (Spain); Guo Yi, Ctr. Nacional de Microelectrónica (Spain); Carles Ferrer Ramis, Ctr. Nacional de Microelectrónica (Spain) and Univ. Autònoma de Barcelona (Spain) [8764-23]
- 17:10: **Introduction on performance analysis and profiling methodologies for KVM on ARM virtualization**, Antonios Motakis, Alexander Spyridakis, Daniel Raho, Virtual Open Systems (France) [8764-24]
- 17:30: **OPC mask simplification using over-designed timing slack of standard cells**, Yifan Qu, Chun Huat Heng, Arthur Tay, Tong Heng Lee, National Univ. of Singapore (Singapore) [8764-25]

Friday 26 April

Session 7

Room: Chartreuse Fri 9:00 to 10:20

Communication and WSNs

Session Chair: **Teresa Riesgo**, Univ. Politécnica de Madrid (Spain)

- 9:00: **A micropower supervisor for wireless nodes with a digital pulse frequency modulator battery monitor**, Mirko Carloni, Rocco D'Aparo, Pierpaolo Scorrano, Univ. Politecnica delle Marche (Italy); Berardo Naticchia, Smart Space Solutions S.r.l (Italy); Massimo Conti, Univ. Politecnica delle Marche (Italy) [8764-26]
- 9:20: **Wireless sensor network for wide-area high-mobility applications**, Ignacio Del Castillo, Félix B. Tobajas Guerrero, Roberto Esper-Cháin, Valentín De Armas, Univ. de Las Palmas de Gran Canaria (Spain) [8764-27]
- 9:40: **Intelligent microchip networks: an agent-on-chip synthesis framework for the design of smart and robust sensor networks**, Stefan Bosse, Univ. Bremen (Germany) [8764-28]
- 10:00: **STAR: FPGA-based software defined satellite transponder**, Daniele Davalle, Riccardo Cassettari, Sergio Saponara, Luca Fanucci, Univ. di Pisa (Italy); Luca Cucchi, Intecs S.p.A (Italy); Franco Bigongiari, Sitael S.p.A. (Italy); Walter Errico, Sitael (Italy) [8764-29]
- 10:20: **Design and optimization of an RF energy harvesting system from multiple sources**, Mai Ali, Lutfi Albasha, Nassir Qaddoumi, American Univ. of Sharjah (United Arab Emirates) [8764-35]

Bio-MEMS and Medical Microdevices

Conference Chair: **Angeliki Tserepi**, National Ctr. for Scientific Research Demokritos (Greece)

Conference Co-Chairs: **Manuel Delgado-Restituto**, Instituto de Microelectrónica de Sevilla (Spain); **Eleni Makarona**, National Ctr. for Scientific Research Demokritos (Greece)

Programme Committee: **Ryan C. Bailey**, Univ. of Illinois at Urbana-Champaign (United States); **Ricardo A. Carmona-Galán**, IMSE-CNM (Spain); **Gert Cauwenberghs**, Univ. of California, San Diego (United States); **Nikos Chronis**, Univ. of Michigan (United States); **Jens Ducree**, Dublin City Univ. (Ireland); **Artur Dybko**, Warsaw Univ. of Technology (Poland); **Laura Maria Lechuga**, Ctr. d' Investigacions en Nanociència i Nanotecnologia (Spain); **Konstantinos Misiakos**, National Ctr. for Scientific Research Demokritos (Greece); **Ioannis Raptis**, National Ctr. for Scientific Research Demokritos (Greece); **Niclas Roxhed**, Royal Institute of Technology (Sweden); **Ramón Ruiz-Merino**, Univ. Politècnica de Cartagena (Spain); **Josep Samitier Martí**, Univ. de Barcelona (Spain); **Winnie E. Svendsen**, Technical Univ. of Denmark (Denmark); **Sabeth Verpoorte**, Univ. of Groningen (Netherlands); **Fernando Vidal-Verdú**, Univ. de Málaga (Spain); **Jean-Louis Viovy**, Institut Curie (France)

Thursday 25 April

Session 1

Room: Meije Thu 9:00 to 10:20

Neural and Cellular Interfaces I

Session Chair: **Manuel Delgado-Restituto**, Instituto de Microelectrónica de Sevilla (Spain)

9:00: **WIMAGINE: an implantable electronic platform for wireless 64-channel ECoG recording**, Michael Foerster, Jean Porcherot, Stéphanie Robinet, Raffaele D'Errico, Vincent Josselin, Corinne Mestais, Guillaume Charvet, CEA-LETI (France) [8765-1]

9:20: **A battery-free 64-channel neural spike wireless sensor array**, Alberto Rodríguez-Pérez, Jesús Ruiz-Amaya, Jens Masuch, José Antonio Rodríguez-Rodríguez, Manuel Delgado-Restituto, Ángel B. Rodríguez-Vázquez, Ctr. Nacional de Microelectrónica (Spain) [8765-2]

9:40: **Low-power techniques in multi-channel cortical recording implants (Invited Paper)**, Alexandre Schmid, Ecole Polytechnique Fédérale de Lausanne (Switzerland) [8765-3]

Coffee Break Thu 10:20 to 10:50

Session 2

Room: Meije Thu 10:50 to 12:10

BioMEMS Technologies I

Session Chair: **Yves Fouillet**, CEA-LETI (France)

10:50: **Design of cell microgripper and actuation strategy**, Aurelio Soma, Sonia Iamoni, Politecnico di Torino (Italy) [8765-4]

11:10: **Thermal actuated micropump for biological and medical application**, David Rabaud, Rémy Lefevre, Arnaud Salette, Loïc Dargent, Hakim Marko, Quentin Le Masne, Christophe Dehan, Panagiota Morfouli, Laurent Montès, IMEP-LAHC (France) [8765-5]

11:30: **Optimization of dielectrophoretic separation and concentration of pathogens in biological samples**, Emilie Bisceglia, Commissariat à l'Énergie Atomique (France); Myriam Cubizolles, CEA-LETI (France); Frédéric Mallard, bioMérieux SA (France); Florian Pineda, CEA (France); Olivier Francais, Bruno Le Poulf, Ecole Normale Supérieure de Cachan (France) [8765-6]

11:50: **Modeling of an implantable device for remote arterial pressure measurement**, Jose A. Miguel, Yolanda Lechuga, Mar Martinez, Univ. de Cantabria (Spain) [8765-7]

Lunch Break Thu 12:10 to 13:30

Plenary Session

Room: Pelvoux auditorium Thu 13:30 to 14:30

Session Chair: **Christos Tsamis**, National Ctr. for Scientific Research Demokritos (Greece)



13:30: **Biologically inspired large scale chemical sensor arrays and embedded data processing**, Santiago Marco, A. Gutiérrez-Gálvez, Univ. de Barcelona (Spain) and Institute for Bioengineering of Catalonia (Spain); Anders Lansner, Royal Institute of Technology (Sweden); Dominique Martinez, LORIA (France); J. P. Rospars, Institut National de la Recherche Agronomique (France); Romeo Beccherelli, Istituto per la Microelettronica e Microsistemi (Italy); Alexandre Perera, Univ. Politècnica de Catalunya (Spain); Tim C. Pearce, Univ. of Leicester (United Kingdom); Paul Vershure, Univ. Pompeu Fabra (Spain); Krishna Persaud, The Univ. of Manchester (United Kingdom) [8763-502]

Poster Session

Room: Pelvoux Salle de Reception Thu 14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Poster authors are encouraged to display their posters beginning at 10:00 on Wednesday for extended viewing.

Lab-on-a disc platform for particle focusing induced by inertial forces, Maria Kitsara, Gerson R. Aguirre, Dublin City Univ. (Ireland); Vitaly Efremov, Dublin City University (Ireland) and Biomedical Diagnostics Institute (Ireland); Jens Ducree, Dublin City Univ. (Ireland) [8765-22]

Physical and chemical gels of lipid nanoparticles for controlled delivery of lipophilic drugs and proteins, Anne-Claude Couffin, Thomas Delmas, Jean-Sébastien Thomann, Ismail Cheibani, Emilie Heinrich, Thomas Courant, Antoine Hoang, Commissariat à l'Énergie Atomique (France); Rachel Auzély, Eric Bayma, Ctr. de Recherches sur les Macromolécules Végétales (France); Isabelle Texier-Nogues, Commissariat à l'Énergie Atomique (France) [8765-23]

Effect of terahertz radiation on cell, Liliya Dvoretzskaya, National Research Univ. of Information Technologies, Mechanics and Optics (Russian Federation) [8765-24]

Tri-axial tactile sensing element, Julian Castellanos-Ramos, Rafael Navas-González, Fernando Vidal-Verdú, Univ. de Málaga (Spain) [8765-25]

Monitoring the effects of fibrinogen concentration on blood coagulation using quartz crystal microbalance (QCM) and its comparison with thromboelastography, Ramji S. Lakshmanan, Vitaly Efremov, Sinéad Cullen, Barry Byrne, Anthony J. Killard, Dublin City Univ. (Ireland) [8765-26]

Session 3

Room: Meije Thu 16:30 to 17:50

BioMEMS Technologies II

Session Chair: **Ioannis Raptis**, National Ctr. for Scientific Research Demokritos (Greece)

16:30: **A novel microfluidic anti-factor Xa assay device for monitoring anticoagulant therapy at the point of care**, Leanne F. Harris, Paul V. Rainey, Vanessa Castro-López, Dublin City Univ. (Ireland); James S. O'Donnell, Trinity College Dublin (Ireland); Anthony J. Killard, Univ. of the West of England (United Kingdom) [8765-8]

16:50: **Probing the mechanism of material specific peptides for optical biosensors**, Sathish Kumar Ramakrishnan, Marta Martin, Elias Estephan, Thierry Cloitre, Csilla Gergely, Univ. Montpellier 2 (France) [8765-9]

17:10: **Cell array fabrication by plasma nanotexturing of PMMA**, Dimitrios Kontziampasis, Athanasia Bourkoura, Panayiota Petrou, Angeliki Tserepi, Sotirios E. Kakabakos, Evangelos Gogolides, National Ctr. for Scientific Research Demokritos (Greece) [8765-10]

17:30: **Deflection of microcantilever beams subjected by a point force**, Davut E. Sahin, Bozok Univ. (Turkey); Mohammad A. Changizi, Ion Stiharu, Concordia Univ. (Canada) [8765-11]

Friday 26 April

Session 4

Room: Meije Fri 9:00 to 10:20

Neural and Cellular Interfaces II

Session Chair: **Rafael Navas-González**, Univ. de Málaga (Spain)

9:00: **Wireless data and power transmission aiming intracranial epilepsy monitoring**, Gurkan Yilmaz, Oguz Atasoy, Catherine Dehollain, Ecole Polytechnique Fédérale de Lausanne (Switzerland) [8765-12]

9:20: **BIO instrument for parallel impedance spectroscopy of biological cell cultures**, Thomas Frank, Ingo Tobehn, Alexander Rösner, CiS Forschungsinstitut für Mikrosensorik und Photovoltaik GmbH (Germany) [8765-13]

9:40: **Polymer electronics for in vitro electrophysiology**, Michele Sessolo, Dion Khodagholy, Adel Hama, Jonathan Rivnay, Ecole Nationale Supérieure des Mines de Saint-Étienne (France); Esther Steidl, Bruno Buisson, Neuroservice (France); George G. Malliaras, Ecole Nationale Supérieure des Mines de Saint-Étienne (France) [8765-14]

10:00: **Zinc oxide nanostructures as low-cost templates for neuronal circuits**, Anna Kritharidou, Zafeiroula Georgoussi, Christos Tsamis, Eleni Makarona, National Ctr. for Scientific Research Demokritos (Greece) [8765-15]

Coffee Break Fri 10:20 to 10:50

Session 5

Room: Meije Fri 10:50 to 12:10

Biosensors

Session Chair: **Eleni Makarona**,

National Ctr. for Scientific Research Demokritos (Greece)

10:50: **All-silicon monolithic optoelectronic platform for multi-analyte biochemical sensing** (*Invited Paper*), Konstantinos Misiakos, National Ctr. for Scientific Research Demokritos (Greece) [8765-16]

11:30: **Real-time polarimetric biosensing using macroporous alumina membranes**, Jesús Alvarez, Univ. de València (Spain); Laura Sola, Consiglio Nazionale delle Ricerche (Italy); Geoff Platt, Farfield Group Ltd. (United Kingdom); Marina Cretich, Consiglio Nazionale delle Ricerche (Italy); Marcus Swann, Farfield Group Ltd. (United Kingdom); Marcella Chiari, Consiglio Nazionale delle Ricerche (Italy); Daniel Hill, Juan P. Martínez-Pastor, Univ. de València (Spain) . . . [8765-17]

11:50: **Nanobiosensor for HPV vaccine monitoring**, Jose A. Saez, Elisabeth Fernandez, Jordi Suarez, Socorro Vazquez, LEITAT Technological Ctr. (Spain); Marina Cazorla, Maria J. Lopez-Bosque, Alvaro Mata, Parc Científic de Barcelona (Spain); Marc Massa, Francesc Mitjans, Laurent Aubouy, LEITAT Technological Ctr. (Spain) . . . [8765-18]

Lunch Break Fri 12:10 to 13:30

Plenary Session

Room: Pelvoux auditoriumFri 13:30 to 14:30

Session Chair: **Marc Belleville**, CEA-LETI (France)



13:30: **Micro- and nanoscale thermoelectrics: an overview over basic concepts and recent advances**, Markus Winkler, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany); Martin Jaegle, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Xi Liu, Christian-Albrechts Univ. zu Kiel (Germany); Jan Koenig, Harald Boettner, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Lorenz Kienle, Christian-Albrechts-Univ. zu Kiel (Germany) . . . [8763-503]

Session 6

Room: Meije Fri 14:30 to 15:50

Microfluidics and LOCs

Session Chair: **Angeliki Tserepi**,

National Ctr. for Scientific Research Demokritos (Greece)

14:30: **Design and fabrication of high-throughput application-specific microfluidic devices for studying single-cell responses to extracellular perturbations**, Amin Abbaszadeh Banaeiyan, Göteborg Univ. (Sweden); Doryaneh Ahmadpour, Univ. of Gothenburg (Sweden); Caroline Beck Adiels, Mattias Goksör, Göteborg Univ. (Sweden) [8765-19]

14:50: **Integrated biochip for PCR-based DNA amplification and detection on capacitive biosensors**, Nikolaos Vourdas, Despina Moschou, National Ctr. for Scientific Research Demokritos (Greece); George Tsekenis, Biomedical Research Foundation, Academy of Athens (Greece); Ioanna Zergioti, National Technical Univ. of Athens (Greece); Stavros Chatzandroulis, Angeliki Tserepi, National Ctr. for Scientific Research Demokritos (Greece) [8765-20]

15:10: **A passive microfluidic fragmentation system for continuous fluid-particles separation**, Antoine Viana, Julien Marchalot, Yves Fouillet, Lucas Digianantonio, Myriam Cubizolles, CEA-LETI (France); Jean-Luc Achard, Lab. des Ecoulements Géophysiques et Industriels (France) [8765-21]

Nanotechnology VI

Conference Chair: **Rainer Adelung**, Christian-Albrechts-Univ. zu Kiel (Germany)

Conference Co-Chair: **Ion M. Tiginyanu**, Academy of Sciences of Moldova (Republic of Moldova)

Programme Committee: **Sergey V. Gaponenko**, B.I. Stepanov Institute of Physics (Belarus); **Mircea Dragoman**, National Institute for Research and Development in Microtechnologies (Romania); **Jan Linnros**, Royal Institute of Technology (Sweden); **James Lloyd-Hughes**, Univ. of Oxford (United Kingdom); **Hidenori Mimura**, Shizuoka Univ. (Japan); **Hadis Morkoç**, Virginia Commonwealth Univ. (United States); **Kornelius Nielsch**, Univ. Hamburg (Germany); **Thierry Pauporté**, Ecole Nationale Supérieure de Chimie de Paris (France); **Andrei Sarua**, Univ. of Bristol (United Kingdom); **Marion A. Stevens-Kalceff**, The Univ. of New South Wales (Australia); **Anatoly V. Zayats**, King's College London (United Kingdom)

Wednesday 24 April

Plenary Session

Room: **Peloux auditorium** Wed 9:30 to 11:00



Symposium Opening

Thomas Becker, EADS Deutschland GmbH (Germany) and nta Isny (Germany)



Welcome by Local Co-Chair

Marc Belleville, CEA-Leti (France)



Session Chair: **Marc Belleville**, CEA-Leti (France)

10:00: **An autonomous structural health monitoring solution**, Carol A. Featherston, Karen Holford, Rhys Pullin, Jonathan Lees, Mark J. Eaton, Matthew Pearson, Cardiff Univ. (United Kingdom) ... [8763-501]

