

2013 Seventh International Conference on Sensing Technology

(ICST 2013)

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Program

S0: Opening Ceremony

S1: Keynote 1

10:00 to 10:45 Brian Cuningham
10:45 to 11:30 Goutam Chattopdhyay

Interval

Allow delegates to move between sessions

S2A: Gas and Chemical Sensors 1

Selectivity of organic nanocomposite sensor for detection of aldehydes

Ashwini Mallya (Indian Institute of Science, India); Praveen Ramamurthy (Indian Institute of Science, India)
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Integration of ZnO Nanoflakes with MEMS Platform and its Application as Gas Sensor

Partha Bhattacharyya (Bengal Engineering and Science University, Shibpur, India)
pp. 7-10

Tuning the Bias Sensing Layer: A New Way to Greatly Improve Metal-Oxide Gas Sensors Selectivity

Nicolas Dufour (LAAS-CNRS, France); Audrey Chapelle (LAAS-CNRS, France); Chabane Talhi (LAAS-CNRS, France); Frederic Blanc (LAAS-CNRS, France); Bernard Franc (LAAS-CNRS, France); Philippe Menini (LAAS-CNRS, France); Khalifa Aguir (IMN2P, France)
pp. 11-15

Soft-sensing of Liquid Desiccant Concentration Based on ELM

Zhongtian Chen (Zhejiang University of Technology, P.R. China); Wenjian Cai (Nanyang Technological University, Singapore); Xiong Xiong He (Zhejiang University of Technology, P.R. China); Xinli Wang (Zhejiang University, P.R. China); Lei Zhao (Nanyang Technological University, P.R. China)
pp. 16-21

Ovarian Hormone Estrone Glucuronide (E1G) Quantification- Impedimetric Electrochemical Spectroscopy Approach

Asif Iqbal Zia (Massey University & COMSATS Institute of Information Technology, New Zealand); Anton Yudhana (Ahmad Dahlan University, Indonesia); Subhas Mukhopadhyay (Massey University, New Zealand); Pak Yu (Massey University, New Zealand); Ibrahim Al-Bahadly (Massey University, New Zealand); Chinthaka Gooneratne (King Abdullah University of Science and Technology, Saudi Arabia); Jürgen Kosel (King Abdullah University of Science and Technology, Saudi Arabia)
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S2B: Novel Applications 1

A digital delivery system of scent for video game application

Ibrahim Al-Bahadly (Massey University, New Zealand)
pp. 28-33

Identification of Single Bacteria using Micro Raman Spectroscopy

Martin De Biasio (Carinthian Tech Research AG, Austria); Raimund Leitner (CTR AG, Austria); Gerald McGunnigle (Carinthian Tech Research AG, Austria); Dirk Balthasar (TOMRA Sorting Solutions GmbH, Austria); Jürgen Popp (Friedrich-Schiller-Universität Jena, Germany); Petra Rösch (Friedrich-Schiller-University, Germany)
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A Novel and Cost Effective Resistive Rain Sensor for Automatic Wiper Control: Circuit Modelling and Implementation

Mukul Joshi (College of Engineering Pune, India); Kaustubh Jogalekar (College of Engineering, Pune, India); Dayanand Sonawane (College of Engineering, Pune, India); Vinayak Sagare (Automotive Research Institute of India, India); Madhuri Arunkumar Joshi (College of Engineering, Pune, India)
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Automated Monitoring of Foraging Behaviour in Free Ranging Sheep Grazing a Biodiverse Pasture

Alex Mason (Liverpool John Moores University, United Kingdom); Jenny Sneddon (Liverpool John Moores University, United Kingdom)
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Development of Anal Position Detecting System for New-Toilet system

Koshi Tokoro (Tokyo University of Science, Japan); Hiroshi Kobayashi (Tokyo University of Science, Japan)
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S2C: Biosensors 1

Developing Non-Parametric Density Estimation on Genetic Evolution Computing as a Cloud Based Sensor Fusion Method

Tsu-Wang Shen (Tzu Chi University, Taiwan)
pp. 56-61

Performance Optimization of Temperature Compensated Surface Acoustic Wave Biosensors

Shuangming Li (Nanjing University of Science & Technology, P.R. China); Yan Su (Nanjing University of Science & Technology, P.R. China); Ying Wan (Nanjing University of Science & Technology, P.R. China); Zheng Tang (Nanjing University of Science & Technology, P.R. China)
pp. 62-66

Biochemical Sensing Assays based on Coalescence-induced Self-propulsion Digital Microfluidics

Volker Nock (University of Canterbury & MacDiarmid Institute for Advanced Materials and Nanotechnology, New Zealand); Mathieu Sellier (University of Canterbury, New Zealand); Yannick Muller (University of Canterbury, New Zealand); Claude Verdier (CNRS and University Joseph Fourier, France)
pp. 67-70

