

EUROSENSORS 2017 LECTURES PROGRAM

MONDAY

Chemical sensors: Room Temperature	Room L. Armand	Monday, 4 september, 14:30-16:30	14:30-14:50	1181	WO <sub>3</sub> -Doped Indium Oxide Thick Films for Ozone Detection at Low Temperature	D. Ziegler, A. Marchisio, P. Palmero, J. Tulliani	Politecnico di Torino, Italy
			14:50-15:10	1148	Ozone Sensors Working at Room Temperature Using Zinc Oxide Nanocrystals Annealed at Low Temperature	S. Bernardini <sup>{2}</sup> , M. Hameda Benchekroun <sup>{2}</sup> , T. Fiorido <sup>{2}</sup> , K. Aguir <sup>{2}</sup> , M. Bendahan <sup>{2}</sup> , S. Ben Dkhil <sup>{1}</sup> , M. Gaceur <sup>{1}</sup> , J. Ackermann <sup>{1}</sup> , O. Margeat <sup>{1}</sup> , C. Videlot-Ackermann <sup>{1}</sup>	<sup>{1}</sup> Aix Marseille Université, France; <sup>{2}</sup> Aix Marseille Université / Université de Toulon, France
			15:10-15:30	1021	Sensitive and Selective Ammonia Gas Sensor Based on Molecularly Modified SnO <sub>2</sub>	M. Hijazi <sup>{1}</sup> , V. Stambouli <sup>{2}</sup> , M. Rieu <sup>{1}</sup> , G. Tournier <sup>{1}</sup> , C. Pijolat <sup>{1}</sup> , J. Viricelle <sup>{1}</sup>	<sup>{1}</sup> École Nationale Supérieure des Mines Saint Étienne, France; <sup>{2}</sup> Université Grenoble Alpes, France
			15:30-15:50	1248	Low Temperature CVD Grown Graphene for Highly Selective Gas Sensors Working Under Ambient Conditions	F. Ricciardella <sup>{2}</sup> , S. Vollebregt <sup>{2}</sup> , T. Polichetti <sup>{1}</sup> , B. Alfano <sup>{1}</sup> , E. Massera <sup>{1}</sup> , P. Sarro <sup>{2}</sup>	<sup>{1}</sup> ENEA, Italy; <sup>{2}</sup> Technische Universiteit Delft, Netherlands
			15:50-16:10	1099	Room Temperature NO <sub>2</sub> Responses of Visible-Light Activated Nanosheet rGO@ZnO <sub>1-x</sub> Sensors	X. Geng <sup>{1}</sup> , C. Zhang <sup>{2}</sup> , M. Olivier <sup>{1}</sup> , M. Debliquy <sup>{1}</sup>	<sup>{1}</sup> Université de Mons, China; <sup>{1}</sup> Université de Mons, Belgium; <sup>{2}</sup> Yangzhou University, China
			16:10-16:30	1214	Gas Sensing Approaches Based on WO <sub>3</sub> Nanowire-Back Gated Devices	T. Welearegay, R. Calavia, R. Ionescu, E. Llobet	Universitat Rovira i Virgili, Spain
MEMS detection and architecture	Room List	Monday, 4 september, 14:30-16:30	14:30-14:50	1105	Planar Microstrip Ring Resonator Structure for Gas Sensing and Humidity Sensing Purposes	A. Bogner, C. Steiner, S. Walter, J. Kita, G. Hagen, R. Moos	Universität Bayreuth, Germany
			14:50-15:10	1150	Steady-State and Transient Response of a Micromechanical Broadband Shooling Amplifier	M. Müller, V. Maiwald, C. Roman, C. Hierold	ETH Zurich, Switzerland
			15:10-15:30	1120	1 Million-Q Optomechanical Microdisk Resonators with Very Large Scale Integration	M. Hermouet <sup>{1}</sup> , L. Banniard <sup>{1}</sup> , M. Sansa <sup>{1}</sup> , A. Fafin <sup>{1}</sup> , M. Gely <sup>{1}</sup> , S. Pauliac <sup>{1}</sup> , P. Brianceau <sup>{1}</sup> , J. Dallery <sup>{3}</sup> , P. Allain <sup>{2}</sup> , E. Gil Santos <sup>{2}</sup> , I. Favero <sup>{2}</sup> , T. Alava <sup>{1}</sup> , G. Jourdan <sup>{1}</sup> , S. Hentz <sup>{1}</sup>	<sup>{1}</sup> Commissariat à l'Energie Atomique et aux Energies Alternatives, France; <sup>{2}</sup> Université Paris Diderot, France; <sup>{3}</sup> Vistec Electron Beam GmbH, Germany
			15:30-15:50	1285	Thermal Noise Limited, Scalable Multi-Piezoresistor Readout Architecture	J. Radó, G. Battistig, A. Pap, P. Fürjes, P. Földesy	Hungarian Academy of Sciences, Hungary
			15:50-16:10	1205	Air-Coupled Ultrasonic Ferroelectret Receiver with Additional DC Voltage	M. Gaal <sup>{1}</sup> , R. Caldeira <sup>{1}</sup> , J. Bartusch <sup>{1}</sup> , M. Kupnik <sup>{2}</sup>	<sup>{1}</sup> Bundesanstalt für Materialforschung und -prüfung, Germany; <sup>{2}</sup> Technische Universität Darmstadt, Germany
			16:10-16:30	1141	Linear Integrated Interface for Automatic Differential Capacitive Sensing	G. Barile <sup>{1}</sup> , G. Ferri <sup>{1}</sup> , F. Parente <sup>{1}</sup> , V. Stornelli <sup>{1}</sup> , A. Depari <sup>{2}</sup> , A. Flammini <sup>{2}</sup> , E. Sisinni <sup>{2}</sup>	<sup>{1}</sup> Università degli Studi dell'Aquila, Italy; <sup>{2}</sup> Università degli Studi di Brescia, Italy

