

EUROSENSORS XXV

September 4-7, 2011 Athens

Athens Megaron International Conference Center

Alexandra Trianti Hall

Room MC2

Room MC3

Music Library Lecture Room

Monday, September 05, 2011

Opening Ceremony & Plenary Session I

Chair: Christos Tsamis, Grigoris Kaltsas

08:45 - 09:30	Opening Ceremony
09:30 - 10:15	Piezotronics for Smart CMOS and Nanogenerators for Self-Powered Sensors <i>Zhong Lin Wang</i>
10:15 - 11:00	Why Going Towards Plastic and Flexible Sensors? <i>Danick Briand et al</i>

11:00 – 11:30 *Coffee break*

A2L-A: Chemical Sensors

Chair: Maximilian Fleischer, Yuri Vlasov

11:30 - 11:45	Invited: Novel Chemical Sensor Applications in Commercial Aircraft <i>Gerhard Müller et al</i>
11:45 - 12:00	
12:00 - 12:15	1148: Discrimination and Classification of Chemical Warfare Agent Simulants Using a Love-Wave Sensor Array <i>Daniel Matatagui et al</i>
12:15 - 12:30	1375: Imprinted Photonic Crystal Chemical Sensors <i>Arjen Boersma et al</i>
12:30 - 12:45	1153: Silicone Containing Amphiphilic co-Networks As Immobilization Matrices for Enzyme Based biosensors: Optochemical Detection of Gaseous Hydrogen Peroxide <i>Stephan Meskath et al</i>
12:45 - 13:00	1230: Facile Sensors Replacement in Optical Gas Sensors Array <i>Davide Polese et al</i>

13:00 - 14:30 *Lunch*

A3L-A: Gas Sensing Mechanisms

Chair: Gerhard Müller, Dimitris Tsoukalas

14:30 - 14:45	Invited: Transduction in Semiconducting Metal Oxide Based Gas Sensors - Implications of the Conduction Mechanism <i>Nicolae Barsan</i>
14:45 - 15:00	
15:00 - 15:15	1021: The Influence of Pt Doping on the Sensing and Conduction Mechanism of SnO₂ Based Thick Film Sensors <i>Michael Hübner et al</i>
15:15 - 15:30	1406: Metal Organic Frameworks As Promising High Surface Area Material for Work Function Gas Sensors <i>Roland Pohle et al</i>
15:30 - 15:45	1154: Sensitivity Enhancement of Metal Oxide Thin Film Transistor with Back Gate Biasing <i>Van Anh Dam et al</i>
15:45 - 16:00	1277: Toward a Hydrogen Peroxide Sensor for Exhaled Breath Analysis <i>Justyna Wiedemair et al</i>

A2L-B: Physical Sensors - Transducers

Chair: Arnaldo D'Amico, Christopher Hierold

1074: 6 DOF Force and Torque Sensor for Micro-Manipulation Applications <i>Pablo Estevez et al</i>
1530: A Novel Approach for Active Pressure Sensors in Thin Film SOI Technology <i>Benoit Olbrechts et al</i>
1354: Squeeze-Film Damper Design with Air Channels: Experimental Verification <i>Rosana Alves Dias et al</i>
1241: Analysis of Acceleration Sensitivity in Frequency Decoupled MEMS Tuning Fork Gyroscope <i>Thakur Praveen Singh et al</i>
1174: A Novel Dynamic Pull-in MEMS Gyroscope <i>Mrigank Sharma et al</i>
1205: Optimization of an Electro-Optic Voltage Transducer Using a VHDL-AMS Model <i>Joris Pascal et al</i>