Opening Remarks

Room: **Sept laux** 11:05 to 11:20

Rainer Adelung, Christian-Albrechts-Univ. zu Kiel (Germany);
Ion Tiginyanu, Academy of Sciences of Moldova (Republic of Moldova)

Session 1

Room: **Sept laux** Wed 11:20 to 12:40

Nanophotonics and Plasmonics I

Session Chair: **Rainer Adelung**,
Christian-Albrechts-Univ. zu Kiel (Germany)

11:20: **Nanotechnology for advanced photonic materials and structures** (*Invited Paper*), Robert W. Boyd, Univ. of Ottawa (Canada) [8766-1]

12:00: **Plasmonic nanorod metamaterials** (*Invited Paper*), Wayne Dickson, Gregory A. Wurtz, Anatoly V. Zayats, King's College London (United Kingdom) [8766-2]

Lunch Break Wed 12:40 to 14:00

Session 2

Room: **Sept laux** Wed 14:00 to 14:40

Nanophotonics and Plasmonics II

Session Chair: **Rainer Adelung**,
Christian-Albrechts-Univ. zu Kiel (Germany)

14:00: **Photocathodes using surface plasmon resonance**, Hidenori Mimura, Chung-Han Chen, Yoichiro Neo, Takahiro Matsumoto, Shizuoka Univ. (Japan) [8766-3]

14:20: **Analysis of resolution limit in plasmonic lithography and high-density line patterning for practical applications beyond 2x nm half pitch**, Jae W. Hahn, Yonsei Univ. (Korea, Republic of) [8766-4]

Session 3

Room: **Sept laux** Wed 14:40 to 17:10

Quantum Dots and Nanowires

Session Chair: **Ion M. Tiginyanu**,
Academy of Sciences of Moldova (Republic of Moldova)

14:40: **Dense chains of stacked quantum dots in Ge/Si heterostructures** (*Invited Paper*), Vladimir A. Yuryev, Larisa V. Arapkina, Mikhail S. Storozhevikh, Oleg V. Uvarov, Victor P. Kalinushkin, A. M. Prokhorov General Physics Institute (Russian Federation) [8766-5]

Coffee Break Wed 15:20 to 15:50

15:50: **Exciton lifetime measurements on single silicon quantum dots**, Fatemeh Sangghaleh, Royal Institute of Technology (Sweden); Benjamin Bruhn, Torsten Schmidt, Electrum Lab. (Sweden); Jan Linnros, Royal Institute of Technology (Sweden) [8766-6]

16:10: **Semiconductor nanowire based devices for energy and sensor applications**, Laurent Montès, Ronan Hinchet, Gustavo A. Ardila Rodriguez, Xin Xu, IMEP-LAHC (France); Alexis Potié, IMEP-LAHC (France) and LTM CNRS (France); Thierry Baron, LTM CNRS (France); Mireille Mouis, IMEP-LAHC (France) [8766-7]

16:30: **Properties of individual GaP/ZnO core-shell nanowires with radial PN junction**, Jozef Novak, Agata Laurencikova, Peter Elias, Stanislav Hasenohrl, Roman Stoklas, Institute of Electrical Engineering (Slovakia); Jaroslav Kovac, Ivan Novotny, Slovak Univ. of Technology (Slovakia) [8766-8]

16:50: **Photoconductivity of catalyst-free grown aluminum nitride nanowires**, Kasif Teker, Istanbul Sehir Univ. (Turkey) and Frostburg State Univ. (United States); Andrew Siemann, Frostburg State Univ. (United States) [8766-9]

Thursday 25 April

Session 4

Room: **Sept laux** Thu 9:00 to 10:20

Carbon Nanotubes, Graphene

Session Chair: **Hidenori Mimura**, Shizuoka Univ. (Japan)

9:00: **Graphene nanoelectronics for high frequency applications**, Mircea Dragoman, National Institute for Research and Development in Microtechnologies-IMT Bucharest (Romania) [8766-10]

9:20: **Aerographite: mechanical, electrical and optical properties of a cellular carbon nanomaterial with densities below 0.2 mg/ccm**, Arnim Schuchardt, Christian-Albrechts-Univ. zu Kiel (Germany); Matthias Mecklenburg, Technische Univ. Hamburg-Harburg (Germany); Yogendra Kumar Mishra, Sören Kaps, Rainer Adelung, Christian-Albrechts-Univ. zu Kiel (Germany); Karl Schulte, Technische Univ. Hamburg-Harburg (Germany) [8766-11]

9:40: **Humidity sensing of an epoxy/MWCNT composite by electrical conductivity measurements**, Heinz C. Neitzert, Univ. degli Studi di Salerno (Italy); Andrea Sorrentino, Consiglio Nazionale delle Ricerche (Italy); Luigi Vertuccio, Univ. degli Studi di Salerno (Italy) [8766-12]

10:00: **Amorphous silicon-graphene anodes for lithium ion batteries**, Filippos Farmakis, Demokritos Univ. of Thrace (Greece); Kostas Alexandrou, Columbia Univ. (United States); Costas Elmasides, Systems Sunlight S.A. (Greece); Ioannis Kymissis, Columbia Univ. (United States); Nikolaos Georgoulas, Demokritos Univ. of Thrace (Greece) [8766-13]

Coffee Break Thu 10:20 to 10:50

Session 5

Room: Sept laux Thu 10:50 to 12:10

Nanoparticles for Biomedicine

Session Chair: **Mircea Dragoman**, National Institute for Research and Development in Microtechnologies-IMT Bucharest (Romania)

10:50: **A new application of bionanoparticles as drug delivery in breast cancer**, Neda Esfandiari, Technical Univ. of Denmark (Denmark) and Univ. of Tehran (Iran, Islamic Republic of); Mohsen Karimi, Karolinska Univ. (Sweden); Mina Kohi Habibi, Univ. of Tehran (Iran, Islamic Republic of); Masoud Solimani, Tarbiat Modares Univ. (Iran, Islamic Republic of); Winnie E. Svendsen, Technical Univ. of Denmark (Denmark) [8766-14]

11:10: **Effects of morphology on the emission of photons from GaN membranes fabricated by using surface charge lithography**, Marion A. Stevens-Kalceff, The Univ. of New South Wales (Australia); Ion M. Tiginyanu, Institute of Electronic Engineering and Nanotechnologies (Republic of Moldova) and Academy of Sciences of Moldova (Republic of Moldova); Veaceslav Popa, Technical Univ. of Moldova (Republic of Moldova); Patrice Brenner, Fachhochschule Karlsruhe Technik und Wirtschaft (Germany); Dagmar Gerthsen, Karlsruher Univ. (Germany) [8766-25]

11:30: **Laser irradiation of biofunctional magnetic nanoparticles in aqueous solution**, Alexander I. Omelchenko, Emil N. Sobol, Institute on Laser and Information Technologies (Russian Federation); Svetlana S. Pavlova, Ugric State Univ. (Russian Federation) [8766-16]

11:50: **Complexation of porphyrins with silver nanoparticles**, Anna Gyulkhandanyan, Institute of Biochemistry (Armenia); Robert K. Ghazaryan, Yerevan State Medical Univ. (Armenia); Vardan Gasparyan, Marina Paronyan, Grigor V. Gyulkhandanyan, Institute of Biochemistry (Armenia) [8766-17]

Lunch Break Thu 12:10 to 13:30

Plenary Session

Room: Pelvoux auditorium Thu 13:30 to 14:30

Session Chair: **Christos Tsamis**, National Ctr. for Scientific Research Demokritos (Greece)



13:30: **Biologically inspired large scale chemical sensor arrays and embedded data processing**, Santiago Marco, A. Gutiérrez-Gálvez, Univ. de Barcelona (Spain) and Institute for Bioengineering of Catalonia (Spain); Anders Lansner, Royal Institute of Technology (Sweden); Dominique Martinez, LORIA (France); J. P. Rospars, Institut National de la Recherche Agronomique (France); Romeo Beccherelli, Istituto per la Microelettronica e Microsistemi (Italy); Alexandre Perera, Univ. Politècnica de Catalunya (Spain); Tim C. Pearce, Univ. of Leicester (United Kingdom); Paul Vershure, Univ. Pompeu Fabra (Spain); Krishna Persaud, The Univ. of Manchester (United Kingdom) [8763-502]

Poster Session

Room: Pelvoux Salle de Reception Thu 14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Poster authors are encouraged to display their posters beginning at 10:00 on Wednesday for extended viewing.

Creation of entangled photons by two level atom trapped in one-dimensional nanocavity with weakly decaying resonance mode, Vladislav Cheltsov, Moscow State Mining Univ. (Russian Federation) [8766-23]

Calculation of nanoparticle surface shape instability development, Tamara Pogosyan, Sergey A. Chivilikhin, National Research Univ. of Information Technologies, Mechanics and Optics (Russian Federation) [8766-26]

Power generation in microbial fuel cell with simultaneous metal sulfide nanoparticles formation by sulfur-reducing bacteria, Oresta M. Vasylyv, Oleksandr I. Bilyi, Yaroslav P. Ferensovykh, Svitlana O. Hnatysh, Ivan Franko National Univ. of L'viv (Ukraine) [8766-27]

Optical properties of silver nanoparticles coated by cyanine dyes molecular overlayers, Nikita A. Toropov, Anton A. Starovoytov, Viktor V. Zakharov, Nikita B. Leonov, Elena N. Kaliteevskaya, Tigran A. Vartanyan, National Research Univ. of Information Technologies, Mechanics and Optics (Russian Federation) . . [8766-28]

Simulation of size distribution function's evolution in colloidal solutions of zinc oxide nanoparticles, Anton V. Alfirmov, Elizabeth M. Arysyanova, Sergey A. Chivilikhin, National Research Univ. of Information Technologies, Mechanics and Optics (Russian Federation) [8766-30]

Bacterial reduction of silver nitrate as the potential mechanism for silver nanoparticles forming, Olga D. Maslovska, Oleksandr I. Bilyi, Vasyly B. Getman, Svitlana Hnatysh, Ivan Franko National Univ. of L'viv (Ukraine) [8766-31]

Modelling the initial stage of porous alumina growth during anodization, Elizabeth M. Arysyanova, Anton V. Alfirmov, Sergey A. Chivilikhin, National Research Univ. of Information Technologies, Mechanics and Optics (Russian Federation) [8766-32]

Implementation of all-optical logic gate by adiabatic population transfer, Emil A. Gazazyan, Gayane Grigoryan, Vigen O. Chalytykian, Olesya Tikhova, Institute for Physical Research (Armenia) [8766-33]

Gold nanoparticles embedded in organic/inorganic hybrid matrix: electrical and electrochemical behavior, Sandra Moreira, Carlos Silva, Maria de Jesus Gomes de Matos Gomes, Manuel Filipe Costa, Univ. do Minho (Portugal) [8766-34]

Session 6

Room: Sept laux Thu 16:30 to 18:10

Microfabrication

Session Chair: **Rainer Adelung**, Christian-Albrechts-Univ. zu Kiel (Germany)

16:30: **Line width roughness reduction strategies for low energy multibeam lithography**, Julien Jussot, Univ. Joseph Fourier (France); Béatrice Icard, CEA-LETI (France); Erwine Pargon, LTM CNRS (France); Claire Sourd, CEA-LETI (France); Jessy Bustos, STMicroelectronics (France); Isabelle Servin, Laurent Pain, CEA-LETI (France) [8766-19]

16:50: **Role of shape: ZnO tetrapods in fabrication of smart composites**, Xin Jin, Univ. of Kiel (Germany); Yogendra Kumar Mishra, Rainer Adelung, Christian-Albrechts-Univ. zu Kiel (Germany) [8766-20]

17:10: **Diffraction microstructures based on metallic nanowires: a low cost devices for optical focusing**, Soraya Zaiba, Univ. des Sciences et de la Technologie Houari Boumediene (Algeria); Timothée Kouriba, Univ. Joseph Fourier (France); Omar Ziâne, Univ. des Sciences et de la Technologie Houari Boumediene (Algeria); Guy Vitrant, IMEP-LAHC (France); Patrice L. Baldeck, Univ. Joseph Fourier (France) [8766-21]

17:30: **Influence of irregular growth of monoatomic steps during Si/Si(001) epitaxy on generation of surface defects**, Larisa V. Arapkina, Vladimir A. Yuryev, A. M. Prokhorov General Physics Institute (Russian Federation) [8766-22]

17:50: **Reversible nano-lithography of soft and hard materials**, Jae Hong Park, National Nanofab Ctr. (Korea, Republic of); Hyun Ik Jang, National Nanofab Ctr. (Korea, Republic of) and KAIST (Korea, Republic of); Jun Yong Park, KAIST (Korea, Republic of); Dong Eon Lee, Seoul National Univ. (Korea, Republic of); Seok Woo Jeon, Chi Won Ahn, KAIST (Korea, Republic of); Kwang Soo Yoo, Univ. of Seoul (Korea, Republic of) [8766-35]

Integrated Photonics: Materials, Devices, and Applications II

Conference Chair: **Jean-Marc Fédéli**, CEA-LETI (France)

Conference Co-Chairs: **Laurent Vivien**, Institut d'Électronique Fondamentale (France); **Meint K. Smit**, Technische Univ. Eindhoven (Netherlands)

Programme Committee: **Pavel Cheben**, National Research Council Canada (Canada); **Patrice Féron**, Ecole Nationale Supérieure des Sciences Appliquées et de Technologie (France); **Norbert Grote**, Fraunhofer-Institut für Nachrichtentechnik Heinrich-Hertz-Institut (Germany); **Giovanni Isella**, Lab. for Epitaxial Nanostructures on Silicon and Spintronics (Italy); **Erich Kasper**, Univ. Stuttgart (Germany); **Eric Mazur**, Harvard Univ. (United States); **Andrea I. Melloni**, Politecnico di Milano (Italy); **Iñigo Molina-Fernandez**, Univ. de Málaga (Spain); **Richard V. Penty**, Univ. of Cambridge (United Kingdom); **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy); **Andrew W. Poon**, Hong Kong Univ. of Science and Technology (Hong Kong, China); **Günther Roelkens**, Univ. Gent (Belgium); **Kazumi Wada**, The Univ. of Tokyo (Japan)

Wednesday 24 April

Plenary Session

Room: Pelvoux auditorium Wed 9:30 to 11:00



Symposium Opening

Thomas Becker, EADS Deutschland GmbH (Germany) and nta Isny (Germany)



Welcome by Local Co-Chair

Marc Belleville, CEA-Leti (France)



Session Chair: **Marc Belleville**, CEA-Leti (France)

10:00: **An autonomous structural health monitoring solution**, Carol A. Featherston, Karen Holford, Rhys Pullin, Jonathan Lees, Mark J. Eaton, Matthew Pearson, Cardiff Univ. (United Kingdom) . . . [8763-501]

Session 1

Room: Belle-etoile Wed 11:00 to 12:20

Micro Cavities and Micro Resonators

Session Chair: **Andrea I. Melloni**, Politecnico di Milano (Italy)

11:00: **Monolithic integration of high-Q wedge resonators with vertically coupled waveguides**, Fernando Ramiro Manzano, Univ. degli Studi di Trento (Italy) [8767-1]

11:20: **Fano lineshapes of 'Peak-tracking chip' spatial profiles analyzed with correlation analysis for bioarray imaging and refractive index sensing**, Kristelle Bougot-Robin, Shunbo Li, Hong Kong Univ. of Science and Technology (Hong Kong, China); Weisheng Yue, Longqing Chen, Xixiang Zhang, King Abdullah Univ. of Science and Technology (Saudi Arabia); Weijia Wen, Hong Kong Univ. of Science and Technology (Hong Kong, China); Henri Benisty, Institut d'Optique Graduate School (France) [8767-2]

11:40: **Systematic optimization of the storage capacity of photonic crystal slab waveguides**, Panagiotis Kanakis, National and Kapodistrian Univ. of Athens (Greece); Thomas Kamalakis, Harokopio Univ. of Athens (Greece); Thomas Sphicopoulos, Univ. of Athens (Greece) [8767-3]

12:00: **Talbot effect from periodic and quasi-periodic structures: application to 3D quasi-crystalline photonic lattices formation**, Rafael Drampyan, Anahit Badalyan, Paytsar A. Mantashyan, Vahram Mekhitarian, Institute for Physical Research (Armenia); Varsenik Nersesyan, Russian-Armenian (Slavonic) State Univ. (Armenia) [8767-5]

Lunch Break Wed 12:20 to 13:40

Session 2

Room: Belle-etoile Wed 13:40 to 15:00

Photonic Materials

Session Chair: **Iñigo Molina-Fernandez**, Univ. de Málaga (Spain)