Electrochemical Biosensing of Organophosphates using Vertically Aligned Multiwall Carbon Nanotubes

Saroja Mantha (Research Associate, USA); Bryan Chin (Auburn University, USA); Aleksandr Simonian (Auburn University, USA)
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An A.N.N. Model of the Perception of Sound by the Human Auditory System

Daniel Riordan (Institute of Technology, Tralee, Ireland); Pat Doody (ITTralee, Ireland); Joseph Walsh (Institute of Technology, Tralee, Ireland)
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S2D: Wireless Sensors Networks 1

Intellectus: Multi-Hop Fault Detection Methodology Evaluation

Tiziana Campana (University College of Dublin, Ireland); Gregory O'Hare (University College Dublin, Ireland)
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Light-Weight History-Based Medium Access Control (MAC) Protocol for Body Area Networks

Nesa Mouzehkesh (Charles Sturt University, Australia); Tanveer A Zia (Charles Sturt University, Australia); Saman Shafigh (Charles Sturt University, Australia); Lihong Zheng (Charles Sturt University, Australia)

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Wireless Sensor Network Attacks: An Overview and Critical Analysis

Arash Tayebi (University of Auckland, New Zealand); Stevan Mirko Berber (University of Auckland, New Zealand); Akshya Kumar Swain (University of Auckland, New Zealand)

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AWSAM-3: A low power miniaturised wireless sensor mote

Ameer Ivoghlian (The University of Auckland, New Zealand); Kevin I-Kai Wang (The University of Auckland, New Zealand); Zoran Salcic (The University of Auckland, New Zealand)

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Secured Multimedia Authentication System for Wireless Sensor Network Data related to Internet of Things

Jyotsna Suryadevara (Malla Reddy Institute of Engineering & Technology- & JNTU-Hyderabad, India); Bollam Sunil (Malla Reddy Institute of Engineering & Technology-, India); Nagender Kumar Suryadevara (Massey University, New Zealand)

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S3: Invited Session 1

14:00 - 14:30 James Brussey; 14:30 - 15:00 Goutam Chakraborty; 15:00 - 15:30 Basabi Chakraborty; 15:30 - 16:00 Ian Platt

14:00 - 14:30 Advanced sensing technologies for superconducting devices test at CERN
Pasquale Arpaia, European Organization for Nuclear Research (CERN) and University of Sannio, Italy.
14:30 - 15:00 Proposal of a sub-cent RFID using metal-patch - Problems and ways to overcome them
Goutam Chakraborty, Iwate Prefectural University, Japan
15:00 - 15:30 Feature selection for pattern analysis and mining of sensors' data
Basabi Chakraborty Iwate Prefectural University, Japan
15:30 - 16:00 Imaging Dielectric Structure Using Transmission Line Waveguides 47
Ian Platt, Lincoln Ventures Ltd, New Zealand

S4A: Gas and Chemical Sensors 2

Combination of tailored acid-base and red/ox properties of nanocrystalline SnO₂ for optimal gas sensor performance

Valeriy Krivetskiy (M. V. Lomonosov Moscow State University, Russia); Roman Rozhik (M. V. Lomonosov Moscow State University, Russia); Marina Rumyantseva (M. V. Lomonosov Moscow State University, Russia); Alexander Gaskov (M. V. Lomonosov Moscow State University, Russia)

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Ethanol Sensor Based on ZnO Nanoporous Prepared via Microwave Oven

Noor Ridha (Universiti Kebangsaan Malaysia (UKM), Malaysia)

pp. 121-126

Highly Sensitive and Stable MOSFET-Type Hydrogen Sensor with Dual FETs

Jung-Sik Kim (University of Seoul, Korea); Bum-Joon Kim (University of Seoul, Korea)

pp. 127-130

Semiconductor gas sensing coupled with pre-sampling system for toxic compounds and chemical threat agents detection

Valeriy Krivetskiy (M. V. Lomonosov Moscow State University, Russia); Alexander Gaskov (M. V. Lomonosov Moscow State University, Russia); Andrey Smirnov (M. V. Lomonosov Moscow State University, Russia); Maksim Panteleev (M. V. Lomonosov Moscow State University, Russia); Leonid Logvin (M. V. Lomonosov Moscow State University, Russia)

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Fast and Low-Cost Online Detection of Critical Micelle Concentration based on Impedance Spectroscopy

Roman Gruden (Seuffer GmbH & Co. KG & TU Chemnitz, Germany); Olfa Kanoun (Chemnitz University of Technology, Germany)
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S4B: Image, Vision and Range Sensors 1

Fully Integrated Vision Based Localization in Low Cost Robot Using Kinect

Alexandre This (ECE Paris School of Engineering, France); Badis Bouchilaoun (ECE Paris School of Engineering, France); Ronan Guyomard (ECE Paris School of Engineering, France); Charles Lahaye (ECE, France); Thomas Lange (ECE Paris School of Engineering, France)
pp. 141-144