A3L-B: Flexible Sensors

Chair: Danick Briand, Grigoris Kaltsas

1418: Fully Printed Flexible Humidity Sensor <i>Sai Gurusu Reddy Avuthu et al</i>
1576: Microfabrication of Flexible Self-Repairing Ground Reaction Sensor with Liquid Metal Electrodes <i>Rajesh Surapaneni et al</i>
1054: Flexible 3D Force Tactile Sensor for Artificial Skin for Anthropomorphic Robotic Hand <i>Hanna Yousef et al</i>
1271: Flexible Microfluidic Devices for Both Generation and Absorption of Carbon Dioxide Gas and Liquid Perfusion <i>Po Ki Yuen et al</i>
1442: Humidity and Temperature Sensors on Plastic Foil for Textile Integration <i>Caglar Ataman et al</i>
1240: Nanocomposite Flexible Pressure Sensor for Biomedical Applications <i>Alexandra Sepúlveda et al</i>

A2L-C: Photonic Bio-Devices

Chair: Michiel Vellekoop, Spiridon Kintzios

1545: Label-Free, Multiplexed Biomolecular Analysis Using Arrays of Silicon Photonic Microring Resonators <i>Adam Washburn et al</i>
1135: Gold Nanorods Based LSPR Biosensor for Label-Free Detection of Alpha-Fetoprotein <i>Xia Xu et al</i>
Invited: Advanced Photonic Biosensors for Point-of-Care Diagnostics <i>Laura Lechuga</i>
1026: SERS Sensors for Biomedical Tubing <i>Charles Choi et al</i>
1286: Salt and Pepper for Point-of-Care Diagnostics <i>Dominik Furin et al</i>

A3L-C: Optical Devices

Chair: Corrado di Natale, Paddy French

1239: Advanced FT-IR High-Speed Spectrometer Showing the Feasibility of High Performance Optical MEMS Based Mid-IR Sensing <i>Andreas Kenda et al</i>
1004: Portable Surface Plasmon Resonance Biosensor for Detection of Nucleic Acids <i>Hana Šipova et al</i>
Invited: Monolithic Silicon Optocouplers for Bio-Chemical Sensing <i>Kostas Misiakos</i>
1210: Hemoglobin Detection in Opaque Particular Fluids <i>Martin Brandl et al</i>
1432: Non-Cooled Low-Cost Miniature CCD Camera Module As Fluorescence Detector for Lab-on-a-Chip Life-Science Applications <i>Rafal Walczak et al</i>

A2L-D: Wireless Sensor Networks

Chair: Robert Puers, Joao Carmo

1368: Cooperative 3D Air Quality Monitoring with Wireless Chemical Sensing Networks <i>Saverio De Vito et al</i>
1520: Heterogeneous Integration of Autonomous Systems in Package for Wireless Sensor Networks <i>Gonzalo Murillo et al</i>
1303: A Wireless Module for Vibratory Motor Control and Inertial Sensing in Capsule Endoscopy <i>Gastone Ciuti et al</i>
1615: Autonomous smart sensors : from MEMS design to wireless sensor network deployment <i>Pierre-Damien Berger</i>
Invited: Wireless Sensors Network Based Safe Home to Care Elderly People: Behaviour Detection <i>Subhas Chandra Mukhopadhy et al</i>

A3L-D: Reliability of MEMS Devices

Chair: Ernst Obermeier, Thomas Maeder

1165: Long-Term Mechanical Reliability of Ceramic Thick-Film Circuits and Mechanical Sensors Under Static Load <i>Thomas Maeder et al</i>
1198: Thin Film Electrodes for High Temperature Surface Acoustic Wave Devices <i>Denny Richter et al</i>
1345: Neutron and Gamma Photon Radiation Effects on MEMS Structures <i>Petros Gkotsis et al</i>
1582: Driving Modes and Material Stability of a Vibrating Polyethylene Membrane Viscosity Sensor <i>Bernhard Weiss et al</i>
Invited: Reliability Aspects of Capacitive MEMS Devices <i>Wim de Groot et al</i>

16:00 - 16:30 *Coffee break*

16:30 - 18:00 Poster Session I

18:00 - 20:00 **Special event on "Common Strategic Framework for EU research and innovation funding"**20:30 **Official Reception at "Byzantine and Christian Museum of Athens"**

