

EUROSENSORS2016 PROGRAM
Tuesday - September 6, 2016

Chemical sensors II. Optical readout, Room1: "PATRIA"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|-------------------|---|--|---|
| 8.30-8.50 | TL.CHM-7-8274 | Point-of-Use Ultrafast Single-Step Detection of Food Contaminants: a Novel Microfluidic Fluorescence-Based Immunoassay with Integrated photodetection | R. R. G. Soares (a,b*), D. R. Santos (a,b), I. F. Pinto (a,b), A. M. Azevedo (b,c), V. Chu (a), M. R. Aires-Barros (b,c), J. P. Conde (a,c) | (a) Instituto de Engenharia de Sistemas e Computadores – Microsistemas e Nanotecnologias (INESC MN) and IN – Institute of Nanoscience and Nanotechnology, Rua Alves Redol 1000-029, Lisbon, Portugal (b) IBB – Institute for Bioengineering and Biosciences, Instituto Superior Técnico, Avenida Rovisco Pais 1049-001, Universidade de Lisboa, Lisbon, Portugal (c) Department of Bioengineering, Instituto Superior Técnico, Avenida Rovisco Pais 1049-001, Universidade de Lisboa, Lisbon, Portugal |
| 8.50-9.10 | TL.CHM-8-8445 | Integration of New Sol-Gel Films Into Optical Chemical Sensors | E. Scolan (a,*), R. Smajda(a), G. Weder(a), G. Voirin(a), R. Pugin(a), Y. Michou(b), M.C. Merienne(b), M. Lyonnet(b), A. Winzer(c) | (a) CSEM Centre Suisse d'Electronique et de Microtechnique SA, CH-2002 Neuchâtel, Switzerland (b) ONERA, 73500 Modane, France (c) CIS Forschungsinstitut für Mikrosensorik GmbH, 99099 Erfurt, Germany |
| 9.10-9.30 | TL.CHM-9-8518 | Surface modification of integrated optical MZI sensor arrays using inkjet printing technology | Eva Melnik (a,*), Florian Strasser (a,c), Paul Muellner (a), Rudolf Heer (a), Giorgio C. Mufinati (a), Guenther Koppitsch (b), Peter Lieberzeit (c), Michael Laemmerhofer (d), Rainer Hainberger (a) | (a) AIT Austrian Institute of Technology GmbH, Molecular Diagnostics, Vienna, Austria (b) ams AG, Premstätten, Austria (c) University of Vienna, Department of Analytical Chemistry, Vienna, (d) Austria University of Tübingen, Institute of Pharmaceutical Sciences, Tübingen, Germany |
| 9.30 - 9.50 | TL.CHM-10-8472 | Simple fluorescent sensor for simultaneous selective quantification of benzene, toluene and xylene in a multicomponent mixture | D. Ionov (a,*), G. Yurasik (a), Y. Kononevich(b), V. Sazhnikov (a,c), A. Muzafarov (b), M. Alfimov (a,c) | (a) Photochemistry Center of the Russian Academy of Sciences, st. Novatorov 7a, Moscow, 119421 Russia (b) A. N. Nesmeyanov Institute of Organoelement compounds, st. Vavilova 28, Moscow, 119991 Russia (c) Moscow Institute of Physics and Technology (State University), Institutsky per. 9, 141707, Dolgoprudny, Russia |
| 9.50-10.10 | TL.CHM-11-8527 | Photographic detection of Cadmium(II) and Zinc(II) ions | Larisa Lvova (a,*), Corrado Di Natale (b), Roberto Paolesse (a), Luca Giorgic, Vieri Fusi (c), Alessandra Garau (d), Vito Lippolis (d) | (a) Department of Chemical Science and Technologies, University "Tor Vergata", via della Ricerca Scientifica, 1, Rome,00133, Italy (b) Department of Electronic Engineering, University "Tor Vergata", Via del Politecnico 1, Rome, 00133, Italy (c) Department of Base Sciences and Foundations, Università degli Studi di Urbino, P.za Rinascimento 6, Urbino, 61029, Italy (d) Dipartimento di Scienze Chimiche e Geologiche Università degli Studi di Cagliari, S.S. 554 Bivio per Sestu, Monserrato, 09042, Italy |

Chemical sensors III. Electroanalytical sensing, Room1: "PATRIA"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|----------------------|---|---|---|