Hyper-spectral video endoscopy system for intra-surgery tissue classification

Thomas Arnold (Carinthian Tech Research AG & University of Klagenfurt, Austria); Martin De Biasio (Carinthian Tech Research AG, Austria); Raimund Leitner (CTR AG, Austria)
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Ultrasonic Range Measurements on the Human Body

Dirk Weenk (University of Twente, The Netherlands); Bert-Jan van Beijnum (University of Twente, The Netherlands); Ed Droog (University of Twente, The Netherlands); Hermie Hermens (University of Twente, The Netherlands); Peter Veltink (University of Twente, The Netherlands)
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A 3D vision system for high resolution surface reconstruction

Roberto Marani (National Research Council (CNR), Italy); Giuseppe Roselli (National Research Council (CNR), Italy); Massimiliano Nitti (Consiglio delle Ricerche - ISSIA, Italy); Grazia Cicirelli (National Research Council, Italy); Tiziana D'Orazio (National Research Council, Italy); Ettore Stella (Consiglio delle Ricerche - ISSIA, Italy)
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Analysis of Indoor Environments by Range Images

Roberto Marani (National Research Council (CNR), Italy); Giuseppe Roselli (National Research Council (CNR), Italy); Massimiliano Nitti (Consiglio delle Ricerche - ISSIA, Italy); Grazia Cicirelli (National Research Council, Italy); Tiziana D'Orazio (National Research Council, Italy); Ettore Stella (Consiglio delle Ricerche - ISSIA, Italy)
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S4C: Biosensors 2

Label-free Capacitance DNA Sensing

Yi Jia (University of Puerto Rico, Mayaguez, USA); Phillip Rivera Ortiz (University of Puerto Rico – Mayaguez, Puerto Rico); Carlos Cabrera (University of Puerto Rico – Rio Piedras, Puerto Rico); Nella Vargas (University of Puerto Rico – Rio Piedras, Puerto Rico)
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Wireless Magnetoelastic Biosensors for the Detection of Salmonella on Fresh Produce

Bryan Chin (Auburn University, USA)
pp. 174-177

A microflow cytometer chip driven by the absorbent force of on-chip superabsorbent materials

Yan-Chang Lee (National Chung Cheng University, Taiwan); Wen-Hsin Hsieh (National Chung Cheng University, Taiwan)
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Magnetotactic Bacteria as Dispatched Oxygen Sensors

Sylvain Martel (Polytechnique Montreal, Canada); Mahmood Mohammadi (Polytechnique Montreal, Canada); Dominic de Lanauze (Polytechnique Montreal, Canada); Ouajdi Felfoul (Polytechnique Montreal, Canada)
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Human Sensing Using Wearable Wireless Sensors for Smart Environments

Chika Sugimoto (Yokohama National University, Japan)
pp. 188-192

S4D: Wireless Sensors Networks 2

A Energy Efficient WSN System for Limited Power Source Environments

Rodrigo Semente (Universidade Federal do Rio Grande do Norte, Brazil); Felipe Oliveira (Universidade Estadual do Rio Grande do Norte, Brazil); Alberto Lock (Universidade Federal da Paraíba, Brazil); Alexandre Silva (Universidade Federal do Rio Grande do Norte, Brazil); Andres Salazar (Federal University of Rio Grande do Norte, Brazil)
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An Ultra Low Energy 8-bit Charge Redistribution ADC for Wireless Sensors

Antonio J López-Martín (Public University of Navarra, Spain); Iñigo Cenoz Villanueva (UPNA, Spain)
pp. 198-202

An Adaptive Approach to Information Discovery in Multi-Dimensional Wireless Sensor Networks

Menik Tissera (Deakin University, Australia); Robin Doss (Deakin University, Australia); Gang Li (Deakin University, Australia); Lynn M Batten (Deakin University, Australia)
pp. 203-208

Comparative Study of Routing Protocols for Opportunistic Networks

Majeed Alajeely (Deakin University, Australia); Asma'a Ahmad (Deakin University, Australia); Robin Doss (Deakin University, Australia)
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Effect of Distributed Backoff mechanism to Simple Autonomous Active Period Selection Control in Cluster-tree type IEEE 802.15.4 WSNs with Cluster Mobility

Kazuo Mori (Mie University, Japan); Katsuhiko Naito (Mie University, Japan); Hideo Kobayashi (Mie University, Japan)
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S5: Keynote 2

S6A: Temperature, Humidity and Flow Sensors

Fluid Flow Rate Estimation using Acceleration Sensors

Laura Fabbiano (Polytechnic of Bari, Italy); Gaetano Vacca (Politecnico di Bari, Italy); Giuseppe Dinardo (Politecnico di Bari, Italy)
pp. 221-225