13:40: **Hydrogenated amorphous silicon nanowires with high nonlinear figure of merit and stable nonlinear optical response**, Luca Carletti, Institut des Nanotechnologies de Lyon (France); Christelle Monat, Christian Grillet, Ecole Centrale de Lyon (France); Philippe Grosse, CEA-LETI-Minatec (France); Badhise B. Bakir, Sylvie Menezo, Jean-Marc Fédéli, CEA-LETI (France); David J. Moss, The Univ. of Sydney (Australia) [8767-6]

14:00: **Travelling wave resonators fabricated with low-loss hydrogenated amorphous silicon**, Timo Lipka, Julia Amthor, Jörg Müller, Technische Univ. Hamburg-Harburg (Germany) [8767-7]

14:20: **High-resolution 3D structural and optical analyses of hybrid or composite materials by means of scanning probe microscopy combined with the ultramicrotome technique: an example of application to engineering of liquid crystals doped with fluorescent quantum dots**, Konstantin E. Mochalov, Institute of Molecular Medicine (Ireland) and Moscow Engineering Physics Institute (Russian Federation); Anton E. Efimov, V.I. Shumakov Federal Research Ctr. of Transplantology and Artificial Organs (Russian Federation); Alexey Y. Bobrovsky, Lomonosov Moscow State Univ. (Russian Federation); Anton A. Chistyakov, National Research Nuclear Univ. MEPhI (Russian Federation); Vladimir A. Oleinikov, National Research Nuclear Univ. MEPhI (Russian Federation) and Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences (Russian Federation); Valery P. Shibaev, Lomonosov Moscow State Univ. (Russian Federation); Igor R. Nabiev, Univ. de Reims Champagne-Ardenne (France) and Moscow Engineering Physics Institute (Russian Federation) [8767-8]

14:40: **Submicron scale germanium selective epitaxial growth at different growth temperatures**, Yasutaka Mizuno, The Univ. of Tokyo (Japan); Naoyuki J. Kawai, Univ. of Tokyo (Japan); Kazumi Wada, The Univ. of Tokyo (Japan) . [8767-9]

Coffee Break Wed 15:00 to 15:30

Session 3

Room: Belle-etoile Wed 15:30 to 16:50

Ge-Based Devices

Session Chair: **Laurent Vivien**,

Institut d'Électronique Fondamentale (France)

15:30: **Ge on Si waveguide-integrated photodiodes for high speed and low power receivers**, Léopold Viro, STMicroelectronics (France) and Institut d'Électronique Fondamentale (France); Laurent Vivien, Institut d'Électronique Fondamentale (France); Jean-Michel Hartmann, Jean-Marc Fédéli, CEA-LETI (France); Delphine Marris-Morini, Eric Cassan, Institut d'Électronique Fondamentale (France); Charles Baudot, Frédéric Boeuf, ST Microelectronics (France) [8767-10]

15:50: **Electro-refractive effect in Ge/SiGe multiple quantum wells**, Jacopo Frigerio, Politecnico di Milano (Italy); Papichaya Chaisakul, Delphine Marris-Morini, Institut d'Électronique Fondamentale (France); Stefano Carlo Cecchi, Politecnico di Milano (Italy); Mohamed-Said Rouifed, Laurent Vivien, Institut d'Électronique Fondamentale (France); Giovanni Isella, Politecnico di Milano (Italy) [8767-11]

16:10: **Franz-Keldysh effect of Ge-on-Si pin diodes at common chip temperatures**, Marc Schmid, Mathias R. Kaschel, Martin Gollhofer, Michael Oehme, Univ. Stuttgart (Germany); Jens Werner, Kai Ulbricht, Univ. of Stuttgart (Germany); Erich Kasper, Jörg Schulze, Univ. Stuttgart (Germany) [8767-12]

16:30: **Resistance-capacitance limitation of fast double heterojunction Ge p-i-n photodetectors**, Mathias R. Kaschel, Marc Schmid, Martin Gollhofer, Michael Oehme, Erich Kasper, Jörg Schulze, Univ. Stuttgart (Germany) . . [8767-13]

Thursday 25 April

Session 4

Room: Belle-etoile Thu 9:00 to 10:20

Photonics Platform I

Session Chair: **Meint K. Smit**,
Technische Univ. Eindhoven (Netherlands)

9:00: **TriPleX waveguide platform: low loss technology over a large wavelength range** (*Invited Paper*), Marcel Hoekman, Arne Leinse, René G. Heideman, LioniX BV (Netherlands) [8767-14]

9:40: **Generic process for low-cost InP integrated photonics in industrial foundries** (*Invited Paper*), Luc M. Augustin, Technische Univ Eindhoven (Netherlands); Huub P.M.M. Ambrosius, Technische Univ. Eindhoven (Netherlands); Peter J. A. Thijs, Technische Univ. Eindhoven (Netherlands) and SMARTPhotonics B. V. (Netherlands); Francisco M. Soares, Norbert Grote, Fraunhofer-Institut für Nachrichtentechnik Heinrich-Hertz-Institut (Germany); Dominik Szymanski, Wroclaw Univ. of Technology (Poland); Michael J. Wale, Oclaro, Inc. (United Kingdom) and Technische Univ. Eindhoven (Netherlands); Meint K. Smit, Technische Univ. Eindhoven (Netherlands) [8767-15]

Coffee Break Thu 10:20 to 10:50

Session 5

Room: Belle-etoile Thu 10:50 to 12:10

Photonics Platform II

Session Chair: **Jean-Marc Fédéli**, CEA-LETI (France)

10:50: **A CMOS-compatible silicon photonic platform for classical and quantum integrated optics** (*Invited Paper*), Christophe Galland, Ran Ding, Yang Liu, Yi Zhang, Li He, Nicholas Harris, Tom W. Baehr-Jones, Michael Hochberg, Univ. of Delaware (United States) [8767-16]

11:30: **ePIXfab: the silicon photonics platform** (*Invited Paper*), Amit Khanna, IMEC at Ghent Univ. (Belgium); Peter A. O'Brien, Tyndall National Institute (Ireland); Jose M. Pozo, TNO (Netherlands); Maryse Fournier, Lab. d'Electronique de Technologie de l'Information (France); Lars Zimmermann, IHP GmbH (Germany); Timo Aalto, VTT Technical Research Ctr. of Finland (Finland); Pieter Dumon, IMEC (Belgium) [8767-17]

Lunch Break Thu 12:10 to 13:30

Plenary Session

Room: Pelvoux auditorium Thu 13:30 to 14:30

Session Chair: **Christos Tsamis**,
National Ctr. for Scientific Research Demokritos (Greece)



13:30: **Biologically inspired large scale chemical sensor arrays and embedded data processing**, Santiago Marco, A. Gutiérrez-Gálvez, Univ. de Barcelona (Spain) and Institute for Bioengineering of Catalonia (Spain); Anders Lansner, Royal Institute of Technology (Sweden); Dominique Martinez, LORIA (France); J. P. Rospars, Institut National de la Recherche Agronomique (France); Romeo Beccherelli, Istituto per la Microelettronica e Microsistemi (Italy); Alexandre Perera, Univ. Politècnica de Catalunya (Spain); Tim C. Pearce, Univ. of Leicester (United Kingdom); Paul Vershure, Univ. Pompeu Fabra (Spain); Krishna Persaud, The Univ. of Manchester (United Kingdom) [8763-502]

Poster Session

Room: Pelvoux Salle de Reception Thu 14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Poster authors are encouraged to display their posters beginning at 10:00 on Wednesday for extended viewing..

Analysis of the Drever-Pound-Hall technique for the simultaneous detection of the detuning of more cavities on a single channel, Martina De Laurentis, Michele Riccio, Giuseppe De Falco, Luca Maresca, Andrea Irace, Giovanni Breglio, Univ. degli Studi di Napoli Federico II (Italy) [8767-4]

Design fabrication and optimization of LiNbO₃ based titanium indiffused waveguide polarizers, Evren Oztekin, Mutlu Gökçavas, Yasemin F. Kanli, Seval Dönertas, Ekmel Ozbay, Bilkent Univ. (Turkey) [8767-34]

Narrow line-width microwave source based on bimodal Whispering Gallery Mode laser, Elodie Le Cren, Alphonse L. Rasoloniaina, Vincent Huet, Yannick Dumeige, Patrice Féron, Ecole Nationale Supérieure des Sciences Appliquées et de Technologie (France); Michel S. Mortier, Ecole Nationale Supérieure de Chimie de Paris (France) [8767-36]

Si-based light emitter in an integrated photonic circuit for smart biosensor applications, Susette Germer, Lars Rebohle, Wolfgang Skorupa, Manfred Helm, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany) [8767-38]

Dot distribution type of grayscale photomask and colorscale photomask for fabrication diffractive and refractive microlens arrays, Qingle Tang, Huazhong Institute of Electro-Optics (China) [8767-39]

Liquid-crystal tunable plasmonic stripe directional coupler switches, Dimitrios C. Zografopoulos, Romeo Beccherelli, Istituto per la Microelettronica e Microsistemi (Italy) [8767-40]

Session 6

Room: Belle-etoile Thu 16:30 to 17:50

Materials and Devices for Light Emission

Session Chair: **Laurent Vivien**,
Institut d'Électronique Fondamentale (France)

16:30: **Electrically pumped Er-doped light emitting slot waveguides for on-chip optical routing at 1.54 μm**, Joan Manel Ramirez, Yonder Berencén, Univ. de Barcelona (Spain); Oleksiy Anopchenko, Nikola Prtjaga, Univ. degli Studi di Trento (Italy); Pierrette Rivallin, CEA-LETI (France); Andrea Tengattini, Univ. degli Studi di Trento (Italy); Jean-Phillippe Colonna, Jean-Marc Fédéli, CEA-LETI (France); Lorenzo Pavesi, Univ. degli Studi di Trento (Italy); Blas Garrido Fernandez, Univ. de Barcelona (Spain) [8767-18]

16:50: **Light emission at telecom wavelengths from single-walled carbon nanotube**, Adrien Noury, Nicolas Izard, Institut d'Électronique Fondamentale (France); Etienne Gaufrès, Univ. de Montréal (Canada); Xavier Le Roux, Laurent Vivien, Institut d'Électronique Fondamentale (France); Richard Martel, Univ. de Montréal (Canada); Masa Tange, Toshiya Okazaki, National Institute of Advanced Industrial Science and Technology (Japan) [8767-19]

17:10: **Efficient room temperature light emission from SiOCH thin films deposited by PECVD**, Pierre Noe, Alexandre Mulot, CEA-LETI (France); Jean-Baptiste Jager, CEA-INAC (France); Vincent Calvo, Commissariat à l'Énergie Atomique (France); Vincent Jousseume, CEA-LETI (France) [8767-20]

17:30: **Warm white LED light by frequency down-conversion of mixed perylene-based dyes**, Mauro Mosca, Fulvio Caruso, Leandro Zambito, Roberto Macaluso, Claudio Cali, Univ. degli Studi di Palermo (Italy); Eric Feltn, NOVAGAN (Switzerland) [8767-21]

Friday 26 April

Session 7

Room: Belle-etoile Fri 9:00 to 10:20

Si and InP Based Devices

Session Chair: **Norbert Grote**, Fraunhofer-Institut für Nachrichtentechnik Heinrich-Hertz-Institut (Germany)

9:00: **Semi-insulating substrate based generic InP photonic integration platform**, Norbert Grote, Francisco M. Soares, Klemens Janiak, Jochen Kreissl, Martin Möhrle, Fraunhofer-Institut für Nachrichtentechnik Heinrich-Hertz-Institut (Germany) [8767-22]

9:20: **Heterogeneously integrated III-V/Si single mode laser based on a MMI-ring combination and triplet-ring reflectors**, Shahram Keyvaninia, Steven Verstuyft, Univ. Gent (Belgium); Francois Lelarge, Guang-Hua Duan, Alcatel-Thales III-V Lab. (France); Sonia Messaoudene, Jean-Marc Fédéli, CEA-LETI (France); Tijbbe De Vries, Barry Smalbrugge, Jeroen Bolk, Meint K. Smit, Technische Univ. Eindhoven (Netherlands); Dries Van Thourhout, Gunther Roelkens, Univ. Gent (Belgium) [8767-23]

9:40: **Ultra compact switching matrix on InP**, Djamilia Cherfi, Univ. des Sciences et Technologies de Lille (France) [8767-24]

10:00: **Characterization of spectral optical responsivity of Si-photodiode junction combinations available in a 0.35μm HV-CMOS technology**, Andrea Kraxner, austriamicrosystems AG (Austria) and Graz Univ. of Technology (Austria); Ewald Wachmann, Ingrid Jonak-Auer, Jordi Teva, Jong Mun Park, Rainer Minixhofer, austriamicrosystems AG (Austria) [8767-25]

Coffee Break Fri 10:20 to 10:50

Session 8

Room: Belle-etoile Fri 10:50 to 12:10

Nanostructures and Nanophotonics

Session Chair: **Gunther Roelkens**, Univ. Gent (Belgium)

10:50: **A dense spot size converter array fabricated in a generic process on InP**, Domenico D'Agostino, Emil Kleijn, Rui Santos, Huub P.M.M. Ambrosius, Meint K. Smit, Technische Univ. Eindhoven (Netherlands) [8767-26]

11:10: **SWG dispersion engineering for ultra-broadband photonic devices**, Robert Halir, Univ. de Málaga (Spain) and Andalusian Ctr. for Nanomedicine and Biotechnology (Spain); Alejandro Maese-Novo, Sebastián Romero-García, Diego Pérez-Galacho, Luis Zavargo-Peche, Univ. de Málaga (Spain); Alejandro Ortega-Moñux, Iñigo Molina-Fernandez, Univ. de Málaga (Spain) and Andalusian Ctr. for Nanomedicine and Biotechnology (Spain); Juan G. Wangüemert-Pérez, Univ. de Málaga (Spain); Pavel Cheben, National Research Council of Canada (Canada) [8767-27]

11:30: **Theoretical model of an interleaved-chirped array waveguide grating (IC-AWG)**, Bernardo Gargallo, Pascual Muñoz, Univ. Politécnica de Valencia (Spain) [8767-28]

11:50: **Metamaterial-based sensor for skin disease diagnostics**, Luigi La Spada, Renato Iovine, Richard Tarparelli, Lucio Vegni, Univ. degli Studi di Roma Tre (Italy) [8767-29]

Lunch Break Fri 12:10 to 13:30

Plenary Session

Room: Pelvoux auditorium Fri 13:30 to 14:30

Session Chair: **Marc Belleville**, CEA-LETI (France)



13:30: **Micro- and nanoscale thermoelectrics: an overview over basic concepts and recent advances**, Markus Winkler, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany); Martin Jaegle, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Xi Liu, Christian-Albrechts Univ. zu Kiel (Germany); Jan Koenig, Harald Boettner, Fraunhofer-Institut für Physikalische Messtechnik (Germany); Lorenz Kienle, Christian-Albrechts-Univ. zu Kiel (Germany) ... [8763-503]

Session 9

Room: Belle-etoile Fri 14:30 to 15:50

Organic and Hybrid Devices

Session Chair: **Patrice Feron**, Ecole Nationale Supérieure des Sciences Appliquées et de Technologie (France)

14:30: **Low-loss SiNx waveguides in polymer**, Ziyang Zhang, Dongliang Liu, Norbert Keil, Norbert Grote, Fraunhofer-Institut für Nachrichtentechnik Heinrich-Hertz-Institut (Germany) [8767-30]

14:50: **Colloidal PbS nanocrystals integrated to Si-based photonics for applications at telecom wavelengths**, Markus Humer, Romain Guider, Wolfgang Jantsch, Thomas Fromherz, Institute of Semiconductor and Solid State Physics (Austria) [8767-31]

15:10: **Experimental studies of cobalt ferrite nanoparticles doped silica matrix 3D magneto-photonic crystals**, Elie Abou Diwan, François Royer, Renata Kekesi, Damien Jamon, Marie-Françoise Blanc-Mignon, Univ. Jean Monnet Saint-Etienne (France); Sophie Neveu, Univ. Pierre et Marie Curie (France); Jean-Jacques Rousseau, Univ. Jean Monnet Saint-Etienne (France) [8767-32]

15:30: **Direct imprinting on chalcogenide glass and fabrication of infrared wire-grid polarizer**, Itsunari Yamada, Univ. of Shiga Prefecture (Japan); Naoto Yamashita, Toshihiko Einishi, Isuzu Glass Co., Ltd. (Japan); Mitsunori Saito, Ryukoku Univ. (Japan); Kouhei Fukumi, National Institute of Advanced Industrial Science and Technology (Japan); Junji Nishii, Hokkaido Univ. (Japan) ... [8767-33]