| 11.10-11.30 | TL.CHM-12-8627 | Water jet actuation for ultra-low cost endoscopy: Characterization of miniature nozzles fabricated by rapid prototyping | F. Campisano(a,*), F. Gramuglia (a,b), I.R. Dawson (c), K.L. Obstein(a), S. Misra (c,d), E. De Momi (b), P. Valdastri (a,e) | (a) STORM lab, Mechanical Engineering, Vanderbilt University, Nashville, USA. (b) Dept. of Electronics, Information and Bioengineering, Politecnico di Milano, Milano, Italy. (c) Surgical Robotics Lab, University of Twente, Enschede, The Netherlands. (d) Dept. of Biomedical Engineering, University Medical Center Groningen, Groningen, The Netherlands. (e) School of Electronic and Electrical Engineering, University of Leeds, UK. |
| 11.30-11.50 | TL.CHM-13-8448 | Characterization of the HS-C6-Aptamer/Mercaptohexanol monolayer on gold electrodes | Peggy Reich(*) , Dieter Beckmann | Institute for Bioprocessing and Analytical Measurement Techniques e.V., Rosenhof, Heilbad Heiligenstadt-37308, Germany |
| 11.50-12.10 | TL.CHM-14-8519 | TiO ₂ Nanocrystals Decorated CVD Graphene based Hybrid for Uvlight Active Photoanodes | C. Ingrosso (a,*), G. V. Bianco(b), V. Pifferi (c), P. Guffanti(c), F. Petronella(a), R. Comparelli (a), A. Agostiano(a),d, M. Striccoli(a), I.Palchetti(e), L. Falciola (c), M. L. Curri (a) and G. Bruno(b) | (a) CNR-IPCF Sez. Bari, c/o Dipartimento di Chimica, Università di Bari, via Orabona 4I-70126 Bari, Italy (b) CNR-NANOTEC, c/o Dipartimento di Chimica, Università di Bari, via Orabona 4I-70126 Bari, Italy (c) Università degli Studi di Milano, Dipartimento di Chimica, via Golgi 19,20133, Milano (d) Dipartimento di Chimica,Università di Bari, via Orabona 4I-70126 Bari, Italy. (e) Dipartimento di Chimica Ugo Schiff, Università degli Studi di Firenze, via della Lastruccia 3-13, 50019 Sesto Fiorentino (Fi), Italy |
| 12.10-12.30 | TL.CHM-15-8385 | Advanced 3D Spheroid Culture for Evaluation of Photodynamic Therapy in Microfluidic System | A. Zuchowska, E. Jastrzebska, M. Chudy, A. Dybko, Z. Brzozka | Department of Microbioanalytics, Institute of Biotechnology, Warsaw University of Technology, Poland |
| 12.30-13.00 | TKeynote.CHM-16-8133 | Micro-USB Connector Pins As Low-Cost, Robust Electrodes for Microscale Water Conductivity Sensing in Oceanographic Research | Marco Carminati (a,*), Valerio Stefanelli (a), Paolo Luzzatto-Fegiz (b) | (a) Politecnico di Milano, Dipartimento di Elettronica, Informazione e Bioingegneria, P.za Leonardo da Vinci 32, Milano 20133, Italy (b) University of California, Santa Barbara, Department of Mechanical Engineering, Santa Barbara, 93106, USA |

Chemical sensors IV. Biochemical sensors 1., Room1: "PATRIA"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|-------------------|--|--|---|
| 14.00-14.20 | TL.CHM-17-8490 | A Novel Sensing Method for HPO ₄ ²⁻ and HCO ₃ ⁻ by Electrochemical Oxidation with Amorphous Mixed Oxide Catalyst | A. Honda (a), M. Morimitsu (a,b,*) | (a) Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, 610-0394, Japan (b) Department of Environmental Systems Science, Doshisha University, Kyotanabe, 610-0394, Japan |
| 14.20-14.40 | TL.CHM-18-8216 | Design of a Resonator-on-Microchannel (RoM) for Gravimetric Detection Applications in Liquid Environment | M. Kangül (a,*), E. Aydın (a), F. Gökçe (a), T. Toral (a,b), O. Zorlu (b), H. Külah (a,b) | (a) Middle East Technical University, Turkey (b) Mikro Biyosistemler, A.S., Turkey |
| 14.40-15.00 | TL.CHM-19-8417 | 32-Channel Integrated Electrical Impedance Sensors on a Multifunctional Neural Microelectrode Array Platform | Viswam Vijay(a,*), Bounik Raziye(a), Shadmani Amir(a), Dragas Jelena(a), Jan Müller(a), Chen Yihui(a,b), Hierlemann Andreas(a) | (a)ETH Zurich, Department of Biosystems Science and Engineering, Basel, Switzerland (b)Analog Devices Shanghai Co. Ltd., Shanghai, China |