Tuesday, September 06, 2011

Plenary Session II*Chair: Maximilian Fleischer, Christopher Hierold*09:00 - 09:45 **A New Game Changer for Immunoassays and IVD: Microfluidics and Lab Chips***Chong Ahn*09:45 - 10:30 **Liquid Condition Monitoring Using Physical Sensors***Bernhard Jakoby*10:30 - 11:00 *Coffee break***B2L-A:
Cantilever-based Sensors***Chair: Valentin Smytyna, Panos Datskos*11:00 - 11:15 **Invited: Cantilever-Like Sensors for Use in Molecular Recognition and Particle Detection***Anja Boisen*

11:15 - 11:30

11:30 - 11:45 **1045: Fabrication of Conducting AFM Cantilevers with AlN-based piezoelectric actuators***Hans-Joachim Quenzer et al*11:45 - 12:00 **1188: 2D Cantilever Arrays with Fixed Geometries and Varying Spring Constants for Life Science Applications***Frédéric Loizeau et al*12:00 - 12:15 **1443: Fabrication of AlN Slender Piezoelectric Cantilevers for High-Speed MEMS Actuators***An Tran et al*12:15 - 12:30 **1171: Wafer-Scale MEMS Technology of New Vertically Laminated Cantilevers***Yi Zhang et al*12:30 - 14:00 *Lunch***B3L-A:
Nanomaterials for Sensing***Chair: Juan Ramon Morante, Giorgio Sberveglieri*14:00 - 14:15 **Invited: One- and Two- Dimensional Nanostructures for Chemical- and Bio-Sensing***Magnus Willander et al*