A

Aalto, Timo [8767-17] S5
 Ababneh, Abdallah [8763-108] SPSThu, [8763-109] SPSThu, [8763-17] S5, [8763-68] SPSThu
Abbaszadeh Banaeiyan, Amin [8765-19] S6
 Abou Diwan, Elie [8767-32] S9
 Achard, Jean-Luc [8765-21] S6
 Adami, Andrea [8763-72] SPSThu
 Adams, Jonathan [8763-78] SPSThu
 Adelung, Rainer 8766 Conference Chair, 8766 S1 Session Chair, 8766 S2 Session Chair, 8766 S6 Session Chair, [8766-11] S4, [8766-20] S6
 Adiels, Caroline B. [8765-19] S6
 Aguirre, Gerson R. [8765-22] SPSThu
 Ahmadvpour, Doryaneh [8765-19] S6
 Ahn, Chi Won [8766-35] S6, [8766-36] S2
 Al Nassar, Mohammed [8763-12] S3
 Alamin Dow, Ali Badar M. 8763 Program Committee, [8763-104] SPSThu, [8763-61] SPSThu, [8763-73] SPSThu
 Alarcon, Eduard 8764 Program Committee
 Aldea, Concepcion 8764 S3 Session Chair, [8764-1] S1
 Alexandrou, Kostas [8766-13] S4
 Alfimov, Anton V. [8766-30] SPSThu, [8766-32] SPSThu
 Al-Halhouli, Alaaldeen T. [8763-23] S7, [8763-46] SPSThu
 Allerdissen, Merle [8763-18] S5, [8763-32] S9
 Al-Omari, Ahmad N. [8763-108] SPSThu, [8763-109] SPSThu, [8763-68] SPSThu
Álvarez, Jesús [8765-17] S5
 Ambrosius, Huub P.M.M. [8767-15] S4, [8767-26] S8
 Amthor, Julia [8767-7] S2
 Ancik, Zdenek [8763-48] SPSThu, [8763-55] SPSThu
 Anopchenko, Oleksiy [8767-18] S6
 Antes, Jürgen [8763-22] S6
 Arapkina, Larisa V. [8766-22] S6, [8766-5] S3
 Ardila Rodriguez, Gustavo Adolfo [8766-7] S3
 Argitis, Panagiotis [8763-65] SPSThu
Aryslanova, Elizabeth M. [8766-30] SPSThu, [8766-32] SPSThu
 Arzt, Eduard 8763 Program Committee
 Ascione, Giovanni [8764-30] SPSThu
 Aslam, Sarmad [8763-3] S1
 Astrinaki, M. [8764-12] S3
 Atasoy, Oguz [8765-12] S4
 Aubouy, Laurent [8765-18] S5
 Augustin, Luc M. [8767-15] S4
 Auzély, Rachel [8765-23] SPSThu
 Ayala Alfonso, Alejandro J. [8764-34] SPSThu

B

Badalyan, Anahit [8767-5] S1
 Baehr-Jones, Tom W. [8767-16] S5
 Bailey, Ryan C. 8765 Program Committee
 Bakir, Badhise Ben [8767-6] S2
 Baldeck, Patrice L. [8766-21] S6
 Barba, Jesus [8764-21] S5
 Baron, Thierry [8766-7] S3
 Bartha, Johann Wolfgang [8763-103] SPSThu
 Basrour, Skandar [8763-58] SPSThu
 Baudot, Charles [8767-10] S3
 Baumgart, Marcus [8763-15] S4
 Bausells, Joan 8763 Program Committee
 Bayma, Eric [8765-23] SPSThu
 Beccherelli, Romeo [8763-502] SPLThu, [8767-40] SPSThu
 Becker, Thomas Symposium Chair, [8763-3] S1, [8763-56] SPSThu
 Belavic, Darko [8763-89] SPSThu
 Belleville, Marc Symposium Chair, SPLWed Session Chair, SPLFri Session Chair
 Benisty, Henri [8767-2] S1
 Berencén, Yonder [8767-18] S6
 Betts, David N. [8763-60] SPSThu, [8763-69] SPSThu
 Beutel, Tobias T. [8763-19] S6
 Biehl, Saskia N. [8763-9] S3
 Bigongiari, Franco [8764-29] S7
 Bilyi, Oleksandr I. [8766-27] SPSThu, [8766-31] SPSThu
 Bipoun, Mireille [8763-44] SPSThu, [8763-45] SPSThu
 Bisceglia, Emilie [8765-6] S2
 Bittner, Achim [8763-108] SPSThu, [8763-109] SPSThu, [8763-28] S8, [8763-61] SPSThu, [8763-66] SPSThu
 Blanc-Mignon, Marie-Françoise [8767-32] S9
 Blažević, David [8763-53] SPSThu
 Blums, Juris [8763-54] SPSThu
 Bobrovsky, Alexey Yu. [8767-8] S2
 Bodelot, Laurence [8763-67] SPSThu
 Boettner, Harald [8763-503] SPLFri
 Boeuf, Frédéric [8767-10] S3
 Bolk, Jeroen [8767-23] S7
 Bolzmacher, Christian 8763 Program Committee, [8763-67] SPSThu, [8763-79] SPSThu
 Bonaldi, Michele [8763-29] S8, [8763-98] SPSThu
 Bonfanti, Andrea G. [8764-11] S3, [8764-2] S1
 Borrielli, Antonio Lorenzo [8763-29] S8, [8763-98] SPSThu
 Bosse, Stefan 8764 S4 Session Chair, [8764-28] S7
 Botsialas, Athanasios [8763-65] SPSThu
 Bottarel, Valeria [8763-57] SPSThu
 Bougot-Robin, Kristelle [8767-2] S1

Bourkoura, Athanasia [8765-10] S3
 Bowen, Christopher R. [8763-60] SPSThu, [8763-69] SPSThu
Boyd, Robert W. [8766-1] S1
 Braeken, An [8763-63] SPSThu
 Brand, Oliver [8763-16] S5
 Bräuer, Andreas [8763-105] SPSThu
 Breglio, Giovanni [8764-30] SPSThu, [8767-4] SPSThu
 Brenner, Patrice [8766-25] S5
 Briscoe, Joe [8763-4] S1
 Brückner, Andreas [8763-105] SPSThu
 Bruhn, Benjamin [8766-6] S3
 Buettgenbach, Stephanus [8763-23] S7
 Buisson, Bruno [8765-14] S4
 Burgner, Christopher [8763-13] S4
 Burrow, Stephen G. [8763-52] SPSThu
 Busch, Sebastian [8763-31] S9
 Bustos, Jessy [8766-19] S6
 Büttgenbach, Stephanus [8763-106] SPSThu, [8763-19] S6, [8763-39] SPSThu, [8763-46] SPSThu
 Byrne, Barry [8765-26] SPSThu

C

Cable, Alex E. [8763-13] S4
 Caillard, B. [8763-16] S5
 Cain, Markys G. [8763-35] SPSThu, [8763-4] S1
 Caldari, Marco 8764 Program Committee
 Cali, Caludio [8767-21] S6
 Calvo, Belen [8764-5] S1
 Calvo, Vincent [8767-20] S6
 Camilloni, Enrico [8764-4] S1
 Canas Ferreira, João 8764 Program Committee
 Canavese, Giancarlo [8763-33] S9
 Cané, Carles 8763 Program Committee
 Cardona, Luis Andres [8764-23] S6
 Cardoso, Filipe [8763-43] SPSThu
 Cardoso, Susana [8763-43] SPSThu
 Carletti, Luca [8767-6] S2
 Carloni, Mirko [8764-26] S7, [8764-4] S1
 Carmona-Galán, Ricardo A. 8765 Program Committee
 Caruso, Fulvio [8767-21] S6
 Cassan, Eric [8767-10] S3
 Cassetari, Riccardo [8764-29] S7
 Castellanos-Ramos, Julian [8765-25] SPSThu
 Castro-López, Vanessa [8765-8] S3
 Cataliotti, Francesco Saverio [8763-98] SPSThu
 Cauwenberghs, Gert 8765 Program Committee
 Cazorla, Marina [8765-18] S5
 Cecchi, Stefano Carlo [8767-11] S3
 Celma-Pueyo, Santiago [8764-1] S1, [8764-17] S4, [8764-5] S1

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

Cervero García, Teresa G. [8764-20] S5
Chaisakul, Papichaya [8767-11] S3
Chaltykyan, Vigen O. [8766-33] SPSThu
Changizi, Mohammad A. [8765-11] S3
Charvet, Guillaume [8765-1] S1
Chatzakos, Panagiotis [8763-49] SPSThu
Chatzandroulis, Stavros [8765-20] S6
Chatzichristidi, Margarita [8763-65] SPSThu
Cheben, Pavel 8767 Program Committee, [8767-27] S8
Cheibani, Ismail [8765-23] SPSThu
Cheltsov, Vladislav F. [8766-23] SPSThu
Chen, Chung-Han [8766-3] S2
Chen, Longqing [8767-2] S1
Cherfi, Djamilia [8767-24] S7
Chiari, Marcella [8765-17] S5
Chiolerio, Alessandro [8763-33] S9
Chistyakov, Anton A. [8767-8] S2
Chivilikhin, Sergey Anatolyevich [8766-26] SPSThu, [8766-30] SPSThu, [8766-32] SPSThu
Choleva, Pavlina [8763-101] SPSThu
Christoforakis, I. [8764-12] S3
Chronis, Nikos 8765 Program Committee
Cloitre, Thierry [8765-9] S3
Cole, Garrett D. [8763-13] S4
Colin, Mikaël [8763-58] SPSThu
Collini, Cristian [8763-72] SPSThu
Colonna, Jean-Philippe [8767-18] S6
Colpo, Sabrina [8763-107] SPSThu
Conci, Paolo [8763-72] SPSThu
Conti, Massimo 8764 Conference CoChair, 8764 S1 Session Chair, [8764-10] S3, [8764-26] S7, [8764-4] S1
Coppola, Marcello 8764 Program Committee, 8764 S6 Session Chair, [8764-12] S3
Corsonello, Pasquale [8764-14] S4
Costa, Manuel Filipe [8766-34] SPSThu
Couffin, Anne-Claude [8765-23] SPSThu
Courant, Thomas [8765-23] SPSThu
Crepaldi, Marco [8763-33] S9
Cretich, Marina [8765-17] S5
Cubizolles, Myriam [8765-21] S6, [8765-6] S2
Cucchi, Luca [8764-29] S7
Cullen, Sinéad [8765-26] SPSThu

D

Dagamseh, Ahmad [8763-96] SPSThu
D'Agostino, Domenico [8767-26] S8
Dams, Florian [8763-21] S6
D'Aparo, Rocco [8764-26] S7
Dargent, Loïc [8765-5] S2
Davalle, Daniele [8764-29] S7
De Armas, Valentín [8764-27] S7, [8764-9] S2

De Falco, Giuseppe [8764-30] SPSThu, [8767-4] SPSThu
de la Torre-Arnanz, Eduardo 8764 Program Committee, [8764-18] S5
De Laurentis, Martina [8764-30] SPSThu, [8767-4] SPSThu
de Mello, John C. [8763-59] SPSThu
De Pascali, Chiara [8763-2] S1
De Pasquale, Giorgio [8763-26] S8, [8763-75] SPSThu
De Vries, Tjibbe [8767-23] S7
Debéda, H. [8763-16] S5
Dehan, Christophe [8765-5] S2
Dehé, Alfons [8763-74] SPSThu, [8763-77] SPSThu
Dehollain, Catherine [8765-12] S4
Del Castillo, Ignacio [8764-27] S7
Delgado-Restituto, Manuel 8765 Conference CoChair, 8765 S1 Session Chair, [8765-2] S1
Dell, John M. [8763-91] SPSThu
Delmas, Thomas [8765-23] SPSThu
Demarchi, Danilo [8763-33] S9
D'Errico, Raffaele [8765-1] S1
Di Criscienzo, Roberto [8763-29] S8
Diah, S. Zaleha B. M. [8763-82] SPSThu
Diaz Suarez, Alvaro [8764-19] S5
Dickson, Wayne [8766-2] S1
Dietzel, Andreas H. [8763-106] SPSThu, [8763-19] S6, [8763-39] SPSThu, [8763-46] SPSThu
Ding, Ran [8767-16] S5
Dini, Michele [8763-57] SPSThu
Djabi, Smail [8763-36] SPSThu
Dondo, Julio Daniel [8764-20] S5
Dönertas, Seval [8767-34] SPSThu
Döring, Lutz [8763-102] SPSThu
Dragoi, Viorel 8763 Program Committee, [8763-111] SPSThu, [8763-6] S2
Dragoman, Mircea 8766 Program Committee, 8766 S5 Session Chair, [8766-10] S4
Drampyan, Rafael [8767-5] S1
Drexler, Petr [8763-81] SPSThu
Duan, Guang-Hua [8767-23] S7
Ducree, Jens 8765 Program Committee, [8765-22] SPSThu
Dudek, Rainer [8763-84] SPSThu
Dufour, Isabelle [8763-16] S5
Dumeige, Yannick [8767-36] SPSThu
Dumon, Pieter [8767-17] S5
Dunkel, Jens [8763-105] SPSThu
Dunn, Steve [8763-4] S1
Dussault, Donald [8763-111] SPSThu
Dvoretzkaya, Liliya [8765-24] SPSThu
Dybko, Artur 8765 Program Committee
Dzuba, Jaroslav [8763-101] SPSThu

E

Eaton, Mark Jonathan [8763-501] SPLWed
Efimov, Anton E. [8767-8] S2
Efremov, Vitaly [8765-22] SPSThu, [8765-26] SPSThu
Einishi, Toshihiko [8767-33] S9
Ekerdt, John G. [8763-42] SPSThu
El Sabahy, Julien [8763-64] SPSThu
Elefsiniotis, Alexandros [8763-3] S1, [8763-56] SPSThu
Elias, Peter [8766-8] S3
Elmasides, Costas [8766-13] S4
Encke, Jörg [8763-37] SPSThu, [8763-80] SPSThu
Errico, Walter [8764-29] S7
Esfandiari, Neda [8766-14] S5
Esper-Chaín, Roberto [8764-27] S7
Espino, Omar [8764-7] S2
Estephan, Elias [8765-9] S3

F

Faes, Alessandro [8763-8] S2
Fagas, Giorgos [8763-59] SPSThu
Faglia, Guido 8763 Program Committee
Falk, Fritz [8763-59] SPSThu
Fan, Yiqiang [8763-41] SPSThu
Fantner, Georg E. 8763 Program Committee, 8763 S9 Session Chair, [8763-78] SPSThu
Fanucci, Luca [8764-29] S7
Faraone, Lorenzo [8763-91] SPSThu
Farinelli, Paola [8763-107] SPSThu
Farmakis, Filippos [8766-13] S4
Featherston, Carol A. [8763-3] S1, [8763-501] SPLWed
Fédéli, Jean-Marc 8767 Conference Chair, 8767 S5 Session Chair, [8767-10] S3, [8767-18] S6, [8767-23] S7, [8767-6] S2
Feiertag, Gregor [8763-84] SPSThu
Feili, Dara [8763-68] SPSThu, [8763-83] SPSThu
Feldmann, Marco [8763-23] S7
Feltin, Eric [8767-21] S6
Fercher, Georg [8763-45] SPSThu
Ferensovych, Yaroslav P. [8766-27] SPSThu
Fernandez, Elisabeth [8765-18] S5
Féron, Patrice 8767 Program Committee, 8767 S9 Session Chair [8767-36] SPSThu
Ferreira, Ricardo [8763-43] SPSThu
Ferrer Ramis, Carles 8763 Program Committee, [8764-23] S6
Fiala, Pavel J. 8763 Program Committee, 8763 S5 Session Chair, [8763-81] SPSThu
Fidler, Franz [8763-7] S2
Filatov, Oleksandr Yu [8763-113] SPSThu
Filatov, Yuriy D. [8763-113] SPSThu
Filippi, Matteo [8763-57] SPSThu
Fink, Franz [8763-77] SPSThu
Fischer, Julia [8763-93] SPSThu
Fischer, Wolf-Joachim [8763-103] SPSThu

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

Fleischer, Maximilian 8763 Program Committee
Floetgen, Christoph [8763-6] S2
Foerster, Michael [8765-1] S1
Foucher, Johann [8763-38] SPSThu
Fouillet, Yves [8765-21] S6 8765 S2 Session Chair
Foulds, Ian G. [8763-41] SPSThu
Fournel, Frank [8763-111] SPSThu
Fournier, Maryse [8767-17] S5
Francais, Olivier [8765-6] S2
Francioso, Luca [8763-2] S1
Franek, Friedrich 8763 Program Committee
Frank, Thomas [8763-102] SPSThu, [8765-13] S4
Frankel, David J. [8763-11] S3
Frascolla, Valerio 8764 Program Committee
Freitas, Paulo P. [8763-43] SPSThu
Fricke, Sören 8763 Program Committee
Frigerio, Jacopo [8767-11] S3
Fritz, Mathias [8763-94] SPSThu
Fromherz, Thomas [8767-31] S9
Fujimoto, James G. [8763-13] S4
Fukumi, Kohei [8767-33] S9
Futterknecht, Oliver [8763-82] SPSThu