| 15.00-15.20 | TL.CHM-20-8359 | Label-Free Electrostatic Detection of DNA Amplification by PCR Using Capacitive Field-Effect Devices | A. Poghosian (a,b,*), T.S. Bronder (a,b), S. Scheja (a), C. Wu (a,e), T. Weinand (d), C. Metzger-Boddien (d), M. Keusgen (c), M.J. Schöning (a,b) | (a) Institute of Nano- and Biotechnologies, FH Aachen, Campus Jülich, D-52428 Jülich, Germany (b) Peter Grünberg Institute (PGI-8), Forschungszentrum Jülich GmbH, D-52425 Jülich, Germany (c) Institute of Pharmaceutical Chemistry, University of Marburg, D-35032 Marburg, Germany (d) Gerbion GmbH & Co. KG, D-70806 Kornwestheim, Germany (e) Institute of Medical Engineering, Xi'an Jiaotong University School of Medicine, Xi'an, China |
| 15.20-15.40 | TL.CHM-21-8443 | Ionogel-based Nitrite and Nitrate Sensor for Water Control at the Point-of-Need | J. Saez (a), G. Arana (b), L. A. Fernandez-Cuadrado (b), F. Benito-Lopez (a,c,*) | (a) Analytical Microsystems & Materials for Lab-on-a-Chip (AMMa-LOAC) Group, Microfluidics UPV/EHU Cluster, Analytical Chemistry Department, University of the Basque Country UPV/EHU, Vitoria-Gasteiz, Spain (b) IBeA Group, Analytical Chemistry Department, University of the Basque Country UPV/EHU, Leioa, Spain (c) Insight Centre for Data Analytics, National Centre for Sensor Research, Dublin City University, Dublin, Ireland |
| 15.40-16.00 | TL.CHM-22-8293 | Diagnosis and Prognosis of Tuberculosis with a Porphyrins Based Sensor Array | N. Zetola(a), C. Modongo(b), O. Matsiri(b), T. Tamuhla(b), B. Mbongwe(b), G. Sirugo(c), A. Catini(d), R. Paolesse(d), E. Martinelli(b), C. Di Natale (*) | (a) Department of Radiation Oncology, University of Pennsylvania, Philadelphia, USA (b) Botswana-UPENN Partnership, University of Botswana, Gaborone, Botswana (c) Az. Osp. Fatebenefratelli, Roma, Italy (d) Department of Electronic Engineering, University of Roma Tor Vergata, Roma, Italy |

Physical sensors I. Magnetic sensors, Room2: "BARTOK"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|--------------------------|--------------------------|---|---|--|
| 8.30-8.50 | TL.PHY-1-8166 | A Low-Cost Soft Tactile Sensing Array Using 3D Hall Sensors | Hongbo Wang (a,*), Greg de Boer (b), Junwai Kow (a), Mazdak Ghajari (b), Ali Alazmani (a), Robert Hewson (b), Peter Culmer (a) | (a) School of Mechanical Engineering, University of Leeds, Leeds, LS2 9JT, UK (b) Department of Aeronautics, Imperial College London, London, SW7 2AZ,UK |
| 8.50-9.10 | TL.PHY-2-8074 | Lorentz Force Magnetic Sensor Based on a Thin-Film Piezoelectric-on-Silicon Laterally Vibrating Micromechanical Resonator | S. Ghosh (a,*), J. E.Y. Lee (a,b) | (a) Department of Electronic Engineering, City University of Hong Kong, Kowloon, Hong Kong (b) State Key Laboratory of Millimeter Waves, City University of Hong Kong, Kowloon, Hong Kong |
| 9.10-9.30 | TL.PHY-3-8637 | Infrared Detector with Directly Grown Carbon Nanotubes as the Absorption Layer | V. Svatos (a,b), P. Neuzil(a,b,c*), I. Gablech (a,b), J. Pekarek(a,b) and J. Hubalek (a,b) | (a) Central European Institute of Technology, Brno University of Technology, Purkynova 123, CZ-61200 Brno, Czech Republic (b) RepublicBrno University of bTechnology, Faculty of Electrical Engineering and Communication, Department of Microelectronics, Technicka 3058/10, CZ-61600 Brno, Czech Republic (c) Northwestern Polytechnical University, 127 West Youyi Road, Xi'an, Shaanxi, P.R. China |
| 9.30-9.50 | TL.PHY-4-8238 | Direct-Reading Resonant Silicon Cantilever for Probing of Surface Deposits | Shuo Zhang (a), Yichao Ding (a), Wenze Wu (a), Maik Bertke (a), Hutomo Suryo Wasisto (a), Lutz Doering (b), Uwe Brand (b), Erwin Peiner (a,*) | (a) Technische Universität Braunschweig, Institute of Semiconductor Technology (IHT) and Laboratory for Emerging Nanometrology (LENA), Hans-Sommer-Str. 66, 38106 Braunschweig, Germany (b) Physikalisch-Technische Bundesanstalt (PTB), Department 5.1 Surface Metrology, Bundesallee 100, 38116 Braunschweig, Germany |