MONDAY

Microfluidic I	Room Stephenson	Monday, 4 september, 14:30-16:30	14:30-14:50	1399	Development of a MEMS Plate Based on Thin-Film Piezoelectric AlN Actuators for Biological Applications	B. Neff, F. Casset, A. Millet, V. Agache, N. Verplanck, F. Boizot, S. Fanget	Commissariat à l'Energie Atomique et aux Energies Alternatives, France
			14:50-15:10	1049	Transparent Glass/SU8-Based Microfluidic Device with on-Channel Electrical Sensors	M. Talebi, K. Cobry, A. Sengupta, P. Woias	Albert-Ludwigs-Universität Freiburg, Germany
			15:10-15:30	1448	Dielectric Characterisation of Single Microalgae Cell Using Electrorotation Measurements	Y. Lin <sup>{5}</sup> , S. Tsang <sup>{4}</sup> , R. Ghasemi <sup>{1}</sup> , S. Bensalem <sup>{1}</sup> , O. Français <sup>{2}</sup> , F. Lopes <sup>{3}</sup> , H. Wang <sup>{5}</sup> , C. Sun <sup>{4}</sup> , B. Le Pioufle <sup>{1}</sup>	<sup>{1}</sup> École Normale Supérieure Paris-Saclay, France; <sup>{2}</sup> ESIEE, France; <sup>{3}</sup> LGPM, Centrale-Supelec, France; <sup>{4}</sup> National Taiwan University, Taiwan; <sup>{5}</sup> National Tsing Hua University, Taiwan
			15:30-15:50	1134	Led-Based Tomographic Imaging for Live-Cell Monitoring of Pancreatic Islets in Microfluidic Channels	G. Scholz <sup>{1}</sup> , Q. Xu <sup>{1}</sup> , T. Schulze <sup>{1}</sup> , H. Boht <sup>{1}</sup> , K. Mattern <sup>{1}</sup> , J. Hartmann <sup>{1}</sup> , A. Dietzel <sup>{1}</sup> , S. Scherneck <sup>{1}</sup> , I. Rustenbeck <sup>{1}</sup> , J. Prades <sup>{2}</sup> , S. Fündling <sup>{1}</sup> , H. Wasisto <sup>{1}</sup> , A. Waag <sup>{1}</sup>	<sup>{1}</sup> Technische Universität Braunschweig, Germany; <sup>{2}</sup> Universitat de Barcelona, Spain
			15:50-16:10	1252	Integrated System Based on Thin Film Technologies for Cell-Based Bioluminescence Assays	D. Caputo <sup>{1}</sup> , G. Petrucci <sup>{1}</sup> , V. Di Fiore <sup>{1}</sup> , A. Buzzin <sup>{1}</sup> , M. Nardecchia <sup>{1}</sup> , L. Cevenini <sup>{2}</sup> , E. Michellini <sup>{2}</sup> , M. Mirasoli <sup>{2}</sup> , A. Roda <sup>{2}</sup> , N. Lovecchio <sup>{1}</sup> , F. Costantini <sup>{1}</sup> , A. Nascetti <sup>{1}</sup> , G. de Cesare <sup>{1}</sup>	<sup>{1}</sup> Sapienza – Università di Roma, Italy; <sup>{2}</sup> Università di Bologna, Italy
16:10-16:30	1041	Toward the Analysis of Mitochondria Isolated from Leukemic Cells with Electrochemically Instrumented Microwell Arrays	G. Lemercier <sup>{3}</sup> , F. Sekli-Belaïdi <sup>{3}</sup> , S. Vajrala <sup>{2}</sup> , E. Descamps <sup>{3}</sup> , J. Foncy <sup>{3}</sup> , S. Arbault <sup>{2}</sup> , J. Sarry <sup>{1}</sup> , P. Temple-Boyer <sup>{3}</sup> , J. Launay <sup>{3}</sup>	<sup>{1}</sup> CRCT-INSERM, France; <sup>{2}</sup> ISM-CNRS, France; <sup>{3}</sup> Laboratory for Analysis and Architecture of Systems, France			
Wireless sensor network	Room 203	Monday, 4 september, 14:30-16:30	14:30-14:50	1226	A Radio-Triggered Wireless Sensor Platform Powered by Soil Bacteria	D. Brunelli, M. Rossi, P. Tosato	Università degli Studi di Trento, Italy
			14:50-15:10	1469	Ultrasonic Coupled Passive Wireless Oscillating Sensor System	T. Aftab, T. Schaechtle, J. Hoppe, D. Shi, D. Schott, L. Reindl	Albert-Ludwigs-Universität Freiburg, Germany
			15:10-15:30	1250	Modelling and Experimental Analysis of a Magnetic Material Actuator: Towards Wireless Implantable Devices	V. Jayaneththi, K. Aw, A. McDaid	University of Auckland, New Zealand
			15:30-15:50	1017	Wireless Sensing System for Long-Time Assistance in the Parkinson's Disease	F. Irrera, A. Kita, R. Rao, A. Suppa	Sapienza – Università di Roma, Italy
			15:50-16:10	1102	In-Vivo Implantable Sensor System for Measuring Bladder Wall Movements	T. Weydts, L. Brancato, M. Soebadi, D. De Ridder, R. Puers	Katholieke Universiteit Leuven, Belgium
			16:10-16:30	1454	Urban Air Quality Monitoring with Networked Low-Cost Sensor-Systems	M. Penza, D. Suriano, V. Pfister, M. Prato, G. Cassano	ENEA, Italy

TUESDAY

Chemical sensors: gas sensors	Room L. Armand	Tuesday, 5 september, 8:30-10:10	8:30-8:50	1365	Capacitive CO2 Sensor	J. Boudaden, A. Klumpp, H. Endres, I. Eisele	Fraunhofer-Einrichtung für Mikrosysteme und Festkörper-Technologien, Germany
			8:50-9:10	1282	Investigation of Gasochromic Rhodium Complexes Regarding Their Reactivity Towards CO	K. Tarantik <sup>{2}</sup> , K. Schmitt <sup>{2}</sup> , C. Pannek <sup>{2}</sup> , L. Miensopust <sup>{2}</sup> , J. Wöllenstein <sup>{1}</sup>	<sup>{1}</sup> Albert-Ludwigs-Universität Freiburg / Fraunhofer-Institut für Physikalische Messtechnik, Germany; <sup>{2}</sup> Fraunhofer-Institut für Physikalische Messtechnik, Germany
			9:10-9:30	1194	Operando Investigations of Differently Prepared In2O3-Gas Sensors	I. Can, U. Weimar, N. Barsan	Eberhard Karls Universität Tübingen, Germany
			9:30-9:50	1385	Separation of Sensitivity Contributions in Tin Oxide Thick Film Sensors by Transmission Line Model Measurements at Isothermal and Thermally Modulated Operation	J. Knoblauch <sup>{1}</sup> , K. Murugavel <sup>{1}</sup> , H. Kohler <sup>{1}</sup> , U. Guth <sup>{2}</sup>	<sup>{1}</sup> Karlsruhe University of Applied Sciences, Germany; <sup>{2}</sup> Technische Universität Dresden, Germany
			9:50-10:10	1360	Design, Fabrication and Optimization of a Silicon MEMS Natural Gas Sensor	M. Shaker <sup>{2}</sup> , E. Sundfør <sup>{1}</sup> , G. Farine <sup>{1}</sup> , C. Slater <sup>{1}</sup> , P. Farine <sup>{2}</sup> , D. Briand <sup>{2}</sup>	<sup>{1}</sup> Bright Sensors SA, Switzerland; <sup>{2}</sup> Ecole Polytechnique Fédérale de Lausanne, Switzerland
Resonant MEMS sensors	Room List	Tuesday, 5 september, 8:30-10:10	8:30-8:50	1131	Driving and Sensing M/NEMS Flexural Vibration Using Dielectric Transduction	C. Fuinel, F. Mathieu, B. Legrand	Laboratory for Analysis and Architecture of Systems, France
			8:50-9:10	1445	Low Impedance ALD HfO2 Partially-Filled-Gap Flexural and Bulk MEMS Resonators Piezoresistively Detected for Distributed Mass Sensing	M. Maqueda Lopez, E. Casu, M. Fernandez-Bolanos, A. Ionescu	École Polytechnique Fédérale de Lausanne, Switzerland
			9:10-9:30	1373	Servo-Assisted Position-Feedback MEMS Force Sensor with Tunable Sensitivity and Sub-Nanonewton Range	A. Nastro <sup>{3}</sup> , M. Ferrari <sup>{3}</sup> , A. Russo <sup>{2}</sup> , R. Ardito <sup>{1}</sup> , V. Ferrari <sup>{3}</sup>	<sup>{1}</sup> Politecnico di Milano, Italy; <sup>{2}</sup> ST Microelectronic, Italy; <sup>{3}</sup> Università degli Studi di Brescia, Italy
			9:30-9:50	1293	On-Chip Platform for Slack-Free Carbon Nanotube Resonators	L. Kumar, L. Jenni, C. Roman, C. Hierold	ETH ZURICH, Switzerland
			9:50-10:10	1272	Piezo Resistive Read-Out Contact Resonance Spectroscopy for Material and Layer Analysis at High-Aspect-Ratio Geometries	M. Bertke, U. Wobeto Reinheimer, M. Fahrbach, G. Hamdana, H. Suryo Wasisto, E. Peiner	Technische Universität Braunschweig, Germany
Biosensors	Room Stephenson	Tuesday, 5 september, 8:30-10:10	8:30-8:50	1208	Detection of Adrenaline Based on Bioelectrocatalytical System to Support Tumor Diagnostic Technology	D. Molinnus <sup>{1}</sup> , G. Hardt <sup>{1}</sup> , L. Käver <sup>{1}</sup> , H. Willenberg <sup>{3}</sup> , A. Poghossian <sup>{1}</sup> , M. Keusgen <sup>{2}</sup> , M. Schöning <sup>{1}</sup>	<sup>{1}</sup> FH Aachen – University of Applied Sciences, Germany; <sup>{2}</sup> Philipps-Universität Marburg, Germany; <sup>{3}</sup> Universität Rostock, Germany
			8:50-9:10	1202	Field-Effect Biosensors Modified with Tobacco Mosaic Virus Nanotubes as Enzyme Nanocarrier	M. Jablonski <sup>{1}</sup> , C. Koch <sup>{2}</sup> , T. Bronder <sup>{1}</sup> , A. Poghossian <sup>{1}</sup> , C. Wege <sup>{2}</sup> , M. Schöning <sup>{1}</sup>	<sup>{1}</sup> FH Aachen – University of Applied Sciences, Germany; <sup>{2}</sup> Universität Stuttgart, Germany
			9:10-9:30	1123	Pericellular Oxygen Monitoring During Low-Level Light Therapy in Cell Culture Using a Microsensor System	J. Marzioch <sup>{1}</sup> , F. Kramer <sup>{1}</sup> , P. Dungal <sup>{2}</sup> , J. Kieninger <sup>{1}</sup> , G. Urban <sup>{1}</sup>	<sup>{1}</sup> Albert-Ludwigs-Universität Freiburg, Germany; <sup>{2}</sup> Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Austria
			9:30-9:50	1167	Detection of Aβ(1-40) Protein in Human Serum as a Causative Agent of Alzheimer's Disease by Strain Gauge Cantilever Biosensor Immobilizing Liposome Incorpo-Rating Cholesterol	T. Taniguchi <sup>{1}</sup> , Y. Murakami <sup>{1}</sup> , M. Sohgawa <sup>{2}</sup> , K. Yamashita <sup>{1}</sup> , M. Noda <sup>{1}</sup>	<sup>{1}</sup> Kyoto Institute of Technology, Japan; <sup>{2}</sup> Niigata University, Japan
			9:50-10:10	1062	Silicon Nanowires Based Resistors for Bacteria Detection	B. Le Borgne <sup>{2}</sup> , A. Salaün <sup>{2}</sup> , L. Pichon <sup>{2}</sup> , A. Jolivet-Gougeon <sup>{2}</sup> , S. Martin <sup>{1}</sup> , R. Rogel <sup>{2}</sup> , O. De Sagazan <sup>{2}</sup>	<sup>{1}</sup> Société ARCLYNN, France; <sup>{2}</sup> Université de Rennes 1, France