G

Gad, Karim M. [8763-62] SPSThu
Galland, Christophe [8767-16] S5
Gallego, Ángel [8764-18] S5
Gameiro, Luis [8763-43] SPSThu
Gan, Tat-Hean [8763-49] SPSThu
Gaponenko, Sergey V. 8766 Program Committee
García Valderas, Mario [8764-22] S6, [8764-6] S2
García, Javier A. [8764-33] S1
García-Viera Fernández, Alberto [8764-34] SPSThu
Gargallo, Bernardo [8767-28] S8
Garrido Fernandez, Blas [8767-18] S6
Gasparyan, Vardan [8766-17] S5
Gaufrès, Etienne [8767-19] S6
Gazazyan, Emil A. [8766-33] SPSThu
Gebeshuber, Ille C. [8763-82] SPSThu
Genovese, Mariangela [8764-31] SPSThu, [8764-8] SPSThu
Georgaki, Isidora [8763-65] SPSThu
Georgiev, Yordan M. [8763-59] SPSThu
Georgoulas, Nikolaos [8766-13] S4
Georgoussi, Zafeiroula [8765-15] S4
Gergely, Csilla [8765-9] S3
Gerlach, Gerald 8763 Program Committee, 8763 S6 Session Chair, 8763 S8 Session Chair, [8763-34] SPSThu
Germer, Susette [8767-38] SPSThu
Gerthsen, Dagmar [8766-25] S5
Getman, Vasily B. [8766-31] SPSThu

Ghazaryan, Robert K. [8766-17] S5
Giammarini, Marco [8764-4] S1
Gimeno, Cecilia [8764-1] S1, [8764-5] S1
Giouroudi, Ioanna [8763-12] S3
Glacer, Christoph [8763-74] SPSThu
Glunz, Stefan W. [8763-62] SPSThu
Gogolides, Evangelos [8765-10] S3
Gökkavas, Mutlu [8767-34] SPSThu
Göksör, Mattias [8765-19] S6
Gollhofer, Martin [8767-12] S3, [8767-13] S3
Gomes de Matos Gomes, Maria de Jesus [8766-34] SPSThu
Gómez, A. [8764-20] S5
Gonzalez Bayon, Javier [8764-19] S5
González Hernández, Oswaldo B. [8764-34] SPSThu
González Perez, Benito B. [8764-33] S1
Gornevs, Ilgvars [8763-54] SPSThu
Gottardi, Massimo [8763-29] S8
Gougam, Adel B. [8763-104] SPSThu
Grammatikakis, M. D. [8764-12] S3
Greiner, Rinaldo [8763-18] S5
Grenier, Katia M. 8763 Program Committee
Grigoryan, Gayane [8766-33] SPSThu
Grille, Thomas [8763-86] SPSThu
Grillet, Christian [8767-6] S2
Grosse, Philippe [8767-6] S2
Grote, Norbert 8767 Program Committee, 8767 S7 Session Chair, [8767-15] S4, [8767-22] S7, [8767-30] S9
Grulkowski, Ireneusz [8763-13] S4
Guerrero Rodriguez, Erick [8764-1] S1
Guider, Romain [8767-31] S9
Gutierrez-Fernandez, Eric [8764-6] S2
Gutiérrez-Gálvez, A. [8763-502] SPLThu
Gyulkhandanyan, Anna [8766-17] S5
Gyulkhandanyan, Grigor V. [8766-17] S5

H

Ha, Kwon Soo [8763-47] SPSThu
Haas, Willi [8763-103] SPSThu
Hadas, Zdenek [8763-48] SPSThu, [8763-55] SPSThu
Hafez, Moustapha 8763 Program Committee
Hahn, Jae W. [8766-4] S2
Halir, Robert [8767-27] S8
Halmdienst, Martina [8763-110] SPSThu
Hama, Adel [8765-14] S4
Hansal, Wolfgang [8763-110] SPSThu
Hardalov, Chavdar [8763-87] SPSThu
Harris, Leanne F. [8765-8] S3
Harris, Nicholas [8767-16] S5
Harteros, Kostantinos [8764-12] S3
Hartmann, Jean-Michel [8767-10] S3
Hasenohrl, Stanislav [8766-8] S3
Häublein, Volker [8763-83] SPSThu
Hayes, Greg [8763-6] S2

He, Li [8767-16] S5
Hedenig, Ursula [8763-86] SPSThu
Heideman, René G. [8767-14] S4
Heinrich, Emilie [8765-23] SPSThu
Heinrich, Stephen M. [8763-16] S5
Helm, Manfred [8767-38] SPSThu
Heng, Chun Huat [8764-25] S6
Henke, Markus [8763-34] SPSThu
Hernández, Pedro [8764-7] S2
Hernando García, Jorge [8763-108] SPSThu, [8763-109] SPSThu, [8763-17] S5
Herrmann, Jonathan [8763-83] SPSThu
Herzog, Thomas [8763-93] SPSThu, [8763-95] SPSThu
Heuer, Henning 8763 Program Committee, [8763-100] SPSThu, [8763-93] SPSThu, [8763-95] SPSThu, [8763-97] SPSThu
Hidalgo, Diana [8763-33] S9
Hill, Daniel [8765-17] S5
Hinchet, Ronan [8766-7] S3
Hinze, Peter [8763-27] S8
Hnatush, Svitlana O. [8766-27] SPSThu [8766-31] SPSThu
Hoang, Antoine [8765-23] SPSThu
Hochberg, Michael [8767-16] S5
Hoekman, Marcel [8767-14] S4
Hofbauer, Franz [8763-28] S8
Hoffmann, Christian [8763-31] S9
Holford, Karen [8763-501] SPLWed
Holmes, Justin D. [8763-59] SPSThu
Holzmann, Dominik [8763-15] S4
Hoogerwerf, Arno 8763 Program Committee, 8763 S3 Session Chair
Hortschitz, Wilfried [8763-25] S7, [8763-37] SPSThu, [8763-80] SPSThu, [8763-85] SPSThu
Huang, Kai [8763-71] SPSThu
Huber, Jochen [8763-88] SPSThu
Hudek, Peter [8763-101] SPSThu
Huet, Vincent [8767-36] SPSThu
Humer, Markus [8767-31] S9
Hyun, Kyung-A [8763-47] SPSThu
Hyun, Moon Seop [8766-36] S2

I

Iamoni, Sonia [8765-4] S2
Iannacci, Jacopo 8763 Program Committee, 8763 S1 Session Chair, 8763 S7 Session Chair, [8763-107] SPSThu, [8763-29] S8, [8763-8] S2
Iborra, Enrique 8763 Program Committee
Icard, Béatrice [8766-19] S6
Inman, Daniel J. [8763-60] SPSThu
Iovine, Renato [8767-29] S8
Irace, Andrea [8764-30] SPSThu, [8767-4] SPSThu
Irmer, Bernd [8763-38] SPSThu
Irsigler, Peter [8763-86] SPSThu

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

Isella, Giovanni 8767 Program Committee, [8767-11] S3

Ismail, Mohammed 8764 Program Committee

Izard, Nicolas [8767-19] S6

J

Jackson, Nathan M. [8763-51] SPSThu

Jaegle, Martin [8763-22] S6, [8763-503] SPLFri

Jager, Jean-Baptiste [8767-20] S6

Jakoby, Bernhard 8763 Program Committee, [8763-86] SPSThu

Jamon, Damien [8767-32] S9

Janak, Ludek [8763-55] SPSThu

Jang, Hyun Ik [8766-35] S6

Janiak, Klemens [8767-22] S7

Jantsch, Wolfgang [8767-31] S9

Jayaraman, Vijaysekhar [8763-13] S4

Jeon, Seok Woo [8766-35] S6, [8766-36] S2

Jia, Guobin [8763-59] SPSThu

Jiang, Fei [8763-91] SPSThu

Jiang, James [8763-13] S4

Jiménez-Márquez, Francisco [8763-14] S4

Jin, Xin [8766-20] S6

John, Demis [8763-13] S4

Jonak-Auer, Ingrid [8767-25] S7

Joo, Chulmin [8763-47] SPSThu

Josse, Fabien J. [8763-16] S5

Josselin, Vincent [8765-1] S1

Jousseume, Vincent [8763-64] SPSThu, [8767-20] S6

Jung, Hyo-il [8763-47] SPSThu

Jussot, Julien [8766-19] S6

K

Kadlec, Jaroslav [8763-5] S2

Kainz, Andreas [8763-37] SPSThu, [8763-80] SPSThu, [8763-85] SPSThu

Kakabakos, Sotirios E. [8765-10] S3

Kalinushkin, Victor P. [8766-5] S3

Kaliteevskaya, Elena N. [8766-28] SPSThu

Kaltenbacher, Manfred [8763-74] SPSThu

Kamalakis, Thomas [8767-3] S1

Kamenar, Ervin [8763-53] SPSThu

Kanakis, Panagiotis [8767-3] S1

Kanli, Yasemin F. [8767-34] SPSThu

Kaps, Sören [8766-11] S4

Kapser, Konrad 8763 Program Committee

Karimi, Mohsen [8766-14] S5

Karman, Salmah B. [8763-82] SPSThu

Kaschel, Mathias R. [8767-12] S3, [8767-13] S3

Kasemann, Martin [8763-62] SPSThu

Kasper, Erich 8767 Program Committee, [8767-12] S3, [8767-13] S3

Kawai, Naoyuki J. [8767-9] S2

Kayal, Maher [8763-59] SPSThu

Keating, Adrian J. [8763-91] SPSThu

Keil, Norbert [8767-30] S9

Kekesi, Renata [8767-32] S9

Kenda, Andreas [8763-15] S4

Keplinger, Franz [8763-110] SPSThu, [8763-25] S7, [8763-37] SPSThu, [8763-44] SPSThu, [8763-45] SPSThu, [8763-80] SPSThu, [8763-85] SPSThu

Ketterer, Manuel [8763-31] S9

Keyvaninia, Shahram [8767-23] S7

Khanna, Amit [8767-17] S5

Kherani, Nazir P. [8763-104] SPSThu, [8763-61] SPSThu, [8763-73] SPSThu

Khodagholy, Dion [8765-14] S4

Kiefer, Christian [8763-20] S6

Kienle, Lorenz [8763-503] SPLFri

Killard, Anthony J. [8765-26] SPSThu, [8765-8] S3

Kim, Hee Yeoun [8763-116] SPSThu, [8766-36] S2

Kim, Hyunsun Alicia [8763-60] SPSThu, [8763-69] SPSThu

Kim, Tae Hyun [8763-116] SPSThu

Kim, Woo Choong [8763-116] SPSThu

Kitsara, Maria [8765-22] SPSThu

Klasa, Andrzej [8763-45] SPSThu

Klatt, Stephan [8763-32] S9

Kleijn, Emil [8767-26] S8

Knechtel, Roy 8763 Program Committee

Kneer, Janosch [8763-10] S3

Koenig, Jan [8763-503] SPLFri

Koerbitz, Rene [8767-37] SPSThu

Kohi Habibi, Mina [8766-14] S5

Kohl, Franz [8763-80] SPSThu

Kokorakis, Nikolaos [8763-56] SPSThu

Kölpin, Alexander [8763-77] SPSThu

Kontziampasis, Dimitrios [8765-10] S3

Kopecek, Pavel [8763-55] SPSThu

Korgel, Brian A. [8763-42] SPSThu

Kornaros, George 8764 Program Committee, [8764-12] S3

Korobeynikov, Igor V. [8764-13] S3, [8764-32] SPSThu

Kosel, Jürgen [8763-12] S3

Koshro-Pour, Naser [8763-59] SPSThu

Kouriba, Timothée [8766-21] S6

Kováč, Jaroslav [8766-8] S3

Kraxner, Andrea [8767-25] S7

Kreissl, Jochen [8767-22] S7

Kritharidou, Anna [8765-15] S4

Krötz, Gerhard Symposium Chair

Krüger, Peter [8763-97] SPSThu

Krutzler, Christian [8763-44] SPSThu

Kucera, Martin [8763-108] SPSThu, [8763-28] S8

Kuchta, Radek [8763-5] S2

Kugi, Andreas 8763 Program Committee

Kuhn, Harald [8763-77] SPSThu

Kumar Mishra, Yogendra [8766-11] S4, [8766-20] S6

Kwon, Mi-Hye [8763-47] SPSThu

Kwon, Seok-Jin [8763-112] SPSThu

Kymissis, Ioannis [8766-13] S4

L

La Spada, Luigi [8767-29] S8

Lacaita, Andrea L. [8764-11] S3, [8764-2] S1

Lad, Robert J. 8763 Program Committee, 8763 S2 Session Chair, [8763-11] S3

Lakshmanan, Ramji S. [8765-26] SPSThu

Lalinsky, Tibor [8763-101] SPSThu

Lang, Klaus-Dieter [8763-94] SPSThu

Lansner, Anders [8763-502] SPLThu

Lapuerta, Magín [8763-17] S5

Laurenčiková, Agáta [8766-8] S3

Lavchiev, Ventsislav M. [8763-86] SPSThu

Le Cren, Elodie [8767-36] SPSThu

Le Masne, Quentin [8765-5] S2

Le Roux, Xavier [8767-19] S6

Lechuga, Laura Maria 8765 Program Committee

Lechuga, Yolanda [8765-7] S2

Lee, Dong Eon [8766-35] S6

Lee, Jeong-Bong 8763 Program Committee

Lee, Kwiro [8763-116] SPSThu

Lee, Tong Heng [8764-25] S6

Lees, Jonathan [8763-3] S1, [8763-501] SPLWed

Leester-Schädel, Monika 8763 Conference CoChair, 8763 S6 Session Chair, 8763 S9 Session Chair, [8763-19] S6, [8763-23] S7, [8763-39] SPSThu

Lefevre, Rémy [8765-5] S2

Leidl, Anton [8763-84] SPSThu

Leinse, Arne [8767-14] S4

Leitao, Diana C. [8763-43] SPSThu

Leitner, Michael 8763 Program Committee

Lelarge, Francois [8767-23] S7

Lemaire, E. [8763-16] S5

Lenzhofer, Martin [8763-15] S4

Leonhardt, Brad [8763-42] SPSThu

Leonov, Nikita B. [8766-28] SPSThu

Lepioufle, Bruno [8765-6] S2

Levantino, Salvatore [8764-11] S3, [8764-2] S1

Li, Huawei [8763-41] SPSThu

Li, Shunbo [8767-2] S1

Liang, Guixuan [8764-15] S4

Licitra, Christophe [8763-64] SPSThu

Liebscher, Eric [8763-111] SPSThu

Linnros, Jan 8766 Program Committee, [8766-6] S3

Lipka, Timo [8767-7] S2

Liu, Dongliang [8767-30] S9

Liu, Xi [8763-503] SPLFri

Liu, Yang [8767-16] S5

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

Lloyd Spetz, Anita 8763 Program Committee
Lloyd-Hughes, James 8766 Program Committee
Lohse, Thomas [8763-97] SPSThu
Lomoio, Pietro Angelo [8764-14] S4
Lopez Feliciano, Jose Francisco 8764 Program Committee
Lopez Suarez, Sebastian [8764-20] S5
Lopez, Giorgio [8764-16] SPSThu
López, Juan Carlos [8764-20] S5
Lopez-Bosque, Maria J. [8765-18] S5
López-Ongil, Celia 8764 Program Committee, 8764 S5 Session Chair, [8764-22] S6, [8764-6] S2
Lorenzelli, Leandro [8763-72] SPSThu
Lucat, C. [8763-16] S5

M

Macaluso, Roberto [8767-21] S6
Mackowiak, Piotr [8763-24] S7, [8763-94] SPSThu
Macqueen, Mark O. [8763-82] SPSThu
Maese-Novio, Alejandro [8767-27] S8
Maffezzoni, Paolo [8764-11] S3
Maier, Reinhard [8763-83] SPSThu
Majzner, Jiri [8763-89] SPSThu, [8763-90] SPSThu
Makarona, Eleni [8763-50] SPSThu, 8765 Conference CoChair, 8765 S5 Session Chair, [8765-15] S4
Mallard, Frédéric [8765-6] S2
Malliaras, George G. [8765-14] S4
Mann, Rudi [8763-110] SPSThu
Mantashyan, Paytsar A. [8767-5] S1
Manzaneque, Tomás [8763-108] SPSThu, [8763-109] SPSThu, [8763-17] S5, [8763-28] S8
Marco Colás, Santiago [8763-502] SPLThu
Maresca, Luca [8764-30] SPSThu, [8767-4] SPSThu
Margesin, Benno [8763-107] SPSThu
Marin, Francesco [8763-98] SPSThu
Marino, Francesco [8763-98] SPSThu
Marko, Hakim [8765-5] S2
Marris-Morini, Delphine [8767-10] S3, [8767-11] S3
Marschibois, MySa [8763-68] SPSThu
Martel, Richard [8767-19] S6
Martin, Marta [8765-9] S3
Martinez, Dominique [8763-502] SPLThu
Martinez, Mar 8764 Program Committee, [8765-7] S2
Martinez, Natividad 8764 Program Committee
Martinez-Pastor, Juan P. [8765-17] S5
Martyuink, Mariusz [8763-91] SPSThu
Maslovska, Olga D. [8766-31] SPSThu
Massa, Marc [8765-18] S5
Masuch, Jens [8765-2] S1