| 9.50-10.20 | TKeynote.PHY-5-8273 | Ultra-Thin Silicon Based Piezoelectric Capacitive Tactile Sensor | Shoubhik Gupta (a,b), Flavio Giacomozzi (b), Hadi Heidari (a), Leandro Lorenzelli (b), Ravinder Dahiya (a,*) | (a) Bendable Electronics and Sensing Technology (BEST) group, School of Engineering, University of Glasgow, G12 8QQ, United Kingdom (b) Micro-System Technology (MST) group, Center of Materials and Microsystems Fondazione Bruno Kessler, Trento, 38123, Italy |

Physical sensors II. Piezo, SAW, Room2: "BARTOK"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|--------------------------|--------------------------|--|---|--|
| 11.10-11.30 | TL.PHY-6-8571 | Fabrication and Characterization of Piezoelectric Paper Based Device for Touch and Force Sensing Applications | Sepehr Emamian (*), Binu B. Narakathu, Amer A. Chlaihawi, Massood Z. Atashbar | Western Michigan University, Electrical and Computer Engineering Department, Kalamazoo, MI 49008, USA |
| 11.30-11.50 | TL.PHY-7-8212 | Exploitation of Giant Piezoresistivity - CNT Sensors Fabricated with a Wafer-Level Technology | Simon Böttger (a,*), Stefan E. Schulz (a,b,c), Sascha Hermann (a,b,c) | (a) Center for Microtechnologies (ZfM), Technische Universität Chemnitz, Chemnitz, Germany (b) Fraunhofer Institute for Electronic Nano Systems (ENAS), Chemnitz, Germany (c) Center for Advancing Electronics Dresden (cfaed), Dresden, Germany |
| 11.50-12.10 | TL.PHY-8-8110 | Surface Acoustic Wave Sensors for PM2.5 and PM10 Concentration | Lyes Djoumi (a,b,*), Virginie Blondeau-Patissier (a), Meddy Vanotti (a), Jean-Christophe Appert-Collin (c), Dominique Thomas (c), Laurent Fertier (b) | (a) FEMTO-ST, Time and frequency department, 26, chemin de l'Épitaphe 25030 Besançon, France. (b) ECOLOGICSENSE, ZI Rousset, 605 Avenue Olivier Perroy 13790 Rousset, France. (c) LRGP, 1 rue Grandville – BP 20451 54001 Nancy Cedex, France. |
| 12.10 - 12.30 | TL.PHY-9-8642 | SAW Based Sandwich Phononic Crystal Sensor | Ralf Lucklum(a,*), Mikhail Zubtsov(a), Aleksandr Oseev(a), Marc-Peter Schmidt(a) Soeren Hirsch(b) | (a) Institute of Micro and Sensor Systems (IMOS), Otto-von-Guericke University Magdeburg, 39106 Magdeburg, Germany (b) Department of Engineering, University of Applied Sciences Brandenburg, 14770 Brandenburg, Germany |
| 12.30 - 12.50 | TL.PHY-10-8620 | A time-gated contactless interrogation system for frequency and quality factor tracking in QCR to investigate on liquid solution microdroplets | Marco Ferrari (*), Marco Baù, Mehedi Masud, Vittorio Ferrari | Dept. of Information Engineering, University of Brescia, Via Branze 38, 25123 Brescia, Italy |

Physical sensors III. Mechanical, Room2: "BARTOK"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|-------------------|---|--|--|
| 14.00-14.20 | TL.PHY-11-8572 | A compact, dual channel flow-based differential pressure sensor with mPa resolution and sub-10 mW power consumption | Massimo Piotto (a), Simone Del Cesta (b), Paolo Bruschi (b,*) | (a) IEIT-PISA, CNR , 56126 Pisa, Italy (b) Dipartimento di Ingegneria dell'Informazione,-56126 Pisa, Italy |
| 14.20-14.40 | TL.PHY-12-8604 | Pulsed excitation of thermal flow sensors for reduced power consumption and expanded measurement range | Nico Hartgenbusch(*), Mykhailo Borysov, Reiner Jedermann, Walter Lang | Institute for Microsensors, -actuators and -systems (IMSAS), Otto-Hahn-Allee NW 1, Bremen, 28359, Germany IMSAS is part of Microsystems Center Bremen (MCB), Otto-Hahn-Allee NW 1, Bremen, 28359, Germany |