TUESDAY

Special Session: Printed and flexible electronics I	Room 203	Tuesday, 5 september, 8:30-10:10	8:30- 8:50	1294	Temperature Dependence of Gauge Factor of Printed Piezoresistive Layers Embedded in Organic Coatings	P. Kulha <sup>{1}</sup> , H. Enser <sup>{1}</sup> , J. Sell <sup>{1}</sup> , B. Strauß <sup>{3}</sup> , M. Schatzl-Linder <sup>{2}</sup> , B. Jakoby <sup>{1}</sup> , W. Hilber <sup>{1}</sup>	<sup>{1}</sup> Johannes Kepler Universität Linz, Austria; <sup>{2}</sup> Voestalpine Industrieanlagenbau GmbH & Co., Austria; <sup>{3}</sup> voestalpine Stahl GmbH, Austria
			8:50- 9:10	1339	All Inkjet-Printed B Field Sensor	B. Andò, S. Baglio, V. Marletta, A. Pistorio	Università degli Studi di Catania, Italy
			9:10- 9:30	1383	Hysteresis and Material Effects of Printed Strain Gauges Embedded in Organic Coatings	H. Enser <sup>{1}</sup> , J. Sell <sup>{1}</sup> , M. Schatzl-Linder <sup>{2}</sup> , B. Strauß <sup>{3}</sup> , W. Hilber <sup>{1}</sup> , B. Jakoby <sup>{1}</sup>	<sup>{1}</sup> Johannes Kepler Universität Linz, Austria; <sup>{2}</sup> Voestalpine Industrieanlagenbau GmbH & Co., Austria; <sup>{3}</sup> voestalpine Stahl GmbH, Austria
			9:30- 9:50	1147	A Flexible Pad-Printed Fluxgate Sensor	S. Schoinas, A. El Guamra, F. Moreillon, P. Passeraub	University of Applied Sciences and Arts Western Switzerland (HES-SO), Switzerland
			9:50- 10:10	1058	Formation of Crumpled Graphene for Flexible Strain Sensor	Y. Jin, A. Kulkarni, H. Kim, S. Hong, T. Kim	Sungkyunkwan University , Korea
Chemical sensors: Nanomaterials I	Room L. Armand	Tuesday, 5 september, 10:40-12:40	10:40- 11:00	1066	Hierarchically Assembled Titania Based Nanostructures: Innovative and Efficient Strategies for the Synthesis and the Improvement of Sensing Properties	V. Galstyan <sup>{3}</sup> , A. Ponzoni <sup>{2}</sup> , I. Kholmanov <sup>{3}</sup> , E. Comini <sup>{3}</sup> , V. Sberveglieri <sup>{1}</sup> , N. Poli <sup>{3}</sup> , G. Sberveglieri <sup>{3}</sup>	<sup>{1}</sup> CNR-IBBR Institute of Biosciences and Bioresources, Italy; <sup>{2}</sup> Istituto Nazionale di Ottica, Italy; <sup>{3}</sup> Università degli Studi di Brescia, Italy
			11:00- 11:20	1350	CuO Nanostructured Sensors for Enhanced CO Detection	J. Jońca <sup>{2}</sup> , R. Lai-Cheong <sup>{2}</sup> , L. Kahn <sup>{2}</sup> , K. Fajerweg <sup>{2}</sup> , C. Combettes <sup>{2}</sup> , V. Bley <sup>{2}</sup> , P. Menini <sup>{1}</sup> , P. Fau <sup>{2}</sup>	<sup>{1}</sup> Laboratory for Analysis and Architecture of Systems, France; <sup>{2}</sup> Toulouse University, France
			11:20- 11:40	1200	Acetone Detection by Chemical Sensors Based on Tungsten and Titanium Oxide Nanowires	A. Bertuna, E. Comini, N. Poli, D. Zappa, G. Sberveglieri	Università degli Studi di Brescia, Italy
			11:40- 12:00	1217	Cobalt or Silver Doped WO <sub>3</sub> Nanowires Deposited by a Two-Step AACVD for Gas Sensing Applications	E. Navarrete, E. González, T. Vilic, E. Llobet	Universitat Rovira i Virgili, Spain
			12:00- 12:20	1361	Gas Sensors Based on Individual (Ga, In) <sub>2</sub> O <sub>3</sub> Nanowires	E. López-Aymerich <sup>{1,2}</sup> , G. Domènech-Gil <sup>{1,2}</sup> , M. Moreno-Sereno <sup>{1,2}</sup> , J. D. Prades <sup>{1,2}</sup> , P. Pellegrino <sup>{1,2}</sup> , S. Barth <sup>{3}</sup> , A. Romano-Rodriguez <sup>{1,2}</sup>	<sup>{1}</sup> Institute of Nanoscience and Nanotechnology (IN2UB), Universitat de Barcelona (UB), c/Martí i Franquès 1, E-08028 Barcelona, Spain; <sup>{2}</sup> MIND-Departament of Electronics, Universitat de Barcelona (UB), c/Martí i Franquès 1, E-08028 Barcelona, Spain; <sup>{3}</sup> Technical University of Vienna (TUW), Institut für Materialchemie, A-1040 Vienna, Austria
			12:20- 12:40	1348	3D Graphene-Carbon Nanotubes-Polydimethyl Siloxane Flexible Electrodes for Simultaneous Electrochemical Detections of Hg, Pb and Cd	T. Daniels, S. Pakapongpan, D. Phokharatkul, K. Jaruwongrangsee, K. Maturros, A. Tuantranont, A. Wisitsora-at	National Electronics and Computer Technology Center, Thailand