Mata, Alvaro [8765-18] S5
Matar, Maher [8763-46] SPSThu
Matheron, Muriel [8763-64] SPSThu
Mathewson, Alan [8763-51] SPSThu
Matsumoto, Takahiro [8766-3] S2
Mazur, Eric 8767 Program Committee
Mazza, Eros [8764-10] S3
Mecklenburg, Matthias [8766-11] S4
Medrano-Marques, Nicolás [8764-5] S1
Meguellati, Said [8763-36] SPSThu
Mekhitaryan, Vahram [8767-5] S1
Melloni, Andrea I. 8767 Program Committee, 8767 S1 Session Chair
Menezo, Sylvie [8767-6] S2
Merzsch, Stephan [8763-114] SPSThu, [8763-27] S8, [8763-71] SPSThu, [8763-92] SPSThu
Messiaoudène, Sonia [8767-23] S7
Mestais, Corinne [8765-1] S1
Meyendorf, Norbert G. [8763-100] SPSThu, [8763-95] SPSThu, [8763-97] SPSThu
Miguel, Jose A. [8765-7] S2
Mimura, Hidenori 8766 Program Committee, 8766 S4 Session Chair, [8766-3] S2
Minixhofer, Rainer [8767-25] S7
Mir, Salvador 8764 Program Committee
Miribel-Català, Pere Lluís 8764 Program Committee
Misiakos, Konstantinos 8765 Program Committee, [8765-16] S5
Mitjans, Francesc [8765-18] S5
Mizuno, Yasutaka [8767-9] S2
Mochalov, Konstantin Evgenievich [8767-8] S2
Mohammed Zaki, Mohanad [8763-115] SPSThu
Möhrle, Martin [8767-22] S7
Molina-Fernandez, Iñigo 8767 Program Committee, 8767 S2 Session Chair, [8767-27] S8
Monat, Christelle [8767-6] S2
Monteil, Guy [8763-113] SPSThu
Montès, Laurent [8765-5] S2, [8766-7] S3
Moreira, Sandra [8766-34] SPSThu
Morfouli, Panagiota [8765-5] S2
Morkoç, Hadis 8766 Program Committee
Morozova, Natalia V. [8764-13] S3, [8764-32] SPSThu
Mortier, Michel S. [8767-36] SPSThu
Mosca, Mauro [8767-21] S6
Moschou, Despina [8765-20] S6
Moss, David J. [8767-6] S2
Motakis, Antonios [8764-24] S6
Mouis, Mireille [8766-7] S3
Moulzolf, Scott C. [8763-11] S3
Mukhopadhyay, Biswajit [8763-94] SPSThu
Müller, Jörg [8767-7] S2
Mulot, Alexandre [8767-20] S6
Muniz-Piniella, Andres [8763-35] SPSThu
Muñoz, Pascual [8767-28] S8

N

Nabiev, Igor R. [8767-8] S2
Napoli, Ettore [8764-16] SPSThu, [8764-31] SPSThu, [8764-8] SPSThu
Naticchia, Berardo [8764-26] S7
Navas-González, Rafael 8765 S4 Session Chair, [8765-25] SPSThu
Nawaz, Mohsin [8763-74] SPSThu
Neikirk, Dean P. 8763 Program Committee, [8763-42] SPSThu
Neitzert, Heinz Christoph [8766-12] S4
Neo, Yoichiro [8766-3] S2
Neris, Romen [8764-7] S2
Nersesyan, Varsenik [8767-5] S1
Neveu, Sophie [8767-32] S9
Ngo, Ha-Duong [8763-24] S7, [8763-94] SPSThu
Niarchos, George [8763-50] SPSThu
Nielsch, Kornelius 8766 Program Committee
Nightingale, Adrian M. [8763-59] SPSThu
Nishii, Junji [8767-33] S9
Noe, Pierre [8767-20] S6
Nolan, Michael [8763-59] SPSThu
Noury, Adrien [8767-19] S6
Novak, Jozef [8766-8] S3
Novotny, Ivan [8766-8] S3
Novotný, Radovan [8763-5] S2
Nunez, Antonio [8764-7] S2

O

O'Brien, Peter A. [8767-17] S5
O'Donnell, James S. [8765-8] S3
Oehme, Michael [8767-12] S3, [8767-13] S3
Oerke, Alexa [8763-106] SPSThu
Oesterle, Florian [8763-77] SPSThu
Okazaki, Toshiya [8767-19] S6
O'Keefe, Rosemary [8763-51] SPSThu
Oleinikov, Vladimir Alexandrovich [8767-8] S2
Omelchenko, Alexander Ivanovich [8766-16] S5
Ondrusek, Cestmir [8763-48] SPSThu
O'Neill, Mike [8763-51] SPSThu
Oppermann, Martin [8763-97] SPSThu
Orcioni, Simone 8764 Program Committee
Ortega-Moñux, Alejandro [8767-27] S8
Otero, Andrés [8764-18] S5
Ovsyannikov, Sergey V. [8764-13] S3, [8764-32] SPSThu
Özbay, Ekmel [8767-34] SPSThu
Ozer, Kaan [8763-45] SPSThu
Oztekin, Evren [8767-34] SPSThu

P

P. Carballo, Pedro [8764-7] S2
Pabo, Eric [8763-6] S2
Pacheco, Sergio P. 8763 Program Committee

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

Pahl, Wolfgang [8763-84] SPSThu
Pain, Laurent [8766-19] S6
Papadimitriou, Vasilis A. [8763-49] SPSThu
Papaefstathiou, Ioannis 8764 Program Committee
Papanikolaou, Nikolaos [8763-65] SPSThu
Pargon, Erwine [8766-19] S6
Park, Eunmi [8763-116] SPSThu
Park, Jae Hong [8763-116] SPSThu, [8766-35] S6, [8766-36] S2
Park, Jong Mun [8767-25] S7
Park, Jun Yong [8766-35] S6, [8766-36] S2
Paronyan, Marina [8766-17] S5
Pasa, André [8763-72] SPSThu
Paschew, Georgi [8767-37] SPSThu
Pasupathy, Praveen [8763-42] SPSThu
Pauporté, Thierry 8766 Program Committee
Pavesi, Lorenzo 8767 Program Committee, 8767 S6 Session Chair, [8767-18] S6
Pavlova, Svetlana S. [8766-16] S5
Pawlak, Marta [8763-6] S2
Paz, Elvira [8763-43] SPSThu
Pearce, Tim C. [8763-502] SPLThu
Pearson, Matthew [8763-501] SPLWed
Peiner, Erwin 8763 Program Committee, 8763 S4 Session Chair, 8763 S7 Session Chair, [8763-114] SPSThu, [8763-27] S8, [8763-71] SPSThu, [8763-92] SPSThu
Pelegri, Silvia [8763-72] SPSThu
Pelliccia, Luca [8763-107] SPSThu
Penty, Richard V. 8767 Program Committee
Penzkofer, Christian [8763-38] SPSThu
Pepe, Federico [8764-11] S3, [8764-2] S1
Pereira Da Cunha, Mauricio [8763-11] S3
Perera, Alexandre [8763-502] SPLThu
Pérez-Galacho, Diego [8767-27] S8
Persaud, Krishna C. [8763-502] SPLThu
Petkov, Nikolay [8763-59] SPSThu
Petrou, Panayiota [8765-10] S3
Philippov, Philipp [8763-99] SPSThu
Piccot, Julien [8763-64] SPSThu
Pineda, Florian [8765-6] S2
Pirri, Fabrizio C. [8763-33] S9
Pisarenko, Galina [8766-29] SPSThu
Platt, Geoff [8765-17] S5
Pogosyan, Tamara [8766-26] SPSThu
Pontin, Antonio [8763-98] SPSThu
Poon, Andrew W. 8767 Program Committee
Popa, Veaceslav [8766-25] S5
Porcherot, Jean [8765-1] S1
Portela-García, Marta [8764-22] S6, [8764-6] S2
Portilla, Jorge 8764 Program Committee, [8764-15] S4
Pössinger, Tobias [8763-67] SPSThu
Potié, Alexis [8766-7] S3
Potsaid, Benjamin [8763-13] S4
Pozo, Jose M. [8767-17] S5

Prodi, Giovanni Andrea [8763-98] SPSThu
Proynov, Plamen [8763-52] SPSThu
Prtljaga, Nikola [8767-18] S6
Puchberger-Engl, Dietmar [8763-44] SPSThu, [8763-45] SPSThu
Puik, Erik [8763-59] SPSThu
Pullin, Rhys [8763-3] S1, [8763-501] SPLWed

Q

Qiu, HuaCheng [8763-109] SPSThu
Qu, Yifan [8764-25] S6
Qureshi, Abdul Qader Ahsan [8763-107] SPSThu

R

Rabaud, David [8765-5] S2
Raho, Daniel [8764-24] S6
Rainey, Paul V [8765-8] S3
Ramakrishnan, Sathish Kumar [8765-9] S3
Ramirez, Joan Manel [8767-18] S6
Ramiro-Manzano, Fernando [8767-1] S1
Raptis, Ioannis [8763-65] SPSThu, 8765 Program Committee, 8765 S3 Session Chair
Rasoloniaina, Alphonse L. [8767-36] SPSThu
Rebohle, Lars [8767-38] SPSThu
Recknagel, Christian [8763-9] S3
Reich, Steffen [8763-102] SPSThu
Reimann, Andreas [8763-105] SPSThu
Reitterer, Jörg [8763-7] S2
Resta, Giuseppe [8763-8] S2
Riccio, Michele [8764-30] SPSThu, [8767-4] SPSThu
Richter, Andreas [8763-103] SPSThu, [8763-18] S5, [8763-32] S9, [8767-37] SPSThu
Ricotti, Giulio [8763-57] SPSThu
Riesgo, Teresa 8764 Conference Chair, 8764 S7 Session Chair, [8764-15] S4, [8764-18] S5
Rincón, Fernando [8764-20] S5
Ripa, Franco 8764 Program Committee
Rivallin, Pierrette [8767-18] S6
Rivnay, Jonathan [8765-14] S4
Robertson, Martin [8763-13] S4
Robinet, Stéphanie [8765-1] S1
Rochat, Nevine [8763-64] SPSThu
Roditis, Ioannis [8763-49] SPSThu
Rodríguez del Rosario, Raúl R. [8764-33] S1
Rodríguez Mendoza, Beatriz [8764-34] SPSThu
Rodríguez Pérez, Silvestre [8764-34] SPSThu
Rodríguez-Pérez, Alberto [8765-2] S1
Rodríguez-Rodríguez, José Antonio [8765-2] S1
Rodríguez-Vázquez, Ángel B. 8764 Program Committee, [8765-2] S1

Roelkens, Gunther 8767 Program Committee, 8767 S8 Session Chair, [8767-23] S7
Romani, Aldo [8763-57] SPSThu
Romero-García, Sebastián [8767-27] S8
Rösner, Alexander [8765-13] S4
Rospars, J. P. [8763-502] SPLThu
Rouifed, Mohamed-Saïd [8767-11] S3
Rousseau, Jean-Jacques [8767-32] S9
Roussev, Iliia R. [8763-30] S9
Roxhed, Niclas 8765 Program Committee
Royer, François [8767-32] S9
Rufer, Libor [8763-58] SPSThu
Rühle, Karola [8763-62] SPSThu
Ruiz, Victor [8763-108] SPSThu, [8763-28] S8
Ruiz-Amaya, Jesús [8765-2] S1
Ruiz-Merino, Ramón 8765 Program Committee
Rumposch, Christian [8763-9] S3
Rýger, Ivan [8763-101] SPSThu
Ryssel, Heiner [8763-83] SPSThu
Ryu, SuHo [8763-47] SPSThu

S

Saez, Jose A. [8765-18] S5
Sahin, Davut Erdem [8765-11] S3
Saint Julien-Wallsee, Ferdinand [8763-7] S2
Saito, Mitsunori [8767-33] S9
Salette, Arnaud [8765-5] S2
Salvador, Ruben 8764 Program Committee
Samitier Martí, Josep 8765 Program Committee
Samori, Carlo [8764-11] S3, [8764-2] S1
Sánchez de Rojas Aldavero, José Luis 8763 Conference CoChair, 8763 S5 Session Chair, [8763-108] SPSThu, [8763-109] SPSThu, [8763-14] S4, [8763-17] S5, [8763-28] S8
Sanchez, Pablo [8764-19] S5
Sánchez-Azqueta, Carlos [8764-17] S4
Sanders, Scott T. [8763-13] S4
Sandner, Thilo [8763-15] S4
Sangghaleh, Fatemeh [8766-6] S3
Santo Zarnik, Marina [8763-89] SPSThu
Santos, Rui [8767-26] S8
Saponara, Sergio 8764 Program Committee, [8764-29] S7
Sarmiento Rodríguez, Roberto 8764 Program Committee, 8764 S2 Session Chair, [8764-20] S5
Sarua, Andrei 8766 Program Committee
Sauter, Thilo 8763 Program Committee, [8763-25] S7, [8763-37] SPSThu, [8763-80] SPSThu, [8763-85] SPSThu, [8763-99] SPSThu
Schalko, Johannes [8763-110] SPSThu
Schmid, Alexandre [8765-3] S1
Schmid, Marc [8767-12] S3, [8767-13] S3