| 14.40-15.00 | TL.PHY-13-8434 | A compact CMOS compatible micro-Pirani vacuum sensor with wide operating range and low power consumption | Massimo Piotto (a), Simone Del Cesta (b), Paolo Bruschi (b, *) | (a) IEIT-PISA, CNR, Via G. Caruso 16, 56122 Pisa, Italy (b) Dipartimento di Ingegneria dell'Informazione, University of Pisa, Via G. Caruso 16, 56122 Pisa, Italy |
| 15.00-15.20 | TL.PHY-14-8602 | Thermal-electrical impedance spectroscopy for fluid characterisation | M. Jaegle(a,*), H.-F. Pernau (a), M. Pfützner (a), M. Benkendorf (a), Xinke Li (a), M. Bartel (a), O. Herm (a), S. Drost (a), D. Rutsch (a), A. Jacquot (b), J. Wöllenstein (a) | (a) Fraunhofer-Institute for Physical Measurement Techniques, Freiburg, Germany (b) Käppelestraße 14, 79540 Lörrach, Germany |
| 15.20-15.40 | TL.PHY-15-8170 | Wall Shear Stress and Flow Direction Thermal MEMS Sensor for Separation Detection and Flow Control Applications | Cecile Ghouila-Houri (a,b,*), Jean-Claude Gerbedoen (a), Julien Claudel (a), Quentin Gallas (b), Eric Garnier (b), Alain Merlen (a,b), Romain Viard (c), Abdelkrim Talbi (a), Philippe Pernod(a) | (a)Univ. Lille, CNRS, Centrale Lille, UMR 8520 - IEMN, LIA LICS/LEMALC, F-59000 Lille, France (b)ONERA, Chemin de la Hunière 91123 Palaiseau, France (c)Fluiditech, Thurmelec, 68840 Pulversheim, France |

Special session: Automotive sensors I. Engine, Room3: "LISZT"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|----------------------|---|---|---|
| 8.30-8.50 | TL.AUTO-1-8506 | Photoacoustic CO ₂ -sensor for automotive applications | J.Huber (a,b,*), C. Weber (a), A. Eberhardt (b), J. Wöllenstein (a,b) | (a) Fraunhofer Institute for Physical Measurement Techniques IPM, Department of Gas and Process Technology, Group of Integrated Sensor Systems, 79110 Freiburg, Germany (b) Department of Microsystems Engineering - IMTEK, University of Freiburg, Germany |
| 8.50-9.10 | TL.AUTO-2-8295 | NO ₂ -Selective Electrochemical Sensors for Diesel Exhausts | J-P. Viricelle (a,*), P. Vernoux (b), J. Gao (a), I. Romanytsia (a), P. Breuil (a), C. Pijolat (a) | (a) Ecole Nationale Supérieure des Mines, SPIN-EMSE, CNRS:UMR5307, LGF, 42023 Saint-Etienne, France (b) Université de Lyon, IRCElyon, UMR 5256, CNRS, Université Claude Bernard Lyon 1, 2 avenue A. Einstein, 69626 Villeurbanne, France |
| 9.10-9.30 | TL.AUTO-3-8600 | NH ₃ storage on a zeolite SCR catalyst measured using a microwave-based method: Reduced sensitivity for more strongly held NH ₃ | D. Kubinski (a,*), A. Bogner (b) | (a) Ford Research and Innovation Center, 2101 Village Rd., Dearborn, Michigan, 48121, USA (b) Department of Functional Materials, University of Bayreuth, Bayreuth 95440, Germany |
| 9.30 - 9.50 | TL.AUTO-4-8508 | Monitoring of the dilution of motor oil with Diesel using an advanced resonant sensor system | A.O. Niedermayer (a,b), T. Voglhuber-Brunmaier (a,c), M. Heinisch (a), F. Feichtinger (a), B. Jakoby (a) | (a) Institute for Microelectronics and Microsensors, Johannes Kepler University, Altenbergerstr. 69, Linz 4040, Austria (b) Micro Resonant Technologies, Hafenstr. 47-51, Linz 4020, Austria c Center for Integrated Sensor Systems, Danube University, Krems, Austria |
| 9.50-10.10 | TL.AUTO-5-8044 | Road Surface Classification Using Automotive Ultrasonic Sensor | Aleksandr Bystrov (a,*), Edward Hoare (a), Thuy-Yung Tran (b), Nigel Clarke (b), Marina Gashinova (a), Mikhail Cherniakov (a) | (a) University of Birmingham, Birmingham, B15 2TT, UK (b) Jaguar Land Rover Research Department, Coventry, CV3 4LF, UK |