14:15 - 14:30

14:30 - 14:45 **1136: TiO₂: Cr nanopowders for Hydrogen Sensing***Barbara Lyson et al*14:45 - 15:00 **1250: Copper Oxide Nanowires Prepared by Thermal Oxidation for Chemical Sensing***Dario Zappa et al***B2L-B:
Actuators***Chair: Lina Sarro, Paddy French*1097: **Flexible Pneumatic Micro-Actuators: Analysis and Production***Benjamin Gorissen et al*1326: **Stepwise Microactuators Powered by Ultrasonic Transfer***Alexey Denisov et al*1467: **Development of a Novel Dual-Axis Large-Displacement Microstage Using Lorentz Force Actuators and Curved-Beam Springs***Feng-Yu Lee et al*1491: **Arrays of 100 μm X 100 μm Dielectric Elastomer Actuators to Strain the Single Cells***Samin Akbari et al*1512: **Piezoelectrically Driven Micro-Lens Out-of-Plane Actuation***Aron Michael et al*1105: **Investigation of a Piezoelectric Driven MEMS Mirror Based on Single S-Shape PZT Actuator***Kah How Koh et al***B3L-B:
Flow Measurements - Sensors***Chair: Bernhard Jakoby, Peter Enoksson*1143: **Calibration-Free Volume Flow Measurement Principle Based on Thermal Time-of-Flight (TToF)***Eberhard Engelen et al*1073: **Passive Wireless Sensing of Micro Coil Parameters in Fluidic Environment***Adnan Yousaf et al*1370: **Utilizing Acoustic Pressure Waves for Sensing Fluid Properties***Hannes Antlinger et al*1361: **Artificial Lateral-Line System for Imaging Dipole Sources Using Beamforming Techniques***Ahmad Dagamseh et al***B2L-C:
Sensors and Microfluidics for Bio-Analysis***Chair: Jens Ducreé, Konstantinos Misiakos*1182: **Separation of Biological Cells and Bacteria by Gradient Electrodes***Sander van Den Driesche et al*1548: **Laser-Induced Fluorescence Detection Modules for Point-of-Care Microfluidic Biochemical Analysis***Toshihiro Kamei*1548: **Laser-Induced Fluorescence Detection Modules for Point-of-Care Microfluidic Biochemical Analysis***Sabeth Verpoorte*1548: **Laser-Induced Fluorescence Detection Modules for Point-of-Care Microfluidic Biochemical Analysis***Sabeth Verpoorte*1578: **Electrochemical Quantification of DNA Using Aluminum Oxide Membranes***Rohit Sharma et al*1398: **TiO₂ Affinity Chromatography Microcolumn on Si Substrates for Phosphopeptide Analysis***George Boulousis et al***B3L-C:
Microfluidics***Chair: Sabeth Verpoorte, Angeliki Tseripi*1493: **Microfluidic Systems with Free Definable Sensor Spots by an Integrated Light-Addressable Potentiometric Sensor***Torsten Wagner et al*1297: **Industrialized Functional Test for Insulin Micropumps***Eric Chappel et al*1592: **A Multi-Range PCB-MEMS Microfluidic Flow Sensor with Adjustable Sensitivity***Anastasios Petropoulos et al*1448: **A Microfluidic System for Full Hydrodynamic Focusing Control***Nicola Moscelli et al***B2L-D:
Energy Harvesting***Chair: Zhong Lin Wang, Gregory Doumenis*1028: **AlN-Based Piezoelectric Micropower Generator for Low Ambient Vibration Energy Harvesting***Fabian Stoppel et al*1049: **Investigation of Piezoelectric MEMS-Based Wideband Energy Harvesting System with Assembled Frequency-Up-Conversion Mechanism***Huicong Liu et al*1428: **An Electromagnetic Micro-Power Generator for Low Frequency Vibrations with Tuneable Resonance***Serol Türkyılmaz et al*1260: **Electret Energy Harvester Vibrated at Collision Induced Natural Frequency***Takayuki Fujita et al*1260: **Electret Energy Harvester Vibrated at Collision Induced Natural Frequency***Takayuki Fujita et al*1260: **Electret Energy Harvester Vibrated at Collision Induced Natural Frequency***Takayuki Fujita et al***B3L-D:
System Energy Issues***Chair: Vittorio Ferrari, Jose Correia*1358: **Early Self-Diagnosis of Critical Battery Status Based on Sensing Quality in WSN***Xinwei Wang et al*1340: **Design, Fabrication and Characterization of a Gas Processing Unit Testing Platform for Micro-Solid Oxide Fuel Cells***Bo Jiang et al*1340: **Design, Fabrication and Characterization of a Gas Processing Unit Testing Platform for Micro-Solid Oxide Fuel Cells***Bo Jiang et al*1340: **Design, Fabrication and Characterization of a Gas Processing Unit Testing Platform for Micro-Solid Oxide Fuel Cells***Bo Jiang et al*1340: **Design, Fabrication and Characterization of a Gas Processing Unit Testing Platform for Micro-Solid Oxide Fuel Cells***Bo Jiang et al*

Alexandra Trianti Hall

15:00 - 15:15	1201: Fabrication of TiO2 and TiO2 Nanotubular Arrays and Their Gas Sensing Properties <i>Vardan Galstyan et al</i>
15:15 - 15:30	1253: WO3 Nano-needles by Aerosol Assisted CVD for Optical Sensing <i>Muhammad Usman Qadri et al</i>

15:30 - 16:00 *Coffee break*

16:00 - 17:30 Poster Session II

19:30 - 23:00 **Conference banquet at "Ble Azure"**

Room MC2

1503: Optimization of a Micro Coriolis Mass Flow Sensor <i>Jarno Groenesteijn et al</i>
1378: 2D Phononic Crystal Sensor with Normal Incidence of Sound <i>Ralf Lucklum et al</i>

Room MC3

1202: Wafer-Level Fabrication of Microfluidic Sensors for Impedance Spectroscopy with Integrated Opposing Electrodes <i>Kiril Kalkanjdjev et al</i>
1327: Guiding Bead-Target Complexes in Microfluidic Systems by Quadrupole Fields <i>Alex Kontschew et al</i>