TUESDAY

Physical MEMS sensors	Room List	Tuesday, 5 september, 10:40-12:20	10:40-11:00	1174	Temperature Sensors Integrated Into a CMOS Image Sensor	A. Abarca, S. Xie, J. Markenhof, A. Theuwissen	Technische Universiteit Delft, Netherlands
			11:00-11:20	1113	A Comb-Based Capacitive MEMS Microphone with High Signal-to-Noise Ratio: Modeling and Noise-Level Analysis	S. Anzinger <sup>{2}</sup> , J. Manz <sup>{2}</sup> , A. Dehé <sup>{1}</sup> , G. Schrag <sup>{2}</sup>	<sup>{1}</sup> Infineon Technologies AG, Germany; <sup>{2}</sup> Technische Universität München, Germany
			11:20-11:40	1462	The First Frequency-Modulated (FM) Pitch Gyroscope	V. Zega <sup>{1}</sup> , P. Minotti <sup>{1}</sup> , G. Mussi <sup>{1}</sup> , A. Tocchio <sup>{2}</sup> , L. Falorni <sup>{2}</sup> , S. Facchinetti <sup>{2}</sup> , A. Bonfanti <sup>{1}</sup> , A. Lacaita <sup>{1}</sup> , C. Comi <sup>{1}</sup> , G. Langfelder <sup>{1}</sup> , A. Corigliano <sup>{1}</sup>	<sup>{1}</sup> Politecnico di Milano, Italy; <sup>{2}</sup> STMicroelectronics, Italy
			11:40-12:00	1156	Tuning the Anti-Phase Mode Sensitivity to Vibrations of a MEMS Gyroscope	P. Janioud <sup>{1}</sup> , A. Koumela <sup>{1}</sup> , C. Poulain <sup>{1}</sup> , P. Rey <sup>{1}</sup> , A. Berthelot <sup>{1}</sup> , P. Morfouli <sup>{2}</sup> , G. Jourdan <sup>{1}</sup>	<sup>{1}</sup> Commissariat à l'Energie Atomique et aux Energies Alternatives, France; <sup>{2}</sup> université grenoble alpes, France
			12:00-12:20	1308	Wall Shear Stress Calorimetric Micro-Sensor Designed for Flow Separation Detection and Active Flow Control	C. Ghouila-Houri <sup>{2}</sup> , Q. Gallas <sup>{2}</sup> , E. Garnier <sup>{2}</sup> , A. Merlen <sup>{1}</sup> , R. Viard <sup>{3}</sup> , A. Talbi <sup>{4}</sup> , P. Pernod <sup>{4}</sup>	<sup>{1}</sup> IEMN, France; <sup>{2}</sup> Office National d'Etudes et de Recherches Aérospatiales, France; <sup>{3}</sup> THURMELEC, France; <sup>{4}</sup> Université Lille 1, France
Piezoelectric Material for medical application	Room Stephenson	Tuesday, 5 september, 10:40-12:20	10:40-11:00	1195	Axially Stressed Piezoelectric Nanowires for High Resolution Tactile Imaging	E. Saoutieff <sup>{1}</sup> , N. Khánh <sup>{2}</sup> , J. Radó <sup>{2}</sup> , I. Lukács <sup>{2}</sup> , J. Volk <sup>{2}</sup> , M. Allain <sup>{1}</sup> , A. Viana <sup>{1}</sup> , Y. Nowicki-Bringuier <sup>{1}</sup> , E. Pauliac-Vaujour <sup>{1}</sup>	<sup>{1}</sup> Commissariat à l'Energie Atomique et aux Energies Alternatives, France; <sup>{2}</sup> Hungarian Academy of Sciences, Hungary
			11:00-11:20	1192	Dual Mode Pressure Sensing for Lower-Limb Prosthetic Interface	M. Rossi <sup>{2}</sup> , M. Nardello <sup>{2}</sup> , L. Lorenzelli <sup>{1}</sup> , D. Brunelli <sup>{2}</sup>	<sup>{1}</sup> Fondazione Bruno Kessler, Italy; <sup>{2}</sup> Università degli Studi di Trento, Italy
			11:20-11:40	1171	Cu Thin Film Polyimide Heater for Nerve-Net Tactile Sensor	Y. Suganuma <sup>{1}</sup> , M. Sasaki <sup>{4}</sup> , T. Nakayama <sup>{3}</sup> , M. Muroyama <sup>{2}</sup> , Y. Nonomura <sup>{1}</sup>	<sup>{1}</sup> Meijo University, Japan; <sup>{2}</sup> Tohoku University, Japan; <sup>{3}</sup> Toyota Motor Corporation, Japan; <sup>{4}</sup> Toyota Technological Institute, Japan
			11:40-12:00	1287	Laparoscopy's Gestures Assessment: a Construct Study for the Validation of an Instrumented Glove	G. Thomas <sup>{1}</sup> , J. Lemos <sup>{4}</sup> , G. Soto-Romero <sup>{3}</sup> , J. Fourniols <sup>{2}</sup> , A. Hernández <sup>{4}</sup>	<sup>{1}</sup> Institut Supérieur d'Ingénieurs de Franche-Comté, France; <sup>{2}</sup> LAAS-CNRS / Université de Toulouse, France; <sup>{3}</sup> Laboratory for Analysis and Architecture of Systems, France; <sup>{4}</sup> University of Antioquia, Colombia
			12:00-12:20	1224	Thin Film PZT Acoustic Sensor for Fully Implantable Cochlear Implants	B. İlik, A. Koyuncuoğlu, H. Uluşan, S. Chamanian, D. Işık, Ö. Şardan-Sukas, H. Külah	Middle East Technical University , Turkey

TUESDAY

Special Session: Printed and flexible electronics II	Room 203	Tuesday, 5 september, 10:40-12:20	10:40- 11:00	1223	Chemical Gas Sensor Based on a Flexible Capacitive Microwave Transducer Associated with a Sensitive Carbon Composite Polymer Film	P. Bahoumina <sup>{5}</sup> , H. Hallil <sup>{5}</sup> , J. Lachaud <sup>{2}</sup> , A. Abdelghani <sup>{4}</sup> , K. Frigui <sup>{4}</sup> , S. Bila <sup>{4}</sup> , D. Baillargeat <sup>{4}</sup> , Q. Zhang <sup>{1}</sup> , P. Coquet <sup>{1}</sup> , C. Paragua <sup>{3}</sup> , E. Pichonat <sup>{3}</sup> , H. Happy <sup>{3}</sup> , D. Rebière <sup>{2}</sup> , C. Dejous <sup>{2}</sup>	{1}CINTRA, CNRS/NTU/THALES, UMI 3288, Singapore; {2}Univ. Bordeaux, Bordeaux INP, CNRS, IMS UMR 5218, France; {3}Univ. Lille, CNRS, IEMN UMR 8520, France; {4}Univ. Limoges/CNRS, XLIM UMR 7252, France; {5}Université de Bordeaux, France
			11:00- 11:20	1331	Aerosol Jet Printing of Miniaturized, Low Power Flexible Micro-Hotplates	S. Khan <sup>{1}</sup> , T. Nguyen <sup>{2}</sup> , L. Thiery <sup>{2}</sup> , P. Vairac <sup>{2}</sup> , D. Briand <sup>{1}</sup>	{1}École Polytechnique Fédérale de Lausanne, Switzerland; {2}Franche-Comté Électronique Mécanique Thermique et Optique - Sciences et Technologies, France
			11:20- 11:40	1299	Towards Recycled Paper Based Impedance Biosensor with Wireless Readout	E. Melnik <sup>{1}</sup> , I. Muschlin <sup>{1}</sup> , A. Wildauer <sup>{1}</sup> , M. Raskovic <sup>{1}</sup> , J. Schotter <sup>{1}</sup> , M. Heilmann <sup>{3}</sup> , D. Ide <sup>{3}</sup> , M. Borinski <sup>{2}</sup> , P. Lieberzeit <sup>{4}</sup> , N. Kataeva <sup>{1}</sup> , G. Mutinati <sup>{1}</sup> , R. Heer <sup>{1}</sup> , R. Hainberger <sup>{1}</sup>	{1}Austrian Institute of Technology GmbH, Austria; {2}Lenzing Papier GmbH, Austria; {3}SCIO Holding GmbH, Austria; {4}Universität Wien, Austria
			11:40- 12:00	1334	Solid-Contact Reference Electrode for Ion-Selective Sensors	V. Dam, M. Goedbloed, M. Zevenbergen	imec the Netherlands, Netherlands
			12:00- 12:20	1172	Online Monitoring of Composites with a Miniaturized Flexible Combined Dielectric and Temperature Sensor	M. Hübner, W. Lang	Universität Bremen, Germany
Chemical sensors: Gas sensor application	Room L. Armand	Tuesday, 5 september, 14:00-16:00	14:00- 14:20	1283	Chili Pepper Scent: Study and Recognition with Chemiresistors Array	E. Massera <sup>{2}</sup> , V. Sberveglieri <sup>{1}</sup> , E. Núñez-Carmona <sup>{3}</sup> , S. De Vito <sup>{2}</sup> , V. Galstyan <sup>{3}</sup> , D. Zappa <sup>{3}</sup> , M. Miglietta <sup>{2}</sup> , B. Alfano <sup>{2}</sup> , G. Di Francia <sup>{2}</sup>	{1}CNR-IBBR Institute of Biosciences and Bioresources, Italy; {2}ENEA, Italy; {3}Università degli Studi di Brescia, Italy
			14:20- 14:40	1177	Performance Evaluation of Low-Cost BTEX Sensors and Devices Within the EURAMET Key-VOCs Project	L. Spinelle <sup>{1}</sup> , M. Gerboles <sup>{1}</sup> , G. Kok <sup>{3}</sup> , S. Persijn <sup>{3}</sup> , T. Sauerwald <sup>{2}</sup>	{1}European Commission, Italy; {2}Universität des Saarlandes, Germany; {3}VSL Dutch Metrology Institute, Netherlands
			14:40- 15:00	1290	Exhaust Gas Analysis of Firewood Combustion Processes: Application of a Robust Thermoelectric Gas Sensor	B. Ojha <sup>{1}</sup> , G. Hagen <sup>{2}</sup> , H. Kohler <sup>{1}</sup> , R. Moos <sup>{2}</sup>	{1}Karlsruhe University of Applied Sciences, Germany; {2}Universität Bayreuth, Germany
			15:00- 15:20	1279	Improving Calibration of Chemical Gas Sensors for Fire Detection Using Small Scale Setups	A. Solórzano <sup>{1}</sup> , J. Fonollosa <sup>{1}</sup> , S. Marco <sup>{2}</sup>	{1}Institute for Bioengineering of Catalonia, Spain; {2}Universitat de Barcelona, Spain
			15:20- 15:40	1478	Detection of NOx in Combustion Engine Exhaust Gas by Applying the Pulsed Polarization Technique on YSZ Based Sensors	R. Pohle <sup>{2}</sup> , E. Magori <sup>{2}</sup> , A. Tawil <sup>{2}</sup> , P. Davydovskaya <sup>{1}</sup> , M. Fleischer <sup>{2}</sup>	{1}Ludwig-Maximilians-Universität, Germany; {2}Siemens AG, Germany
			15:40- 16:00	1321	A Dedicated Gas Analysis System Based on Resonant MEMS Sensors for Detection of Illicit Substances in Cargo Containers	M. Possas <sup>{2}</sup> , L. Rousseau <sup>{2}</sup> , F. Ghassemi <sup>{2}</sup> , P. González Losada <sup>{2}</sup> , J. Pagazani <sup>{2}</sup> , G. Lissorgues <sup>{3}</sup> , M. Habchi <sup>{1}</sup> , E. Scorsone <sup>{1}</sup>	{1}Commissariat à l'Energie Atomique et aux Energies Alternatives, France; {2}ESIEE, France; {3}ESIEE / Université Paris-Est, France