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

- Schmid, Ulrich 8763 Conference Chair, 8763 S1 Session Chair, 8763 S3 Session Chair, [8763-108] SPSThu, [8763-109] SPSThu, [8763-28] S8, [8763-3] S1, [8763-56] SPSThu, [8763-61] SPSThu, [8763-66] SPSThu, [8763-7] S2, [8763-73] SPSThu
- Schmidt, Matthias [8763-84] SPSThu
- Schmidt, Sebastian W. [8763-38] SPSThu
- Schmidt, Torsten [8766-6] S3
- Schmitt, Bastian [8763-20] S6
- Schneider, Michael [8763-66] SPSThu
- Schrag, Gabriele 8763 Program Committee
- Schreiner, Rupert [8763-21] S6
- Schubert, Thomas [8763-39] SPSThu
- Schuchardt, Arnim [8766-11] S4
- Schulte, Karl [8766-11] S4
- Schulze, Jörg [8767-12] S3, [8767-13] S3
- Schulze, Martin H. [8763-100] SPSThu
- Schumann, Rico [8763-95] SPSThu
- Schütze, Andreas 8763 Program Committee, 8763 S8 Session Chair, [8763-20] S6
- Schwerter, Martin [8763-19] S6
- Schwesinger, Norbert** [8763-115] SPSThu
- Scorrano, Pierpaolo [8764-26] S7
- Sedlak, Petr [8763-89] SPSThu, [8763-90] SPSThu
- Sedlakova, Vlasta [8763-89] SPSThu, [8763-90] SPSThu
- Seepold, Ralf 8764 Program Committee
- Seidel, Helmut [8763-108] SPSThu, [8763-109] SPSThu, [8763-17] S5, [8763-68] SPSThu, [8763-83] SPSThu
- Seidemann, Volker [8763-23] S7
- Serra, Enrico [8763-29] S8, [8763-98] SPSThu
- Servin, Isabelle [8766-19] S6
- Sessolo, Michele [8765-14] S4
- Shang, Haifeng [8763-47] SPSThu
- Shchennikov, Vladimir V. [8764-13] S3, [8764-32] SPSThu
- Shchennikov, Vsevolod V. [8764-13] S3, [8764-32] SPSThu
- Shean, Tamaryn A. V. [8763-35] SPSThu
- Shibaev, Valery P. [8767-8] S2
- Shipman, Catherine [8763-42] SPSThu
- Shulev, Assen [8763-30] S9, [8763-87] SPSThu
- Siciliano, Pietro 8763 Program Committee, [8763-2] S1
- Sidorko, Volodymyr I. [8763-113] SPSThu
- Siemann, Andrew [8766-9] S3
- Sikula, Josef [8763-89] SPSThu, [8763-90] SPSThu
- Silva, Carlos [8766-34] SPSThu
- Silva, Dilusha K. [8763-91] SPSThu
- Singla, Garbi [8764-9] S2
- Singule, Vladislav [8763-48] SPSThu
- Skorupa, Wolfgang [8767-38] SPSThu
- Smalbrugge, Barry [8767-23] S7
- Smit, Meint K. 8767 Conference CoChair, 8767 S4 Session Chair, [8767-15] S4, [8767-23] S7, [8767-26] S8
- Smolka, Martin [8763-44] SPSThu, [8763-45] SPSThu
- Soares, Francisco M. [8767-15] S4, [8767-22] S7
- Sobol, Emil Naumovich [8766-16] S5
- Sola, Laura [8765-17] S5
- Solimani, Masoud [8766-14] S5
- Soma, Aurelio [8763-26] S8, [8763-75] SPSThu, [8765-4] S2
- Song, Myeongho [8763-116] SPSThu
- Sordo, Guido [8763-8] S2
- Sorrentino, Andrea [8766-12] S4
- Sourd, Claire [8766-19] S6
- Sphicopoulos, Thomas [8767-3] S1
- Spyridakis, Alexander [8764-24] S6
- Stark, Bernard H. [8763-52] SPSThu
- Starovoytov, Anton A. [8766-28] SPSThu
- Stavrov, Vladimir T. [8763-30] S9, [8763-87] SPSThu, [8763-99] SPSThu
- Stechele, Walter 8764 Program Committee
- Stehno, Christian 8764 Program Committee
- Steidl, Esther [8765-14] S4
- Steiner, Harald [8763-110] SPSThu, [8763-25] S7, [8763-37] SPSThu, [8763-80] SPSThu, [8763-85] SPSThu
- Stevens-Kalceff, Marion A. 8766 Program Committee, [8766-25] S5
- Stewart, Mark [8763-35] SPSThu, [8763-4] S1
- Stifter, Michael [8763-25] S7, [8763-85] SPSThu
- Stiharu, Ion [8765-11] S3
- Stoklas, Roman [8766-8] S3
- Storozhevikh, Mikhail S. [8766-5] S3
- Stranz, Andrej [8763-27] S8, [8763-71] SPSThu
- Stufler, Stefan [8763-84] SPSThu
- Suarez, Jordi [8765-18] S5
- Svendsen, Winnie E. 8765 Program Committee, [8766-14] S5
- Swann, Marcus [8765-17] S5
- Szarka, Gyorgy [8763-52] SPSThu
- Szydzik, Tomasz M. [8764-7] S2
- Szymanski, Dominik [8767-15] S4
- Thangaraj, Karthik [8763-3] S1
- Thies, Jan-Wilhelm [8763-39] SPSThu
- Thijs, Peter J. A. [8767-15] S4
- Thomann, Jean-Sébastien [8765-23] SPSThu
- Tiginyanu, Ion M.** 8766 Conference CoChair, 8766 S3 Session Chair, [8766-25] S5
- Tikhova, Olesya [8766-33] SPSThu
- Tobajas Guerrero, Félix B. [8764-27] S7, [8764-9] S2
- Tobehn, Ingo [8765-13] S4
- Todorov, Vencislav M. [8763-30] S9, [8763-87] SPSThu
- Toledo Serrano, Javier [8763-17] S5
- Tommasi, Tonia [8763-33] S9
- Topolov, Vitaly Yu [8763-69] SPSThu
- Torlee, Hannes [8763-97] SPSThu
- Toropov, Nikita A. [8766-28] SPSThu
- Tortschanoff, Andreas** [8763-15] S4
- Touhafi, Abdellah [8763-63] SPSThu
- Triantafyllidis, Nicolas [8763-67] SPSThu
- Tsamis, Christos** Symposium Chair, 8763 Program Committee, SPLThu Session Chair, [8763-50] SPSThu, [8765-15] S4
- Tsampas, Petros M. [8763-49] SPSThu
- Tsekenis, George [8765-20] S6
- Tserepi, Angeliki 8765 Conference Chair, 8765 S6 Session Chair, [8765-10] S3, [8765-20] S6
- Tumpold, David [8763-74] SPSThu
-
- ## U
- Úbeda, Juan [8763-14] S4
- Ulbricht, Kai [8767-12] S3
- Uvarov, Oleg V. [8766-5] S3
-
- ## V
- Valero, Maria [8764-5] S1
- Vallo, Martin [8763-101] SPSThu
- van de Wiel, Bart [8763-6] S2
- van Rijn, Cees J. M. [8763-59] SPSThu
- van Schaijk, Rob [8763-1] S1
- Van Thourhout, Dries [8767-23] S7
- Vanko, Gabriel 8763 Program Committee, [8763-101] SPSThu
- Vargas, Fabian 8764 Program Committee
- Vartanyan, Tigran A. [8766-28] SPSThu
- Vasconcelos de Brito, Alisson 8764 Program Committee
- Vaskova, Anna [8764-22] S6
- Vasylyv, Oresta M.** [8766-27] SPSThu
- Vázquez, Javier [8763-14] S4, [8763-17] S5
- Vazquez, Socorro [8765-18] S5
- Vece, Giovanni Battista [8764-10] S3
- Vegni, Lucio [8767-29] S8
- Vellekoop, Michael J. 8763 Program Committee, [8763-44] SPSThu, [8763-45] SPSThu
-
- ## T
- Tang, Qingle [8767-39] SPSThu
- Tange, Masa [8767-19] S6
- Tarparelli, Richard [8767-29] S8
- Tartagni, Marco [8763-57] SPSThu
- Tay, Arthur [8764-25] S6
- Teker, Kasif [8766-9] S3
- Tengattini, Andrea [8767-18] S6
- Terlecka, Galina [8763-54] SPSThu
- Teva, Jordi [8767-25] S7
- Texier-Nogues, Isabelle [8765-23] SPSThu

Index of Authors, Chairs, and Committee Members

Bold = SPIE Member

Verbelen, Yannick [8763-63] SPSThu
Verpoorte, Sabeth 8765 Program Committee
Vershure, Paul [8763-502] SPLThu
Verstuyft, Steven [8767-23] S7
Vertuccio, Luigi [8766-12] S4
Vetiška, Vojtěch [8763-48] SPSThu
Viana, Antoine [8765-21] S6
Vidal-Verdú, Fernando 8765 Program Committee, [8765-25] SPSThu
Vilumsone, Ausma [8763-54] SPSThu
Vinzenz, Xenia [8763-31] S9
Viovy, Jean-Louis 8765 Program Committee
Viro, Léopold [8767-10] S3
Vitrant, Guy [8766-21] S6
Vivien, Laurent 8767 Conference CoChair, 8767 S3 Session Chair, [8767-10] S3, [8767-11] S3, [8767-19] S6
Vlach, Radek [8763-5] S2, [8763-55] SPSThu
Voigt, Andreas [8763-18] S5
Völlm, Henning [8763-83] SPSThu
Völlmeke, Stefan [8763-102] SPSThu
Vondra, Marek [8763-90] SPSThu
Vorontsov, Grigory V. [8764-32] SPSThu
Voulazeris, George [8763-50] SPSThu
Vourdas, Nikolaos [8765-20] S6

W

Waag, Andreas [8763-114] SPSThu, [8763-27] S8, [8763-71] SPSThu, [8763-92] SPSThu
Waber, Tobias [8763-84] SPSThu
Wachmann, Ewald [8767-25] S7
Wada, Kazumi 8767 Program Committee, [8767-9] S2
Waldron, Finbarr [8763-51] SPSThu
Waldschik, Andreas [8763-23] S7
Wale, Michael J. [8767-15] S4
Walter, Susan [8763-93] SPSThu, [8763-95] SPSThu
Wangüemert-Pérez, Juan Gonzalo [8767-27] S8
Wasisto, Hutomo Suryo [8763-114] SPSThu, [8763-27] S8, [8763-71] SPSThu, [8763-92] SPSThu
Weaver, Paul M. [8763-35] SPSThu, [8763-4] S1
Weigel, Robert [8763-77] SPSThu
Weimann, Thomas [8763-27] S8
Wen, Weijia [8767-2] S1
Werner, Jens [8767-12] S3
Winkler, Markus [8763-503] SPLFri
Wippermann, Frank C. [8763-105] SPSThu
Wöllenstein, Jürgen 8763 Program Committee, 8763 S2 Session Chair, 8763 S4 Session Chair, [8763-10] S3, [8763-31] S9, [8763-88] SPSThu
Wooldridge, Jenny [8763-35] SPSThu
Wurtz, Gregory A. [8766-2] S1

X

Xu, Xin [8763-24] S7
Xu, Xin [8766-7] S3

Y

Yamada, Itsunari [8767-33] S9
Yamashita, Naoto [8767-33] S9
Yi, Guo [8764-23] S6
Yilmaz, Gurkan [8765-12] S4
Yoo, Kwang Soo [8766-35] S6
Yue, Weisheng [8767-2] S1
Yuryev, Vladimir A. [8766-22] S6, [8766-5] S3

Z

Zähringer, Sandy [8763-115] SPSThu
Zaiba, Soraya [8766-21] S6
Zakharov, Viktor V. [8766-28] SPSThu
Zambito, Leandro [8767-21] S6
Zavargo-Peche, Luis [8767-27] S8
Zayats, Anatoly V. 8766 Program Committee, [8766-2] S1
Zehetner, Johann [8763-101] SPSThu
Zelenika, Saša [8763-53] SPSThu
Zergioti, Ioanna [8765-20] S6
Zhang, Qing [8763-114] SPSThu
Zhang, Sheng P. [8763-42] SPSThu
Zhang, Xixiang [8767-2] S1
Zhang, Yi [8767-16] S5
Zhang, Ziyang [8767-30] S9
Ziane, Omar [8766-21] S6
Zimmermann, Lars [8767-17] S5
Zografopoulos, Dimitrios C. [8767-40] SPSThu

Registration

Onsite Registration and Badge Pickup

Espace Pelvoux Salle de Reception

Tuesday 23 April	15:00 - 17:00 hrs.
Wednesday 24 April	8:00 - 17:00 hrs.
Thursday 25 April	8:00 - 17:30 hrs.
Friday 26 April	8:30 - 17:00 hrs.

Conference Registration

Includes admission to all conference sessions, plenaries, panels, poster sessions, Welcome Reception, coffee breaks, and a choice of proceedings. Student pricing does not include proceedings.

Early Bird Pricing and Dates

Conference registration prices increase by €75 (US\$100) after 17 April 2013. Student prices increase €20 (US\$50).

SPIE Member and Student Member Pricing

- SPIE Members receive conference registration discounts. Discounts are applied at the time of registration.
- Student registration rates are available only to undergraduate and graduate students who are enrolled full time and have not yet received their Ph.D. Post-docs may not register as students. A student ID number or proof of student status is required with your registration.

Press Registration

For credentialed press and media representatives only. Please email contact information, title and organization to media@spie.org

SPIE Cashier

Registration Area. Open during registration hours.

- **Registration Payments**
If you are paying by cash or cheque as part of your onsite registration, wish to add a course, workshop, or special event requiring payment, or have questions regarding your registration, visit the SPIE Cashier.
- **Receipts and Certificate of Attendance**
Preregistered attendees who did not receive a receipt or attendees who need a Certificate of Attendance may obtain those from the SPIE Cashier.
- **Badge Corrections**
Badge corrections can be made by the SPIE Cashier. Please have your badge removed from the badge holder and marked with your changes before approaching the counter.

Refund Information

There is a €35 (US\$40) service charge for processing refunds. Requests for refunds must be received by 15 April 2013; all registration fees will be forfeited after this date. Membership dues and SPIE Digital Library subscriptions are not refundable.

U.S. Government Credit Cards

U.S. Government credit card users: have your purchasing officer contact the credit card company and get prior authorization before attempting to register. Advise your purchasing agent that SPIE is considered a 5968 company for authorization purposes.

Attendee Services _____

Internet Access

Complimentary Wireless Internet will be available. Connection speeds will depend on the number of users. Please read the SPIE Wireless Internet Service Policy found in the SPIE Event Policies.

SPIE Conference App

Download the free SPIE Conference App, available for iPhone and Android smart phones. Search and browse the programme, special events, participants, exhibitors, and more.

SPIE Publications

SPIE Books
Browse the latest SPIE Press Books and Proceedings which will be available at the registration desk.

Press

For credentialed press and media representatives only. Please email contact information, title, and organization to media@spie.org

SPIE Luggage + Coat Check

Salon Honneur - Open during registration hours
Luggage, package, and coat storage are available free of charge. Please note that the desk is staffed during registration hours.

Urgent Message Line

An urgent message line is available during registration hours: +33 4 7639 6600 – please request the SPIE registration desk. Attendees should check the message board in the registration area for any messages held for them.

Author/Presenter Information ____

Speaker Check-in and Preview Station

All conference rooms have a computer workstation, projector, screen, lapel microphone, and laser pointer. All presenters are requested to come to their conference room during the breaks with their memory devices or laptops to confirm their presentation display settings.

Poster Setup Instructions

Pelvoux Salle de Reception

Wednesday10:00

Setup:

Authors are encouraged to display their posters beginning at 10:00 on Wednesday for extended viewing. Each poster author will have a 1m x 1m area in which to display their poster presentation.

Interactive Poster Session:

Thursday14:30 to 16:30

Conference attendees are invited to attend the Poster Session on Thursday afternoon. Come view posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Travel to Grenoble, France

Grenoble, France

Grenoble is a city in southeastern France, at the foot of the French Alps where it is beautifully situated on the Drac and Isère rivers, and surrounded by mountains. Grenoble is a lively, modern city, home to four universities, with more than 50,000 students. Its location in the Rhône-Alpes region has led to the city being known in France as the “Capital of the Alps”.

Grenoble Tourism

The city is now a significant scientific centre in Europe and includes chemical and electronics industries as well as nuclear research. It is also at the heart of French micro- and nanotechnology research, with the CNRS, CEA LETI, and MINATEC based in Grenoble, where 2400 researchers, 1200 students and 600 companies and technology transfer specialists have grouped around infrastructures established by the Grenoble Institute of Technology and CEA LETI in 2002.

Transportation

Airport Information:

Grenoble can be accessed by air from Grenoble-Isère Airport, Lyon Saint-Exupéry Airport and Geneva International Airport. Within Grenoble, there is a comprehensive bus and tram service that operates 26 bus routes and four tram lines and serves much of greater Grenoble. Being essentially flat, Grenoble is a bicycle-friendly city.

Transport from the Airport:

Lyon Airport provides regular connections to Grenoble, either via shuttle bus (for reservations visit the Faure Vercors website or, in France, call 0825 825 536 (N°indigo). You may also visit www.sncf.com, if you prefer to make the journey by train from Paris.

The Gare de Grenoble is served by the TGV rail network, with frequent high-speed services to and from Paris-Gare de Lyon, often with a stop at Lyon Saint-Exupéry Airport. There are also less frequent long distance trains to and from other destinations in France, such as Lille Europe and Nantes. Local rail services connect Grenoble with Lyon, Geneva, and other destinations to the east. Valence to the west provides connections with TGV services along the Rhone valley. Rail and road connections to the south are less well-developed.

Shuttles and Public Transportation:

The stops for Alpexpo Alpes Congres are:

- Tramway : Line A, Stop “Pôle Sud Alpexpo”
 - Bus : Line 13, Stop Alpexpo; Line 12, 23, 2, STOP Grand Place
- For further information please visit www.semitag.com

Driving Directions and Parking:

Alpexpo is near exit 6 of the Rocade Sud, connected directly to motorways A41, A48, and A49. There are approximately 1,200 parking space at Alpexpo Alpes-Congres. See map on page 30. For further information, please visit www.vincipark.com

Car Rental

Call the Hertz International Reservation Center at 1-800-654-3001 in the USA or your local Hertz Reservations Center to receive a special discount for SPIE. Reservations may also be placed on-line at www.hertz.com. You will receive 15% off qualifying Affordable rates at participating locations in Grenoble.