Music Library Lecture Room

1213: Human-Powered Inertial Energy Harvesters: the Effect of Orientation, Location and Activity on Obtainable Power <i>Hui Huang et al</i>
1362: Exploiting Benefits of a Periodically-Forced Nonlinear Oscillator for Energy Harvesting from Ambient Vibrations <i>Carlo Trigona et al</i>

Wednesday, September 07, 2011

**C1L-A:
Gas Sensors**

Chair: Julian Gardner, Udo Weimar

09:00 - 09:15	1535: Can Three Phase Boundary Sites Be Quantified? a Theoretical and Experimental Approach to Validate Porous Electrodes <i>Carlos López-Gándara et al</i>
09:15 - 09:30	1540: High Temperature Robust SOI Ethanol Sensor <i>Julian Gardner et al</i>
09:30 - 09:45	1441: SiC-Based MIS Gas Sensor for High Water Vapor Environments <i>Olga Casals et al</i>
09:45 - 10:00	1438: Fast Responding Ephedrine Detection with Miniaturized Surface Ionization Gas Sensors <i>Angelika Hackner et al</i>
10:00 - 10:15	1061: A Colorimetric CO Sensor for Fire Detection <i>Jerome Courbat et al</i>
10:15 - 10:30	1285: Monocarboxy Tetraphenylporphyrin functionalized ZnO nanorods photoactivated Gas Sensor <i>Yuvaraj Sivalingam et al</i>

10:30 - 11:00 *Coffee break*

**C2L-A:
Gas Sensor Technology**

Chair: Nicolae Barsan, Christophe Pijolat

11:00 - 11:15	1486: Methods and Techniques for the Fabrication of Gas Sensing Devices from Nanowires <i>Albert Romano-Rodriguez et al</i>
11:15 - 11:30	1227: Gas Sensitivity of Blends of Metalloporphyrins and Colorimetric Acid-Base Indicators <i>Francesca Dini et al</i>
11:30 - 11:45	1360: Gas Sensing with AlGaIn/GaN ZDEG Channels <i>Peter Offermans et al</i>
11:45 - 12:00	1484: Air Quality Monitoring Using a Whole-Cell Based Sensor System <i>Ulrich Bohrn et al</i>
12:00 - 12:15	1534: Advanced Performances in Gas Sensors: Stretchable, Flexible, Wireless, Wearable <i>Oriol Monereo et al</i>
12:15 - 12:30	1356: Faster Response Times of Rare-Earth Oxycarbonate Based CO2 Sensors and Another Readout Strategy for Real-World Applications <i>Alexander Haensch et al</i>

C1L-B:

Tactile - Strain Devices

Chair: Robert Puers, Dimitris Davazoglou

1525: Fabrication and Electromechanical Performance of a Novel High Modulus Ionogel Micro-actuator <i>Gokhan Hatipoglu et al</i>
1343: Sputtered Thin Film Piezoelectric Aluminium Nitride As a Functional MEMS Material and CMOS Compatible Process Integration <i>Stephan Marauska et al</i>
1238: Fast and Reliable Modeling of Piezoelectric Transducers for Energy Harvesting Applications <i>Aldo Romani et al</i>
1086: Nanoparticle Films As Biomimetic Tactile Sensors <i>Darren Alvares et al</i>
1256: Strain Sensitivity of Carbon Nanotubes Modified Cellulose <i>Farshad Toomadj et al</i>
1437: Longitudinal Strain Sensitive Effect in a Photonic Crystal Cavity <i>Tung Thanh Bui et al</i>

C1L-C:

Microstructures for Bio-applications

Chair: Anja Boisen, João Pedro Conde

1079: Simple and Non Toxic Enzyme Immobilization Onto Platinum Electrodes for Detection of Metabolic Molecules in the Rat Brain Using Silicon Micro-Needles <i>Natalia Vasylieva et al</i>
1565: High Channel-Count Neural Interfaces for Multiple Degree-of-Freedom Neuroprosthetics <i>Loren Rieth et al</i>
1161: Low Fluorescence Enzyme Matrices Based on Microfabricated SU-8 Films for a Phenol Micro-Biosensor Application <i>Soriría D. Psoma et al</i>
1030: A Novel Patch Micro Electrode Array for Sensing Ionic Membrane Currents <i>Aditya Aryasomayajula et al</i>
1572: High Strength, Polymer Microneedles for Transdermal Drug Delivery <i>Buddhadev Paul Chaudhri et al</i>
1355: Thermal Biosensors from Micromachined Bulk Acoustic Wave Resonators <i>Son Lai et al</i>

C1L-D:

Photonic Systems

Chair: Laura Lechuga, Ioannis Raptis

1117: Optical Fiber Humidity Sensor Based on Lossy Mode Resonances Supported by TiO2/PSS Coatings <i>Carlos Ruiz Zamarréño et al</i>
1577: Reflectance-Based Photonic Crystal Liquid Sensors Made of ALD TiO2 <i>Yujian Huang et al</i>
1290: Ultra Thin Optical Tactile Shear Sensor <i>Jeroen Missinne et al</i>
1537: CMOS PIN Phototransistors for High-Speed Photosensitive Applications <i>Plamen Kostov et al</i>
1385: IR Microspectrometers Based on Linear-Variable Optical Filters <i>Arvin Emadi et al</i>
1263: Automated Infrared Based Health Monitoring System for Veterinary Application <i>Tom Wirthgen et al</i>

C2L-B:

Piezoresistive Sensors & Materials

Chair: Christos Tsamis, Dimitris Niarchos

1246: Stretchable and Conformable Metal-Polymer Piezoresistive Hybrid System <i>Giancarlo Canavese et al</i>
1517: Characteristics of NEMS Piezoresistive Silicon Nanowires Pressure Sensors with Various Diaphragm Layers <i>Liang Lou et al</i>
1142: Suspended Submicron Silicon-Beam for High Sensitivity Piezoresistive Sensing <i>Jia Wei et al</i>
1192: Variation of Material Parameters for the Thickness Extensional Mode of piezoceramic Discs in Case of Mechanical Loading <i>Stefan Rupitsch et al</i>
1055: Piezoresistive Probe Array for High Throughput Applications <i>Angelo Gaitas et al</i>
1519: Enhanced Transversal piezoresistance of Hybrid Structure of Metal and Polysilicon Nano Thin Film <i>Changzhi Shi et al</i>

C2L-C:

Electrical Biosensing Devices

Chair: Nicole Jaffrezic, Spiridon Kintzios

1335: A New Planar-Type Leakage Current and Impedance Microsensor for Detection of Interaction Between Electrolyte-Entrapping Liposome and Protein <i>Minoru Noda et al</i>
1176: Fabrication of a Novel Polymer/Mediator Composite Modified Electrode and its Application to Electrochemical Detection of Iodate <i>Ta-Jen Li et al</i>
1544: Nanoporous Gold Electrodes for Electrochemical Sensors in Biological Environment <i>Hyoungh Jin Cho et al</i>
1015: Impedimetric aptasensor for Thrombin Detection <i>N. Meini et al</i>
1352: Detection of Pathogens with Impedance Analysis in a Lab on a Chip <i>Egbert van der Wouden et al</i>
1447: Nanoporous Gold: a High Sensitivity and Specificity Biosensing Substrate <i>Hwall Min et al</i>

C2L-D:

Nanowire Devices

Chair: Jürgen Wöllenstein, Pascal Normand

1089: Zinc Oxide Nanowire Based Hydrogen Sensor on SOI CMOS Platform <i>P. K. Guha et al</i>
1288: Synthesis of High-Aspect-Ratio CuO Nanowires for Conductometric Gas Sensing <i>Stephan Steinhauer et al</i>
1445: Seebeck Effect in ZnO Nanowires for Micropower Generation <i>Simone Dalola et al</i>
1372: Simultaneous CO and Humidity Quantification with Self-Heated Nanowires in Pulsed Mode <i>Juan Daniel Prades et al</i>
1433: Simultaneous Resistive and Ionization Readout of Single Metal Oxide Nanowires <i>Francisco Hernandez-Ramirez et al</i>
1234: Sensing with Dual-Gated Silicon Nanowire Field-Effect Transistors <i>Alexey Tarasov et al</i>

12:30 - 14:00

Lunch

**C3L-A:
Packaging and Assembly Technology**

Chair: Harrie Tilmans, Wim de Groot

14:00 - 14:15

1133: Evaluation of Thin Film Indium Bonding at Wafer Level
Rahel Straessle et al

14:15 - 14:30

1175: Temporary 0-Level MEMS Packaging Using a Heat Decomposable Sealing Ring
Lieve Bogaerts et al

14:30 - 14:45

1274: A Parylene Temporary Packaging Technique for MEMS Wafer Handling
Lianggong Wen et al

14:45 - 15:00

1429: Thin MEMS Packages Obtained by a Novel Collective Cap Transfer Process
Alain Phommahaxay et al

15:00 - 15:15

1478: Determining the Acoustic Resistance of Small Sound Holes for MEMS Microphones
Gregor Feiertag et al

15:15 - 15:30

1507: Development of High Temperature Platinum TSVs
*Rokhaya Gueye et al*15:30 - 16:00
Coffee break**C4L-A:
Interface and System Issues**

Chair: Subhas Chandra Mukhopadhy, Stelios Siskos

16:00 - 16:15

1494: An Original Rotational RF MEMS Based on Multi-Varactors on a Chip
Julien Pagazani et al

16:15 - 16:30

1129: A Self-Tuning Inductive Powering System for Biomedical Implants
Riccardo Carta et al

16:30 - 16:45

1232: Quadrature Compensation for Gyroscopes in Electro-Mechanical Bandpass Sigma-Delta-Modulators Beyond Full-Scale Limits Using Pattern Recognition
Michael Maurer et al

16:45 - 17:00

1474: Laser Microstructuring of Polymer Optical Fibres for Enhanced and Autonomous Sensor Architectures
Loukas Athanasekos et al

17:00 - 17:15

1571: An Enhanced, Highly Linear, Fully-Differential PLL-Based Sensor Interface
Hans Danneels et al

17:15 - 17:30

1549: Current Mode Interfacing Circuit for Flow Sensing Based on Hot-Wire Anemometers Technique
*Ilias Pappas et al*17:30
Farewell reception (Megaron AICC)**C3L-B:
Resonant Devices**

Chair: Ilija Katardjiev, Stavros Chatzandroulis

1257: Experimental Analysis on Frequency Stability of Piezoelectric Microcantilever Sensor Under Varying Environmental and Operational Conditions
*Sangkyu Lee et al***1159: Modeling and Design of Higher Order, Multi-Mode, Multi-Port MEMS Resonators in 90 nm CMOS**
*Jan Erik Ramstad et al***1167: Hydrogenated Amorphous Silicon Thin-Film Disk Resonators**
*Alexandra Gualdino et al***1022: Characterization of RF Resonators Made of Biodegradable Materials for Biosensing Applications**
*Clémentine Marie Boutry et al***1019: Oscillator-Based Volatile Detection System Using Doubly-Clamped Micromechanical Resonators**
*Mihai Patrascu et al***1397: On the Robust Measurement of Resonant Frequency and Quality Factor of Damped Resonating Sensors**
*Alexander Niedermayer et al***C4L-B:
Electromagnetic Field Devices**