TUESDAY

Micro device & characterization	Room List	Tuesday, 5 september, 14:00-16:00	14:00-14:20	1234	Enhanced Chemical Micro-Thrusters for Maneuvering Nano-Satellites	A. Chaalane <sup>{1}</sup> , R. Chemam <sup>{5}</sup> , I. Azzouz <sup>{1}</sup> , A. Dkhissi <sup>{3}</sup> , D. Mahi <sup>{6}</sup> , M. Houabes <sup>{2}</sup> , D. Estève <sup>{4}</sup>	<sup>{1}</sup> ESIEE, France; <sup>{2}</sup> ESTI, Annaba, Algeria; <sup>{3}</sup> Ghent University, Belgium; <sup>{4}</sup> Laboratory for Analysis and Architecture of Systems, France; <sup>{5}</sup> University of Annaba, Algeria; <sup>{6}</sup> University of Laghouat, Algeria
			14:20-14:40	1015	Absorption Based Characterization Method for Fluid Properties Using Electrowetting-on-Dielectric Forces: Modeling and Fabrication	A. Tröls, B. Jakoby	Johannes Kepler Universität Linz, Austria
			14:40-15:00	1088	VO2: a Phase Change Material for Micromechanics	N. Manca <sup>{4}</sup> , L. Pellegrino <sup>{1}</sup> , T. Kanki <sup>{2}</sup> , W. Venstra <sup>{3}</sup> , G. Mattoni <sup>{3}</sup> , Y. Higuchi <sup>{2}</sup> , H. Tanaka <sup>{2}</sup> , A. Caviglia <sup>{3}</sup> , D. Marré <sup>{4}</sup>	<sup>{1}</sup> Consiglio Nazionale delle Ricerche, Italy; <sup>{2}</sup> Osaka University, Japan; <sup>{3}</sup> Technische Universiteit Delft, Netherlands; <sup>{4}</sup> Università di Genova / Consiglio Nazionale delle Ricerche, Italy
			15:00-15:20	1237	Thermoelectric Measurement of a Single, TiO <sub>2</sub> -Catalyzed Bi <sub>2</sub> Te <sub>3</sub> Nanowire	S. Moosavi <sup>{1}</sup> , D. Kojda <sup>{2}</sup> , M. Kockert <sup>{2}</sup> , P. Schoenherr <sup>{3}</sup> , T. Hesjedal <sup>{3}</sup> , S. Fischer <sup>{2}</sup> , M. Kroener <sup>{1}</sup> , P. Woias <sup>{1}</sup>	<sup>{1}</sup> Albert-Ludwigs-Universität Freiburg, Germany; <sup>{2}</sup> Humboldt-Universität zu Berlin, Germany; <sup>{3}</sup> University of Oxford, United Kingdom
			15:20-15:40	1026	Low-Power Heating Platform for the Characterization and Calibration of Scanning Thermal Probes	D. Briand <sup>{1}</sup> , T. Nguyen <sup>{3}</sup> , E. Lemaire <sup>{2}</sup> , L. Thiery <sup>{3}</sup> , P. Vairac <sup>{3}</sup>	<sup>{1}</sup> Ecole Polytechnique Fédérale de Lausanne, Switzerland; <sup>{2}</sup> EPFL, Switzerland; <sup>{3}</sup> Franche-Comté Électronique Mécanique Thermique et Optique - Sciences et Technologies, France
			15:40-16:00	1414	DNA-Origami-Aided Lithography for Sub-10 Nanometer Pattern Printing	I. Gállego <sup>{2}</sup> , B. Manning <sup>{2}</sup> , J. Prades <sup>{3}</sup> , M. Mir <sup>{1}</sup> , J. Samitier <sup>{1}</sup> , R. Eritja <sup>{1}</sup>	<sup>{1}</sup> IBEC, Spain; <sup>{2}</sup> IQAC, Spain; <sup>{3}</sup> Universitat de Barcelona, Spain
MicroFluidic II	Room Stephenson	Tuesday, 5 september, 14:00-16:00	14:00-14:20	1078	A Tubing-Free, Microfluidic Platform for the Realization of Physiologically Relevant Dosing Curves on Cellular Models	C. Lohasz <sup>{1}</sup> , O. Frey <sup>{2}</sup> , K. Renggli <sup>{1}</sup> , A. Hierlemann <sup>{1}</sup>	<sup>{1}</sup> ETH Zurich, Switzerland; <sup>{2}</sup> InSphero AG, Switzerland
			14:20-14:40	1273	Design, Modeling, and Characterization of a Bionically Inspired Integrated Micro-Flapper for Cooling and Venting Applications	R. Behlert <sup>{3}</sup> , M. Gehring <sup>{3}</sup> , H. Mehner <sup>{2}</sup> , R. Wieland <sup>{1}</sup> , G. Schrag <sup>{3}</sup>	<sup>{1}</sup> Fraunhofer-Einrichtung für Mikrosysteme und Festkörper-Technologien, Germany; <sup>{2}</sup> Technische Universität Ilmenau, Germany; <sup>{3}</sup> Technische Universität München, Germany
			14:40-15:00	1212	Optical Feedback Interferometry Flowmetry Sensor in Microfluidics Chip	Y. Zhao, J. Perchoux, T. Camps, V. Bardinal	Laboratory for Analysis and Architecture of Systems, France
			15:00-15:20	1122	Flow-Ratio Monitoring in a Microchannel by Liquid-Liquid Interface Interferometry	M. Oellers, F. Bunge, P. Vinayaka, S. Van Den Driesche, M. Vellekoop	Universität Bremen, Germany
			15:20-15:40	1258	Particle Separation with Deterministic Lateral Displacement (DLD): the Anisotropy Effect	E. Pariset, J. Berthier, C. Pudda, F. Navarro, B. Icard, V. Agache	Commissariat à l'Energie Atomique et aux Energies Alternatives, France
			15:40-16:00	1356	Modelling and Characterisation of Droplet Generation and Trapping in Cell Analytical Two-Phase Microfluidic System	A. Tóth <sup>{3}</sup> , E. Holczer <sup>{1}</sup> , O. Hakkel <sup>{1}</sup> , E. Tóth <sup>{2}</sup> , K. Iván <sup>{3}</sup> , P. Fürjes <sup>{1}</sup>	<sup>{1}</sup> Hungarian Academy of Sciences, Hungary; <sup>{2}</sup> Hungarian Academy of Sciences / Pázmány Péter Catholic University, Hungary; <sup>{3}</sup> Pázmány Péter Catholic University, Hungary