| 10.10-10.40 | TKeynote.AUTO-6-8652 | Microsensors in Automotive Applications - Invented for Life | Franz Laermer | Robert Bosch GmbH, Corporate Sector Research and Advance Engineering, Robert-Bosch-Campus 1, DE-71272 Renningen |

Special session: Automotive sensors II. Vehicle Room3: "LISZT"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|--------------------------|--------------------------|---|---|--|
| 11.10-11.30 | TL.AUTO-7-8568 | Monitoring the Tyre Deformation on a Vehicle on the Run | J. Radó(a), G. Battistig(a), S. Kulinyi(b), R. Végvári(b), I. Bársony(a) | (a)Institute of Technical Physics and Materials Science - MFA, EK, Hungarian Academy of Sciences, Budapest, Hungary (b)WESZTA-T Industrial and Commercial Ltd., Budakalász, Hungary |
| 11.30-11.50 | TL.AUTO-8-8341 | Artificial neural network assisted compact inductive distance sensor | Zoltán Kántor(*), Zoltán Pólik | Balluff Elektronika Kft., Pápai út 55., 8200 Veszprém, Hungary |
| 11.50-12.10 | TL.AUTO-9-8205 | SiC MOSFET Soot Sensor in a co-Fired LTCC Package | Maciej Sobocinski (a,*), David Bilby (c), David Kubinski (c), Jaco Visser (c), Mike Andersson (a,b), Jari Juuti (a), Anita Lloyd Spetz (a,b), Heli Jantunen (a) | (a) Microelectronics Research Unit, Faculty of Information technology and electrical engineering, University of Oulu, Finland (b) Div. of Appl. Sensor Science, IFM, Linköping University, SE-581 83 Linköping, Sweden (c) Ford Motor Company, 2101 Village Rd. Dearborn, MI 48121, USA |
| 12.10 - 12.30 | TL.AUTO-10-8152 | Influence of Electrodes Polarization on the Response of Resistive Soot Sensor | D. Grondin (a,b), S. Geara (a), P. Breuil (a), J. P. Viricelle (a,*), P. Vernoux (b) | (a) Ecole Nationale Supérieure des Mines, SPIN-EMSE, CNRS:UMR5307, LGF, 42023 Saint-Etienne, France (b) Université de Lyon, Institut de Recherches sur la Catalyse et l'Environnement de Lyon, UMR 5256, CNRS, Université Claude Bernard Lyon 1, 2 avenue A. Einstein, 69626 Villeurbanne, France |
| 12.30 - 12.50 | TL.AUTO-11-8551 | High-Accuracy Nanoparticle Sensor for Combustion Engine Exhaust Gase | M. Kraft(a,*), J. Kaczynski(a), T. Reinisch(b), M. Unger(b), A. Bergmann(b,c) | (a) CTR Carinthian Tech Research AG, Europastraße 12, 9524 Villach, Austria (b) AVL List GmbH, Hans-List-Platz 1, 8020 Graz, Austria (c)Institute of Electronic Sensor Systems, Graz University of Technology, Inffeldgasse 10/II, 8010 Graz, Austria |

Special session: Automotive sensors I. Engine, Room3: "LISZT"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|--------------------------|--------------------------|--|--|---|
| 14.00-14.20 | TL.PCK-1-8099 | Substrate Transfer Technology for Stretchable Electronics | S. Joshi (a,b), A. Savov (a), R. Dekker (a,b,*) | (* ,a) Technical University of Delft, Delft, 2628CD, The Netherlands (b) Philips Research, Eindhoven, 5656AE, The Netherlands |
| 14.20 - 14.40 | TL.PCK-2-8278 | Metal-Organic Dual Layer Structure for Stretchable Interconnects | Wenting Dang (a,b), Vincenzo Vinciguerra (c), Leandro Lorenzelli (a) and Ravinder Dahiya (b,*) | (a) Micro-System Technology (MST) group, Fondazione Bruno Kessler, Trento, 38123, Italy (b) Bendable Electronics and Sensing Technology (BEST) group, School of Engineering, University of Glasgow, G128QQ, UK (c) ST Microelectronics, Catania, 95121, Italy |
| 14.40-15.00 | TL.PCK-3-8126 | Intravascular Ultrasound at the Tip of a Guidewire: Concept and First Assembly Steps | Ronald Stoute (a), Marcus C. Louwerse (b), Vincent A. Henneken (b), Ronald Dekker (a,b,*) | (a) Delft University of Technology, Mekelweg 2, Delft 2628 CD, The Netherlands (b) Philips Research, High Tech Campus 4, Eindhoven 5656 AE, The Netherlands |