Chair: Pavel Ripka, Chavdar Roumenin

1005: High Temperature Resistant Eddy Current Sensor for "in situ" Monitoring the Material Microstructure Development of Steel Alloys During Heat Treatment
*Heinrich Klümper-Westkamp et al***1080: A MEM Electric Field Sensor Optimization by Multi-Objective Niche Pareto Genetic Algorithm**
*Mark Roy et al***1195: Modeling and Measurement of Influence of Mechanical Prestress on Hysteresis of Ferroelectric Actuators**
*Felix Wolf et al***1294: Magnetic Tracker with High Precision**
*Pavel Ripka et al***1379: Detection of Hazardous VOCs Using a Zeolite FAU/Metglas Magnetoelastic Sensor**
*Dimitris Kouzoudis et al***1317: Open-Loop CMOS Current Transducer with Low Temperature Cross-Sensitivity**
*Mirjana Banjevic et al***C3L-C:
Diagnostic - Analytical Technologies**

Chair: Chong H. Ahn, Jan Dziuban

1377: Molecular Identification Through Membrane Engineering As a Revolutionary Concept for the Construction of Cell Sensors with Customized Target Recogniti
*Georgia Moschopoulou et al***1261: Photo-Detection of Solvent Polarities Using Non-Invasive Coatings in Capillaries**
*Larisa Florea et al***1426: Naturally Amplified Player for Biosensing: tmRNA to the Rescue**
*Ott Scheler et al***1450: Oligosaccharides-Protein Interactions Study Using Microarrays with DDI Immobilisation**
*A. Goudot et al***1599: Selective Nanosensor Array Microsystem for Exhaled Breath Analysis**
*Perena Gouma et al***1344: Real-Time Sweat Analysis: Concept and Development of an Autonomous Wearable Micro-Fluidic Platform**
*Vincenzo Fabio Curta et al***C4L-C:
Processing and Characterization Techniques**

Chair: Richard Jachowicz, Konstantinos Misiakos

1064: Anodic Bonding of Glass-to-Glass Through Magnetron Sputtered nanometric Silicon Layer
*Pawel Knapkiewicz et al***1076: Built-in Self-Limitation of Masked Aluminum Anodization Using Photoresist**
*Joseph Zekry et al***1110: Imaging of Located Buried Defects in Metal Samples by an Scanning Microwave Microscopy**
*Jerome Rossignol et al***1536: Nanoscale Protein Patterning on Si Substrates Using Colloidal Lithography and Plasma Processing**
*Antonia Malainou et al***1321: Surface Enhanced Infrared Absorption (SEIRA) Spectroscopy Using Gold nanoparticles on As2S3 Glass**
*Frederic Verger et al***1273: Nanofunctional Electron Photo Ionization Detector**
*Thomas Haas et al***C3L-D:
Sensing with Nanomaterials**

Chair: Magnus Willander, István Bársony

1125: Novel PDGF Aptasensor Based on Gold Nanoparticle Triggered Chemiluminescence
*Jianzhong Lu et al***1214: Transport in Nanostructured Porous Silicon Layers**
*Andras Kovacs et al***1403: Scaling Effects of Intertwined "spiral" -Electrode-Transducer Chemiresistors Made of Ink-jetted Gold-nanoclusters**
*Jeremy Greenblatt et al***1539: Plasma Nanotextured Polystyrene for Intense DNA Microarrays**
*Katerina Tsougeni et al***1071: Stability and High Sensitivity of a Compound NiO:Cu Thin Film Hydrogen Sensor Grown by a Two-Laser, Two-Target PLD Technique**
*Maria Kandylo et al***1339: Study of Growth Kinetics of Pd Metal Catalyzed Silica Nanowires for Biosensor Applications**
*Eric Huey et al***C4L-D:
Micro & Nano Fabrication**

Chair: Sébastien Gautsch, Evangelos Gogalides

1014: Silicon Nanowire Resonator with Integrated Electrostatic Actuation
*Alexandra Koumela et al***1029: Advances in Electrochemical Micromachining of Silicon: Towards MEMS Fabrication**
*Margherita Bassu et al***1279: A FET Mounted Nano Probe with a CNT for Surface Electrical Properties**
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