TUESDAY

Special Session: Sensors for Factory of the future	Room 203	Tuesday, 5 september, 14:00-16:00	14:00- 14:20	1236	Strangers in the Night – Smart Process Sensors in Our Current Automation Landscape	M. Maiwald, P. Gräßer, L. Wander, N. Zientek, S. Guhl, K. Meyer, S. Kern	Bundesanstalt für Materialforschung und -prüfung, Germany
			14:20- 14:40	1296	Passive and Chipless Packaged Sensor for the Wireless Pressure Monitoring in Harsh Environment	J. Philippe, C. Arenas, D. Henry, A. Coustou, A. Rumeau, H. Aubert, P. Pons	Laboratory for Analysis and Architecture of Systems, France
			14:40- 15:00	1302	Electrochemical Multisensor System for Monitoring the Hydrogen Peroxide Direct Synthesis in Microreactors	S. Urban <sup>{1}</sup> , A. Weltin <sup>{1}</sup> , H. Flamm <sup>{1}</sup> , J. Kieninger <sup>{1}</sup> , B. Deschner <sup>{2}</sup> , M. Kraut <sup>{2}</sup> , R. Dittmeyer <sup>{2}</sup> , G. Urban <sup>{1}</sup>	<sup>{1}</sup> Albert-Ludwigs-Universität Freiburg, Germany; <sup>{2}</sup> Karlsruher Institut für Technologie, Germany
			15:00- 15:20	1461	Intelligent Machine Parts: Challenges in the Condition Monitoring of Elastomer Gaskets with Integrated Sensors	D. Gräbner <sup>{2}</sup> , R. Zahn <sup>{1}</sup> , U. Giese <sup>{1}</sup> , W. Lang <sup>{3}</sup>	<sup>{1}</sup> Deutsches Institut für Kautschuktechnologie, Germany; <sup>{2}</sup> Friedrich-Wilhelm-Bessel-Institut Forschungsgesellschaft m.b.H, Germany; <sup>{3}</sup> Universität Bremen, Germany
			15:20- 15:40	1054	Integrated Sensor System for Condition Monitoring of Electromechanical Cylinders	N. Helwig <sup>{2}</sup> , P. Merten <sup>{2}</sup> , T. Schneider <sup>{2}</sup> , A. Schütze <sup>{1}</sup>	<sup>{1}</sup> Universität des Saarlandes, Germany; <sup>{2}</sup> Zentrum für Mechatronik und Automatisierungstechnik gemeinnützige GmbH, Germany
15:40- 16:00	1140	High Bandwidth Sensor Module for Mobile Robot Applications – Wind Tunnel Characterization	T. Vincent, Y. Xing, M. Cole, J. Gardner	University of Warwick, United Kingdom			

WEDNESDAY

Chemical sensors: Health - Medical Application	Room L. Armand	Wednesday, 6 september, 8:30-10:10	8:30- 8:50	1477	Fast Determination of Exhaled Air Oxidative Potential in Chronic Obstructive Pulmonary Disease Patients	S. Goekce, N. Concha-Lozano, J. Sauvain, A. Portela Otaño, E. Sergent, P. Andujar, J. Pairon, G. Suárez	Centre Hospitalier Universitaire Vaudois, Switzerland
			8:50- 9:10	1179	A Non Invasive Sensor System for the Screening of Obstructive Sleep Apnea Syndrome	G. Pennazza, M. Santonico, S. Scarlata, S. Santangelo, S. Grasso, A. Zompanti, R. Antonelli Incalzi	Università Campus Bio-Medico di Roma, Italy
			9:10- 9:30	1377	Detection of Ethanol in Human Breath Using Optical Fiber Long Period Grating Coated with Metal-Organic Frameworks	N. de Acha <sup>{1}</sup> , J. Hromadka <sup>{2}</sup> , B. Tokay <sup>{2}</sup> , R. Correia <sup>{2}</sup> , C. Elosua <sup>{1}</sup> , I. Matías <sup>{1}</sup> , F. Arregui <sup>{1}</sup> , S. Morgan <sup>{2}</sup> , S. Korposh <sup>{2}</sup>	<sup>{1}</sup> Universidad Pública de Navarra, Spain; <sup>{2}</sup> University of Nottingham, United Kingdom
			9:30- 9:50	1012	Use of Gas Sensors and FOBT for the Early Detection of Colorectal Cancer	G. Zonta <sup>{5}</sup> , G. Anania <sup>{5}</sup> , A. de Togni <sup>{1}</sup> , A. Gaiardo <sup>{5}</sup> , S. Gherardi <sup>{4}</sup> , A. Giberti <sup>{3}</sup> , V. Guidi <sup>{5}</sup> , N. Landini <sup>{5}</sup> , C. Palmonari <sup>{1}</sup> , L. Ricci <sup>{2}</sup> , C. Malagù <sup>{5}</sup>	<sup>{1}</sup> AUSL Ferrara, Italy; <sup>{2}</sup> Freelance, Italy; <sup>{3}</sup> MIST E-R s.c.r.l., Italy; <sup>{4}</sup> SCENT S.r.l., Italy; <sup>{5}</sup> Università degli Studi di Ferrara, Italy
			9:50- 10:10	1043	Submucosal Exploration of EMG and Physiological Parameters in the Bladder Wall	L. Brancato, T. Weydts, M. Soebadi, D. De Ridder, R. Puers	Katholieke Universiteit Leuven, Belgium



WEDNESDAY

Piezoelectric material and device	Room List	Wednesday, 6 september, 8:30-10:10	8:30-8:50	1184	Scandium Aluminium Nitride-Based Film Bulk Acoustic Resonators	M. Schneider <sup>{1}</sup> , M. Demiguel-Ramos <sup>{3}</sup> , A. Flewitt <sup>{3}</sup> , E. Iborra <sup>{2}</sup> , U. Schmid <sup>{1}</sup>	{1}Technische Universität Wien, Austria; {2}Universidad Politécnica de Madrid, Spain; {3}University of Cambridge, United Kingdom
			8:50-9:10	1046	Direct Piezoelectric Coefficient Measurements of PVDF and PLLA Under Controlled Strain and Stress	F. Bernard <sup>{1}</sup> , L. Gimeno <sup>{2}</sup> , B. Viala <sup>{1}</sup> , B. Gusarov <sup>{2}</sup> , O. Cugat <sup>{2}</sup>	{1}Commissariat à l'Energie Atomique et aux Energies Alternatives, France; {2}Institut polytechnique de Grenoble, France
			9:10-9:30	1322	Tuneable Q-Factor of MEMS Cantilevers with Integrated Piezoelectric Thin Films	M. Fischeneder, M. Oposich, M. Schneider, U. Schmid	Technische Universität Wien, Austria
			9:30-9:50	1216	A Piezoelectric Micromachined Ultrasound Transducers (pMUT) Array, for Wide Bandwidth Underwater Communication Applications	S. Sadeghpour <sup>{2}</sup> , P. Pobedinskas <sup>{1}</sup> , K. Haenen <sup>{1}</sup> , R. Puers <sup>{2}</sup>	{1}Hasselt University, Belgium; {2}Katholieke Universiteit Leuven, Belgium
			9:50-10:10	1355	Effect of Electrode Configuration on High Temperature Thickness Shear Gallium Phosphate Transducer	A. Dhutti <sup>{1}</sup> , T. Gan <sup>{2}</sup> , A. Mohimi <sup>{2}</sup> , W. Balachandran <sup>{1}</sup> , J. Kanfoud <sup>{1}</sup>	{1}Brunel University London, United Kingdom; {2}TWI Ltd., United Kingdom
MicroFabrication	Room Stephenson	Wednesday, 6 september, 8:30-10:10	8:30-8:50	1453	Fabrication Tolerance Sensitivity in Large-Area Mid-Infrared Metamaterial Absorbers	M. Ghaderi, E. Karimi, N. Ayerden, R. Wolffenbuttel	Technische Universiteit Delft, Netherlands
			8:50-9:10	1057	Single-Step CMOS Compatible Fabrication of High Aspect Ratio Microchannels Embedded in Silicon	M. Kluba <sup>{4}</sup> , A. Arslan <sup>{3}</sup> , R. Stoute <sup>{2}</sup> , J. Muganda <sup>{1}</sup> , R. Dekker <sup>{4}</sup>	{1}Eindhoven University of Technology, Netherlands; {2}Holst Centre, Netherlands; {3}Koninklijke Philips N.V., Netherlands; {4}Technische Universiteit Delft, Netherlands
			9:10-9:30	1152	High Gauge Factor Piezoresistors Using Aluminium Induced Crystallisation of Silicon at Low Thermal Budget	I. Chuang, A. Michael, C. Kwok	University of New South Wales, Australia
			9:30-9:50	1218	Nanofabrication of Vertically Aligned 3D GaN Nanowire Arrays with Sub-50 nm Feature Sizes Using Nanosphere Lift-Off Lithography	T. Granz <sup>{2}</sup> , S. Mariana <sup>{2}</sup> , G. Hamdana <sup>{2}</sup> , F. Yu <sup>{2}</sup> , M. Fatahilah <sup>{2}</sup> , I. Manglano Clavero <sup>{2}</sup> , P. Puranto <sup>{1}</sup> , Z. Li <sup>{1}</sup> , U. Brand <sup>{1}</sup> , J. Prades <sup>{3}</sup> , E. Peiner <sup>{2}</sup> , A. Waag <sup>{2}</sup> , H. Wasisto <sup>{2}</sup>	{1}Physikalisch-Technische Bundesanstalt, Germany; {2}Technische Universität Braunschweig, Germany; {3}Universitat de Barcelona, Spain
			9:50-10:10	1115	Porous Silicon Carbide for MEMS	M. Leitgeb, C. Zellner, G. Pfusterschmied, M. Schneider, U. Schmid	Technische Universität Wien, Austria