| 15.00-15.20 | TL.PCK-4-8366 | Steel Integrated IR Thermopile Array for Characterizing Grinding Processes | M. Reimers (a,*), B. Kolkwitz (b), D. Beck (b), M. Sarma (a), C. Heinzl (b), W. Lang (a), G. Dumstorff (a) | (a) Institute for Microsensors, -actuators and -systems (IMSAS), MAPEX Center for Materials and Processes, University of Bremen, Germany (b) Foundation Institute of Materials Science (IWT) Bremen, MAPEX Center for Materials and Processes, University of Bremen, Germany |
| 15.20-15.40 | TL.PCK-5-8091 | On-Chip Feedthrough Cancellation Technique for Enhanced Electrical Characterization of a Piezoelectric MEMS Resonator in Water | Abid Ali (a,*), Joshua E.-Y. Lee (a, b) | (a) Department of Electronic Engineering, City University of Hong Kong, Kowloon, Hong Kong (b) State Key Laboratory of Millimeter Waves, City University of Hong Kong, Kowloon, Hong Kong |

Theory and modeling I. Piezo, Room4: "LEHAR"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|-------------------|--|---|---|
| 8.30-8.50 | TL.THE-1-8109 | New Optical Approach of SAW Delay Line Characterization | Lyes Djoumi (a), Nikolay Smagin (b), Meddy Vanotti (a), Dame Fall (b), Etienne Herth (a,*), Marc Duquennoy (b), Mohammadi Ouaffouh (b), Virginie Blondeau-Patissier (a), Frédéric Jenot (b) | (a) FEMTO-ST Institute Time and frequency department, 26, chemin de l'Epitaphe 25030 Besançon cedex, France (b) IEMN-DOAE (UMRCNRS 8520), Université de Valenciennes, 59313 valenciennes, France |
| 8.50-9.10 | TL.THE-2-8357 | Vibration Modes of Piezoelectric Diaphragms for Ultrasonic Microsensors and Influence of Top Electrodes | Kaoru Yamashita (*), Tomoki Nishioka, Taiki Nishiumi, Minoru Noda | Kyoto Institute of Technology, Matsugasaki, Kyoto 606-8585, Japan |
| 9.10-9.30 | TL.THE-3-8236 | Thermal-Pulse Method for Life Monitoring of Integrated Piezoelectric Transducers | Agnes Eydam (*), Gunnar Suchanek, Gerald Gerlach | Technische Universität Dresden, Solid State Electronics Laboratory, 01062 Dresden, Germany |
| 9.30 - 9.50 | TL.THE-4-8615 | Multiphysics analysis and experimental validation of an air coupled piezoelectric micromachined ultrasonic transducer with residual stresses | G. Massimino (a), L. D'Alessandro (a,*), F. Procopio (b), R. Ardito (a), M. Ferrera (b), A. Corigliano (a) | (a) Department of Civil and Environmental Engineering, Politecnico di Milano, Milano, Italy (b) STMicroelectronics, Italy |
| 9.50-10.10 | TL.THE-5-8265 | Acoustic Streaming via a Flexible PCB for Micropumping Applications | Marcus A. Hintermüller, Bernhard Jakoby, Erwin K. Reichel (*) | Institute for Microelectronics and Microsensors, Johannes Kepler University Linz, Altenbergerstr. 69, 4040 Linz, Austria |

Theory and modeling II. Design, Room4: "LEHAR"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|-------------------|-------------------|--|--|---|
| 11.10-11.30 | TL.THE-6-8397 | Design of surface plasmon resonance sensor in plastic optical fibers based on nano-antenna arrays | Nunzio Cennamo (a,*), Ramona Galatus(b), Francesco Mattiello(a), Reem Sweid(a), Luigi Zeni(a) | (a)Department of Industrial and Information Engineering, Second University of Naples, Via Roma, 29, Aversa 81031, Italy (b)Technical University of Cluj-Napoca, Faculty of Electronics and Telecommunication, Cluj-Napoca, Romania |
| 11.30-11.50 | TL.THE-7-8583 | A Study on a Lattice Resistance Mesh Model of Display Cathode Electrodes for Capacitive Touch Screen Panel Sensors | Chang-Ju Lee (a,b), Jong Kang Park (a), Seonki Kim (a) and Jung-Hoon Chun (a,*) | (a) College of Information and Communication Eng. Sungkyunkwan University, Suwon 16419, Korea (b) Display Solution Development Team, System LSI Division, Samsung Electronics,Hwaseong 18448, Korea |