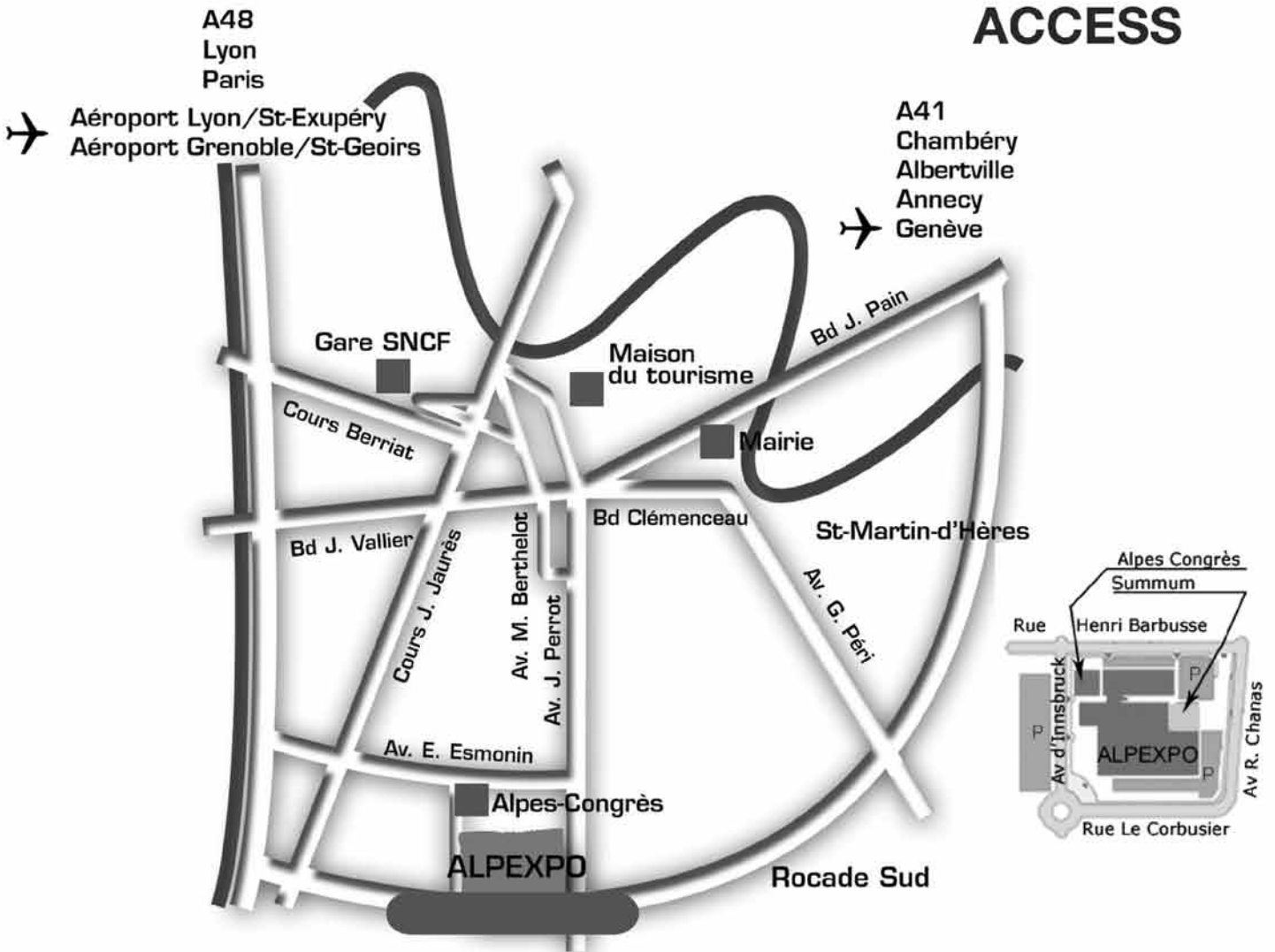
Be sure to identify yourself as a SPIE attendee. The PC#137480 must be on your advance reservation to receive this special offer. You must present this coupon at the time of rental in order to receive this discount.

This special offer is available for rentals from April 15-May 15, 2013.

Highways link Grenoble to all major cities in the area including the autoroute to the northwest toward Lyon, to the southwest toward the Rhone valley via Valence, to the northeast toward Chambéry, the Alps, and Italy.

General Information

ACCESS

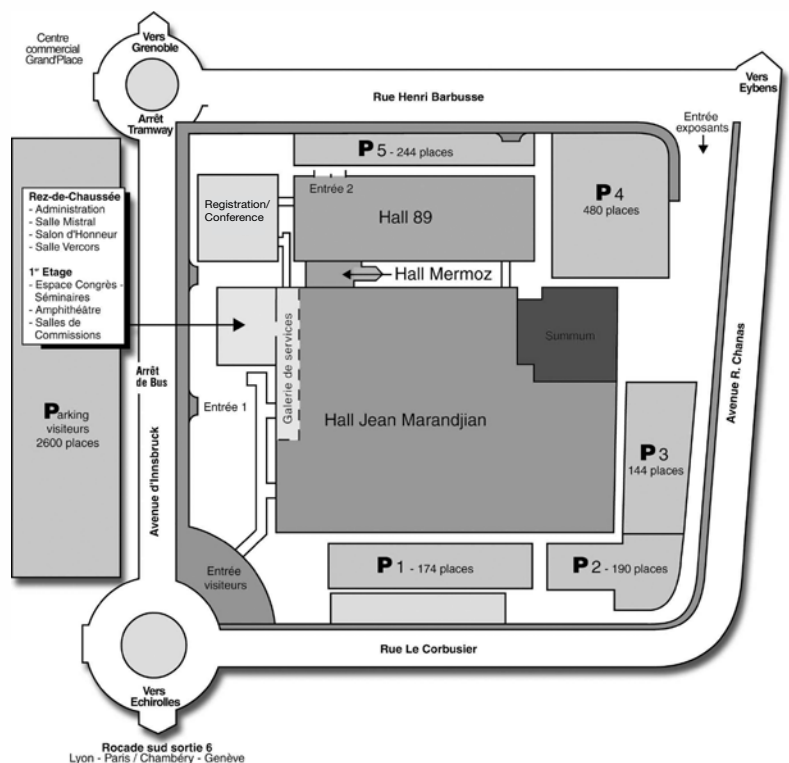


Rocade Sud sortie 6

Eybens

Alpexpo Alpes-Congrès has approximately 1200 parking spaces available.

- P1: 174 places
- P2: 190 places
- P3: 144 places
- P4: 480 places
- P5: 244 places



Policies

Granting Attendee Registration and Admission

SPIE, or their officially designated event management, in their sole discretion, reserves the right to accept or decline an individual's registration for an event. Further, SPIE, or event management, reserves the right to prohibit entry or remove any individual whether registered or not, be they attendees, exhibitors, representatives, or vendors, who in their sole opinion are not, or whose conduct is not, in keeping with the character and purpose of the event. Without limiting the foregoing, SPIE and event management reserve the right to remove or refuse entry to any attendee, exhibitor, representative, or vendor who has registered or gained access under false pretenses, provided false information, or for any other reason whatsoever that they deem is cause under the circumstances.

Misconduct Policy

SPIE is a professional, not-for-profit society committed to providing valuable conference and exhibition experiences. SPIE is dedicated to equal opportunity and treatment for all its members and meeting attendees. Attendees are expected to be respectful to other attendees, SPIE staff, and contractors. Harassment and other misconduct will not be tolerated; violators will be asked to leave the event.

Identification

To verify registered participants and provide a measure of security, SPIE will ask attendees to present a government-issued Photo ID at registration to collect registration materials.

Individuals are not allowed to pick up badges for attendees other than themselves. Further, attendees may not have some other person participate in their place at any conference-related activity. Such other individuals will be required to register on their own behalf to participate.

Capture and Use of a Person's Image

By registering for this event, I grant full permission to SPIE to capture, store, use, and/or reproduce my image or likeness by any audio and/or visual recording technique (including electronic/digital photographs or videos), and create derivative works of these images and recordings in any SPIE media now known or later developed, for any legitimate SPIE marketing or promotional purpose. By registering for this event, I waive any right to inspect or approve the use of the images or recordings or of any written copy. I also waive any right to royalties or other compensation arising from or related to the use of the images, recordings, or materials. By registering, I release, defend, indemnify and hold harmless SPIE from and against any claims, damages or liability arising from or related to the use of the images, recordings or materials, including but not limited to claims of defamation, invasion of privacy, or rights of publicity or copyright infringement, or any misuse, distortion, blurring, alteration, optical illusion or use in composite form that may occur or be produced in taking, processing, reduction or production of the finished product, its publication or distribution.

Payment Method

Registrants for paid elements of the event, who do not provide a method of payment, will not be able to complete their registration. Individuals with incomplete registrations will not be able to attend the conference until payment has been made. SPIE accepts VISA, MasterCard, American Express, Discover, Diner's Club, checks and wire transfers. Onsite registrations can also pay with Cash.

Authors/Coauthors

By submitting an abstract, you agree to the following conditions:

- An author or coauthor (including keynote, invited, and solicited speakers) will register at the author registration rate, attend the meeting, and make the presentation as scheduled.

- A full-length manuscript (6-12 pages) for any accepted oral or poster presentation will be submitted for publication in the SPIE Digital Library, printed conference Proceedings, and CD. (Some SPIE events have other requirements that the author is made aware of at the time of submission.)
- Only papers presented at the conference and received according to publication guidelines and timelines will be published in the conference Proceedings and SPIE Digital Library (or via the requirements of that event).

Audio, Video, Digital Recording Policy

Conferences, courses, and poster sessions: For copyright reasons, recordings of any kind are prohibited without prior written consent of the presenter. Attendees may not capture nor use the materials presented in any meeting room without written permission. Consent forms are available at Speaker Check-In. Individuals not complying with this policy will be asked to leave a given session and asked to surrender their recording media.

Exhibition Hall: For security and courtesy reasons, recordings of any kind are prohibited unless one has explicit permission from on-site company representatives. Individuals not complying with this policy will be asked to surrender their recording media and to leave the exhibition hall.

Your registration signifies your agreement to be photographed or videotaped by SPIE in the course of normal business. Such photos and video may be used in SPIE marketing materials or other SPIE promotional items.

Laser Pointer Safety Information/Policy

SPIE supplies tested and safety-approved laser pointers for all conference meeting rooms. For safety reasons, SPIE requests that presenters use provided laser pointers.

Use of a personal laser pointer represents user's acceptance of liability for use of a non-SPIE-supplied laser pointer. If you choose to use your own laser pointer, it must be tested to ensure <5 mW power output. Laser pointers in Class II and IIIa (<5 mW) are eye safe if power output is correct, but output must be verified because manufacturer labeling may not match actual output. Come to Speaker Check-In and test your laser pointer on our power meter. You are required to sign a waiver releasing SPIE of any liability for use of potentially non-safe, personal laser pointers. Misuse of any laser pointer can lead to eye damage.

Access to Technical and Networking Events

Persons under the age of 18 are not allowed in technical or networking events. Anyone 18 or older must register as an attendee. All technical and networking events require a valid conference badge for admission.

Underage Persons on Exhibition Floor Policy

For safety and insurance reasons, no one under the age of 16 will be allowed in the exhibition area during move-in and move-out. During open exhibition hours, only children over the age of 12 accompanied by an adult will be allowed in the exhibition area.

Unauthorized Solicitation Policy

Unauthorized solicitation in the Exhibition Hall is prohibited. Any non-exhibiting manufacturer or supplier observed to be distributing information or soliciting business in the aisles, or in another company's booth, will be asked to leave immediately.

Unsecured Items Policy

Personal belongings should not be left unattended in meeting rooms or public areas. Unattended items are subject to removal by security. SPIE is not responsible for items left unattended.

General Information

Policies continued

Wireless Internet Service Policy

At SPIE events where wireless is included with your registration, SPIE provides wireless access for attendees during the conference and exhibition but cannot guarantee full coverage in all locations, all of the time. Please be respectful of your time and usage so that all attendees are able to access the internet.

Excessive usage (e.g., streaming video, gaming, multiple devices) reduces bandwidth and increases cost for all attendees. No routers may be attached to the network. Properly secure your computer before accessing the public wireless network. Failure to do so may allow unauthorized access to your laptop as well as potentially introduce viruses to your computer and/or presentation. SPIE is not responsible for computer viruses or other computer damage.

Mobile Phones and Related Devices Policy

Mobile phones, tablets, laptops, pagers, and any similar electronic devices should be silenced during conference sessions. Please exit the conference room before answering or beginning a phone conversation.

Smoking

For the health and consideration of all attendees, smoking is not permitted at any event elements, such as but not limited to: plenaries, conferences, workshops, courses, poster sessions, hosted meal functions, receptions, and in the exhibit hall. Most facilities also prohibit smoking in all or specific areas. Attendees should obey any signs preventing or authorizing smoking in specified locations.

Hold Harmless

Attendee agrees to release and hold harmless SPIE from any and all claims, demands, and causes of action arising out of or relating to your participation in the event you are registering to participate in and use of any associated facilities or hotels.

Event Cancellation

If for some unforeseen reason SPIE should have to cancel the event, registration fees processed will be refunded to registrants. Registrants will be responsible for cancellation of travel arrangements or housing reservations and the applicable fees.

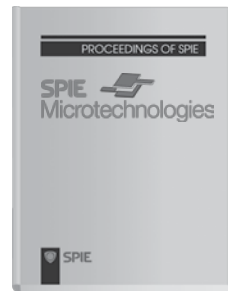
Confidential Reporting of Unethical or Inappropriate Behavior

SPIE is an organization with strong values of responsibility and integrity. Our Ethics Statement and Code of Professional Conduct contain general guidelines for conducting business with the highest standards of ethics. SPIE has established a confidential reporting system for staff & other stakeholders to raise concerns about possible unethical or inappropriate behavior within our community. Complaints may be filed by phone or through the website, and, if preferred, may be made anonymously. The web address is www.SPIE.ethicspoint.com and the toll free hotline number is 1-888-818-6898.



PROCEEDINGS AND SEARCHABLE CDs OF SPIE

Vol#	Title/Editor	Prepublication Price
8763	Smart Sensors, Actuators, and MEMS V. (Schmid)	\$130
8764	VLSI Circuits and Systems VI. (Riesgo)	\$60
8765	Bio-MEMS and Medical Microdevices. (Tserepi)	\$53
8766	Nanotechnology VI. (Adelung)	\$60
8767	Integrated Photonics: Materials, Devices, and Applications II. (Fédéli)	\$70



PRINTED PROCEEDINGS VOLUMES.

If you are only interested in editor-reviewed papers from a single conference or want an archive of the conference that includes your paper, choose the printed book. Available 6 weeks after the meeting.



SEARCHABLE CDs WITH MULTIPLE CONFERENCES.

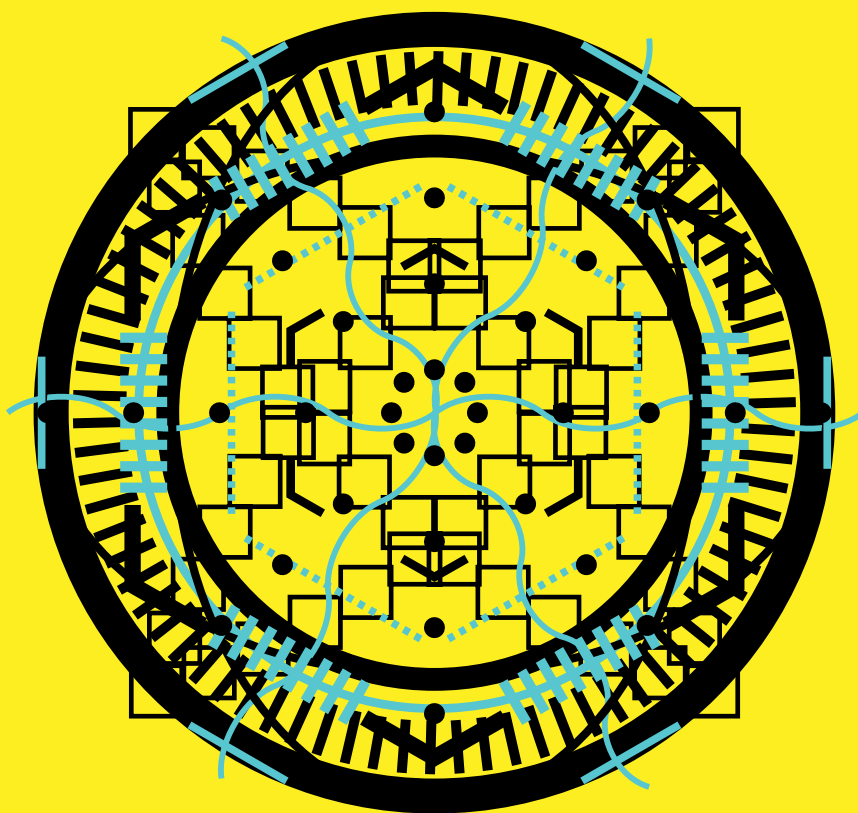
If you are interested in editor-reviewed papers from multiple conferences and a broad topical area, choose the searchable CDs. Available within 8 weeks of the meeting; PC, Macintosh, and Unix compatible.

SPIE Microtechnologies 2013

(Includes Vols. 8763-8767)

Order No. **CDS507**
Est. pub. June 2013

Meeting attendee: \$145 (€110)
Nonattendee member price: \$265
Nonattendee nonmember price: \$345



Helping engineers and
scientists stay current
and competitive



Optics &
Astronomy



Biomedical
Optics



Optoelectronics &
Communications



Defense
& Security



Energy



Lasers



Nano/Micro
Technologies



Sensors

SPIE
Digital
Library

Find the answer
SPIDigitalLibrary.org

2014 Photonics Europe

Advances in applications of photonics, optics, lasers,
and micro/nanotechnologies

Mark Your Calendar

spie.org/pe2014

**Conferences, Courses
and Exhibition**
14-17 April 2014

Location
Square Brussels Meeting Centre
Brussels, Belgium