WEDNESDAY

Neural sensors	Room 203	Wednesday, 6 september, 8:30-10:10	8:30-8:50	1144	Multiphysics Probe for Deep Brain Monitoring of Glioblastoma Environment	C. Chatard <sup>{1}</sup> , O. Pascual <sup>{3}</sup> , Y. Jourlin <sup>{5}</sup> , S. Marinesco <sup>{6}</sup> , D. Barbier <sup>{2}</sup> , A. Sabac <sup>{4}</sup>	<sup>{1}</sup> INSA Lyon, France; <sup>{2}</sup> Institut des Nanotechnologies de Lyon, France; <sup>{3}</sup> Institut NeuMyoGène, France; <sup>{4}</sup> Laboratoire Ampère, France; <sup>{5}</sup> Laboratoire Hubert Curien, France; <sup>{6}</sup> Université Claude Bernard Lyon 1, France
			8:50-9:10	1038	Multimodal Neuroimaging Microtool for Infrared Optical Stimulation, Thermal Measurements and Recording of Neuronal Activity in the Deep Tissue	á. Horváth <sup>{2}</sup> , ö. Sepsi <sup>{1}</sup> , C. Boros <sup>{1}</sup> , S. Beleznai <sup>{1}</sup> , P. Koppa <sup>{1}</sup> , Z. Fekete <sup>{2}</sup>	<sup>{1}</sup> Budapest University of Technology & Economics, Hungary; <sup>{2}</sup> Hungarian Academy of Sciences, Hungary
			9:10-9:30	1027	Highly Stable PEDOT:PSS Coating on Gold Microelectrodes with Improved Charge Injection Capacity for Chronic Neural Stimulation	A. Pranti, A. Schander, A. Bödecker, W. Lang	Universität Bremen, Germany
			9:30-9:50	1244	Demonstration of Intracortical Chronic Recording and Acute Microstimulation Using Novel Floating Neural Probes	A. Schander, H. Stemmann, A. Kreiter, W. Lang	Universität Bremen, Germany
			9:50-10:10	1309	Protuberant Electrode Structures for New Retinal Implants	P. González Losada <sup>{2}</sup> , L. Rousseau <sup>{1}</sup> , M. Grzeskowiak <sup>{5}</sup> , J. Degardin <sup>{4}</sup> , S. Berhanu <sup>{4}</sup> , E. Dubus <sup>{4}</sup> , S. Picaud <sup>{3}</sup> , G. Lissorgues <sup>{2}</sup>	<sup>{1}</sup> ESIEE, France; <sup>{2}</sup> ESIEE / Université Paris-Est, France; <sup>{3}</sup> Institut national de la santé et de la recherche médicale, France; <sup>{4}</sup> Institut of Vision, France; <sup>{5}</sup> Université Paris-Est, France
Chemical sensors: Liquid phase	Room L. Armand	Wednesday, 6 september, 10:40-12:40	10:40-11:00	1138	Multimodal Probe Based on ISFET Electrochemical Microsensors for in-Situ Monitoring of Soil Nutrients in Agriculture	M. Joly <sup>{2}</sup> , L. Mazenq <sup>{2}</sup> , M. Marlet <sup>{1}</sup> , P. Temple-Boyer <sup>{2}</sup> , C. Durieu <sup>{1}</sup> , J. Launay <sup>{2}</sup>	<sup>{1}</sup> Agronutrition, France; <sup>{2}</sup> Laboratory for Analysis and Architecture of Systems, France
			11:00-11:20	1354	OECT for (Bio)Sensing: from Biosensors to Biologic Gates	G. Scheiblin <sup>{1}</sup> , P. Mailley <sup>{2}</sup> , R. Coppard <sup>{2}</sup> , R. Owens <sup>{3}</sup> , G. Malliaras <sup>{3}</sup>	<sup>{1}</sup> CEA-LETI/ENSMSE, France; <sup>{2}</sup> Commissariat à l'Energie Atomique et aux Energies Alternatives, France; <sup>{3}</sup> ENSMSE, France
			11:20-11:40	1187	A Textile Based Polypyrrole Chloride Sensor for Agricultural Use	M. Glanc-Gostkiewicz <sup>{2}</sup> , N. Harris <sup>{1}</sup>	<sup>{1}</sup> University of Southampton, United Kingdom; <sup>{2}</sup> University of Southampton, United Kingdom
			11:40-12:00	1129	Development of All-Around SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> Gate, Suspended Silicon Nanowire Chemical Field Effect Transistors Si-nw-ChemFET	A. Lale <sup>{2}</sup> , A. Grappin <sup>{1}</sup> , L. Mazenq <sup>{2}</sup> , D. Bourrier <sup>{2}</sup> , A. Lecestre <sup>{2}</sup> , J. Launay <sup>{2}</sup> , P. Temple-Boyer <sup>{2}</sup>	<sup>{1}</sup> LAAS-CNRS / Université de Toulouse, France; <sup>{2}</sup> Laboratory for Analysis and Architecture of Systems, France
			12:00-12:20	1474	Microstructure for Thermal Impedance Spectroscopy for Biofuel Composition Measurement	B. Jiang <sup>{2}</sup> , M. Ghaderi <sup>{2}</sup> , A. Bossche <sup>{2}</sup> , J. Visser <sup>{1}</sup> , R. Wolffenbuttel <sup>{2}</sup>	<sup>{1}</sup> Ford Motor Company, United States; <sup>{2}</sup> Technische Universiteit Delft, Netherlands
		12:20-12:40	1457	E-Tongue Based on Porphyrin Electropolymers for Apulian Red Wines Defects Detection	L. Lvova, C. Di Natale, R. Paolesse	Università degli Studi di Roma Tor Vergata, Italy	