| 11.50-12.10 | TL.THE-8-8183 | Reliable and Inexpensive Solar Irradiance Measurement System Design | C. Orsetti, M. Muffillo, F. R. Parente, L. Pantoli (*), V. Stornelli, G. Ferri | Department of Industrial and Information Engineering and Economics, University of L'Aquila, 67100, L'Aquila, Italy |
| 12.10 - 12.30 | TL.THE-9-8058 | Characterization of Temperature Gradients on MEMS Acceleration Sensors | Cristian Nagel (a), Frederik Ante (a), Martin Putnik (b), Johannes Classen (b), Jan Mehner (c) | (a) Robert Bosch GmbH, Zentralbereich Forschung und Voraentwicklung, Renningen, Germany (b) Robert Bosch GmbH, Automotive Electronics, Reutlingen, Germany (c) Technische Universität Chemnitz, Chemnitz, Germany |
| 12.30 - 12.50 | TL.THE-10-8292 | Pressure Distribution Measurement in Knee Arthroplasty | Jaromír Volf (*), Viktor Novák | Czech University of Life Sciences Prague, Faculty of Engineering, Department of Electrical Engineering and Automation. Kamýcká 129, 16521 Prague 6, Czech Republic |

Theory and modeling III. Oscillation, Room4: "LEHAR"

| Presentation time | Presentation code | Paper Title | Authors list | Affiliations |
|--------------------------|--------------------------|---|---|--|
| 14.00-14.20 | TL.THE-11-8564 | Mode veering and internal resonance in mechanically coupled nanocantilevers under electrostatic actuation | N. Kacem (*), V. Walter, G. Bourbon, P. Le Moal, J. Lardiès | FEMTO-ST Institute, UMR 6174, Department of Applied Mechanics, Univ. Bourgogne Franche-Comté, 24 rue de l'Épitaphe, Besançon, 25000 France |
| 14.20 - 14.40 | TL.THE-12-8614 | Investigation on different damping mechanisms on the Q factor of MEMS resonators | M.Jandak (a,b,*), T.Neužil (b), M.Schneider (a), U.Schmid (a) | (a) Institute of Sensor and Actuator Systems, TU Wien, Gußhausstraße 27-29, 1040 Vienna, Austria (b) Honeywell International s.r.o., Turanka 96/1236, 627 00, Brno, Czech Republic |
| 14.40-15.00 | TL.THE-13-8391 | Torsional microresonator in the nonlinear regime: experimental, numerical and analytical characterization | Claudia Comi(a), Alberto Corigliano(a), Milena Doti(a), Alessandro Garatti(a), Giacomo Langfelder(b), Valentina Zega(a,*) | (a)Department of Civil and Environmental Engineering, Politecnico di Milano, piazza Leonardo da Vinci 32, Milano, 20133 Italy (b)Department of Electronics, Information and Bioengineering, Politecnico di Milano, piazza Leonardo da Vinci 32, Milano, 20133 Italy |
| 15.00-15.20 | TL.THE-14-8075 | An Accurate Analytical Squeeze-Film Model for Lateral MEMS/MOEMS Oscillators | A. Kainz (a,*), W. Hortschitz (b), H. Steiner (b), F. Keplinger (a) | (a) Institute of Sensor and Actuator Systems, TU Wien, Vienna, Austria (b) Center for Integrated Sensor Systems, Danube University Krems, Wiener Neustadt, Austria |
| 15.20-15.40 | TL.THE-15-8065 | Resonant Pull-in of High-Q MEMS Oscillators with Arbitrary Closed-Loop Phase Shift | A. Brenes (a,b,c), J. Juillard (b,*), F. Vinci Dos Santos (c) | (a) THALES Avionics SAS, 25 rue Jules Védérines, 26000 Valence, France (b) GeePs Group of electrical engineering – Paris, UMR CNRS 8507, CentraleSupélec, Univ. Paris-Sud, Sorbonne Universités, UPMC Univ. Paris 06, 3,11 rue Joliot-Curie, Plateau de Moulon F-91192 Gif-sur-Yvette CEDEX (c) CentraleSupélec Advanced Analog Design Group, 3 rue Joliot-Curie, 91192 Gif-sur-Yvette, France |
| 15.40-16.00 | TL.THE-16-8234 | Suppression Efficiency of the Correlated Noise and Drift of Self-Oscillating Pseudo-Differential Eddy Current Displacement Sensor | Vikram Chaturvedi, Johan Vogel, Stoyan Nihitjanov | Electronic Instrumentation Laboratory, Delft University of Technology, Delft, The Netherlands |