WEDNESDAY

Energy Harvesting	Room List	Wednesday, 6 september, 10:40-12:20	10:40-11:00	1238	3D Printed Materials Based Triboelectric Device for Energy Harvesting and Sensing	R. Haque, P. Farine, D. Briand	Ecole Polytechnique Fédérale de Lausanne, Switzerland
			11:00-11:20	1391	Bulk PZT Cantilever Based MEMS Acoustic Transducer for Cochlear Implant Applications	A. Koyuncuoğlu, B. İlik, S. Chamanian, H. Uluşan, P. Ashrafi, D. Işık, H. Külah	Middle East Technical University , Turkey
			11:20-11:40	1211	DC Current Beat: Wireless and Non-Invasive DC Current Sensing Scheme	K. Ishibashi, M. Serizawa, R. Takitoge, S. Ishigaki, T. Ishige	University of Electro-Communications, Japan
			11:40-12:00	1370	A MEMS EVEH-Assisted Long-Range RFID Tag System for Applications with Low-Frequency Vibrations	Y. Lu{1}, F. Marty{1}, D. Galayko{3}, J. Laheurte{2}, P. Basset{1}	{1}ESIEE / Université Paris-Est, France; {2}Université Paris-Est / UPEM, France; {3}UPMC-Sorbonne Universités, France
			12:00-12:20	1158	Inkjet 3D Printed Miniature Water Turbine Energy Harvester - Flow Meter for Distributed Measurement Systems	K. Adamski{2}, J. Adamski{1}, J. Dziuban{2}, R. Walczak{2}	{1}Wrocław univerty of technology, Poland; {2}Wrocław University of Science and Technology, Poland
Modeling of micro-nano systems	Room Stephenson	Wednesday, 6 september, 10:40-12:20	10:40-11:00	1275	Efficient Vertical-Cavity Mid-IR Thermal Radiation to Silicon-Slab Waveguide Coupling Using a Shallow Blazed Grating	G. Pühringer, B. Jakoby	Johannes Kepler Universität Linz, Austria
			11:00-11:20	1145	Reduction of Electrostatic Control Voltage with a Tri-Electrode Actuator	Y. Zhou, C. Shafai	University of Manitoba, Canada
			11:20-11:40	1225	High Precision Accelerometer with Integrated Thermal Sensor	B. Verlhac, R. Levy, P. Lavenus, C. Chartier, V. Gaudineau, O. Le Traon	Office National d'Etudes et de Recherches Aérospatiales, France
			11:40-12:00	1074	Two-Directional Operation of Bistable Latchable Micro Switch Actuated by a Single Electrode	L. Medina{3}, R. Gilat{1}, R. Ilic{2}, S. Krylov{3}	{1}Ariel University, Israel; {2}National Institute of Standards and Technology, United States; {3}Tel Aviv University, Israel
			12:00-12:20	1169	Humidity Sensitivity and Coil Design of a High-Precision Eddy-Current Displacement Sensor	J. Vogel, V. Chaturvedi, S. Nihtianov	Technische Universiteit Delft, Netherlands
Optical detection	Room 203	Wednesday, 6 september, 10:40-12:20	10:40-11:00	1031	A Portable, Optical Scanning System for Large Field of View, High Resolution Imaging of Biological Specimens	G. Korompili, G. Kanakaris, C. Ampatis, N. Chronis	N.C.S.R. Demokritos, Greece
			11:00-11:20	1438	Biomolecular Detection Based on the Rotational Dynamics of Magneto-Plasmonic Nanoparticles	A. Shoshi{1}, P. Schneeweiss{1}, T. Glatzl{1}, G. Kovács{1}, J. Schinerl{1}, M. Haslinger{2}, M. Muehlberger{2}, H. Brueckl{1}	{1}Danube University Krems, Austria; {2}PROFACTOR GmbH, Austria
			11:20-11:40	1292	Bacillus spp Cells Captured Selectively by Phages and Identified by Surface Enhanced Raman Spectroscopy Technique	A. Lai{2}, S. Almaviva{2}, V. Spizzichino{2}, D. Luciani{1}, A. Palucci{2}, S. Mengali{1}, C. Marquette{5}, O. Berthuy{5}, B. Jankiewicz{4}, L. Pierno{3}	{1}Consorzio CREO, Italy; {2}ENEA, Italy; {3}Leonardo ETN SpA, Italy; {4}Military University of Technology, Poland; {5}University Claude Bernard Lyon 1, France
			11:40-12:00	1016	Photonic Gas Sensor Using a Silicon Strip Waveguide	C. Ranacher{1}, A. Tortschanoff{1}, C. Consani{1}, M. Moridi{1}, T. Grille{2}, B. Jakoby{3}	{1}Carinthian Tech Research AG, Austria; {2}Infineon Technologies Austria AG, Austria; {3}Johannes Kepler Universität Linz, Austria
			12:00-12:20	1239	A Miniaturized UV-LED Based Optical Gas Sensor Utilizing Silica Waveguides for the Measurement of Nitrogen Dioxide and Sulphur Dioxide	P. Elmlinger{2}, M. Schreivogel{1}, S. Weida{1}, M. Kneissl{3}	{1}Robert Bosch Company, Germany; {2}Robert Bosch Company/Technische Universität Berlin, Germany; {3}Technische Universität Berlin, Germany

WEDNESDAY

Chemical sensors: Nanomaterials II	Room L. Armand	Wednesday, 6 september, 14:00-15:20	14:00- 14:20	1455	Carbon Dots and Fluorescein: the Ideal Fret Pair for the Fabrication of a Precise and Fully Reversible Ammonia Sensor	C. Hsu <sup>{2}</sup> , Z. Hejazi <sup>{2}</sup> , E. Armagan <sup>{2}</sup> , S. Zhao <sup>{2}</sup> , M. Schmid <sup>{2}</sup> , H. Zhang <sup>{2}</sup> , H. Guo <sup>{1}</sup> , L. Weidenbacher <sup>{3}</sup> , R. Rossi <sup>{2}</sup> , M. Koebel <sup>{2}</sup> , L. Boesel <sup>{2}</sup> , C. Toncelli <sup>{2}</sup>	{1}ETH Zürich / Swiss Federal Laboratories for Materials Science and Technology, Switzerland; {2}Swiss Federal Laboratories for Materials Science and Technology, Switzerland; {3}Swiss Federal Laboratories for Materials Science and Technology / ETH Zürich, Switzerland
			14:20- 14:40	1268	Gas Sensing Properties of Moo3	H. Munasinghe Arachchige, E. Comini, D. Zappa, G. Sberveglieri	Università degli Studi di Brescia, Italy
			14:40- 15:00	1118	Tuning of the Humidity-Interference in Gas Sensitive Columnar ZnO Structures	S. Vallejos Vargas <sup>{3}</sup> , I. Gràcia <sup>{4}</sup> , N. Pizúrová <sup>{1}</sup> , E. Figueras <sup>{4}</sup> , J. Hubálek <sup>{2}</sup> , C. Cané <sup>{4}</sup>	{1}Academy of Sciences of Czech Republic, Czech Rep.; {2}Brno University of Technology, Czech Rep.; {3}Brno University of Technology / Consejo Superior de Investigaciones Científicas, Spain; {4}Consejo Superior de Investigaciones Científicas, Spain
			15:00- 15:20	1019	Low Temperature Synthesis of Wafer-Scale 2D Materials for Sensor Applications	H. Kim <sup>{2}</sup> , A. Kulkarni <sup>{2}</sup> , H. Kim <sup>{1}</sup> , D. Shin <sup>{2}</sup> , V. Kanade <sup>{2}</sup> , M. Lee <sup>{1}</sup> , T. Kim <sup>{2}</sup>	{1}Chung Ang University, Korea; {2}Sungkyunkwan University , Korea
Physical and optical sensors	Room List	Wednesday, 6 september, 14:00-15:20	14:00- 14:20	1025	Etched and Nanocoated SMS Fiber Sensor for Detection of Salinity Concentration	Y. Cardona-Maya <sup>{1}</sup> , I. Del Villar <sup>{2}</sup> , A. Socorro <sup>{2}</sup> , J. Corres <sup>{2}</sup> , F. Arregui <sup>{2}</sup> , J. Botero-Cadauid <sup>{1}</sup>	{1}Universidad Nacional de Colombia, Colombia; {2}Universidad Pública de Navarra, Spain
			14:20- 14:40	1056	Development and Evaluation of Tri-Axial Fiber Bragg Grating Force Sensor for Catheter	D. Shin, H. Kim, A. Kulkarni, T. Kim	Sungkyunkwan University , Korea
			14:40- 15:00	1149	Large Tilt Angle Lorentz Force Actuated Micro-Mirror with 3 DOF for Optical Applications	E. Afsharipour, B. Park, C. Shafai	University of Manitoba, Canada
			15:00- 15:20	1306	Piezoelectrically Driven and Sensed Micromirrors with Extremely Large Scan Angles and Precise Closed-Loop Control	S. Gu-Stoppel, T. Giese, H. Quenzer, W. Benecke	Fraunhofer-Institut für Siliziumtechnologie, Germany
QCM Resonator	Room Stephenson	Wednesday, 6 september, 14:00-15:20	14:00- 14:20	1256	Development of a Novel Platelets Functional Assay Using QCM	A. Strallhofer, P. Lieberzeit	Universität Wien, Austria
			14:20- 14:40	1380	Laser-Machined Split-Ring Resonators Embedded in a Polymer Matrix for Glaucoma Monitoring	A. Calikoglu <sup>{2}</sup> , G. Dundar <sup>{1}</sup> , A. Yalcinkaya <sup>{1}</sup> , H. Torun <sup>{1}</sup>	{1}Boğaziçi Üniversitesi, Turkey; {2}Bogazici University, Turkey
			14:40- 15:00	1229	Real-Time QCM Measurements of Rolling Circle Amplification Products	N. Madaboosi <sup>{2}</sup> , F. Neumann <sup>{2}</sup> , I. Hernández-Neuta <sup>{2}</sup> , J. Salas <sup>{2}</sup> , V. Mecea <sup>{1}</sup> , M. Nilsson <sup>{2}</sup>	{1}QCM Laboratory, Sweden; {2}Science for Life Laboratory, Sweden
		15:00- 15:20	1471	Acoustic Streaming Actuator and Multifrequency Resonator Sensor	E. Reichel, T. Voglhuber-Brunnmaier, B. Jakoby	Johannes Kepler Universität Linz, Austria	