Mach-Zehnder interferometer as a temperature sensor based on the nested fiber ring resonator

Yun Dong Zhang (Harbin Institute of Technology, P.R. China); Changqiu Yu (Harbin Institute of Technology, P.R. China); Kaiyang Wang (Harbin Institute of Technology, P.R. China); Chi Xu (Harbin Institute of Technology, P.R. China); Haiping Wang (Ice Training Base in HeiLongJiang Province, P.R. China); Yuhua Zhang (Harbin Normal University, P.R. China)
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Development of polymer coated fibre Bragg gratings for relative humidity sensing

Adam Swanson (Massey University, New Zealand)
pp. 230-234

In-vitro measurement of pulp chamber temperature increase with light cured composite resins using fiber Bragg grating thermal sensor

Sharath Umesh (Indian Institute of Science, India); Aadarsh Koratagere (M S Ramaiah Dental College and Hospital, India); Adarsh Bhat (KLE Society's Institute of Dental Sciences and Hospital, India); Jayanth Ravi (M S Ramaiah Dental College and Hospital, India); Sundarajan Asokan (IISc, India)
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Noncontact Temperature Profiling of Rotating Cylinder by Laser-Ultrasonic Sensing

Ikuo Ihara (Nagaoka University of Technology, Japan); Akira Kosugi (Nagaoka University of Technology, Japan); Iwao Matsuya (Nagaoka University of Technology, Japan); Yasuhiro Ono (Nagaoka University of Technology, Japan)
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S6B: Signal Analysis

Circularly Moving Sensor for Use of Modulation Effect

Masako Kishida (University of Canterbury, New Zealand); Yusuke Hioka (University of Canterbury, New Zealand)
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Scale Factor in MEMS Gyroscopes - The Effect of Power Supply Voltage

Martin Vágner (Brno University of Technology, Czech Republic); Petr Beneš (Brno University of Technology & FEEC, Czech Republic)
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Noise Analysis of a Capacitor-to-Voltage Converter With a Zoom-in Technique

Stoyan Nihtianov (Technical University - Delft, The Netherlands); Ali Heidary (Guilan University, Iran); Reza Taherkhani (Iran University of Science and Technology, Iran)
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Wave Intensity Estimation Over Broad Wavelengths Based On Diffused Sensing

Kenta Niwa (NTT Media Intelligence Laboratories, Japan); Yusuke Hioka (University of Canterbury, New Zealand); Kazunori Kobayashi (NTT Media Intelligence Laboratories, Japan)
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A Novel Signal Reconstruction Strategy of Multifunctional Self-validating Sensor

Qi Wang (Harbin Institute of Technology, P.R. China); Shen Zhengguang (Harbin Institute of Technology, P.R. China); Kai Song (Harbin Institute of Technology, P.R. China); Fengyu Zhu (Harbin Institute of Technology, P.R. China)
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S6C: Biosensors 3

Brain activity measurement in the occipital region of the head using a magneto-impedance sensor

Shingo Tajima (Nagoya University, Japan)
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Using Wearable Near-field Radar Sensor for Non-contact Heartbeat Signal Detection

Hong-Dun Lin (Industrial Technology Research Institute, Taiwan)
pp. 271-274

Higher throughput of optical detection of bacteria concentrated by negative dielectrophoresis

Ryoji Obara (Kyushu University, Japan); Ding Zhenhao (Kyushu University, Japan); Kenta Shinzato (Kyushu University, Japan); Michihiko Nakano (Kyushu University, Japan); Junya Suehiro (Kyushu University, Japan)
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Wirelessly Powered Microfluidic Sensor and Actuator Systems

Dulsha Kularatna-Abeywardana (The University of Auckland, New Zealand); Patrick Hu (University of Auckland, New Zealand); Zoran Salcic (The University of Auckland, New Zealand)
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Apnea Sensing Using Photoplethysmography

Gaurav Gaurav (IIT Madras, India); Mohanasankar Sivaprakasam (IIT Madras, India); Jagadeesh Kumar V (Indian Institute of Technology Madras, India)
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S6D: Mechanical Sensors 1

Force Based Pain Sensing in Animals Using Stepping Motor

Ibrahim Al-Bahadly (Massey University, New Zealand)
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Design and Analysis of a Triple-Axis Thermal Accelerometer

Thien Dinh (Ritsumeikan University, Japan); Yoshifumi Ogami (Ritsumeikan University, Japan)
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Reducing the Probe Ball Diameters of 3D Silicon-Based Microprobes for Dimensional Metrology

Nelson Ferreira (Technische Universität Braunschweig & Institut für Mikrotechnik, Germany); Alexander Brennecke (Technische Universität Braunschweig, Germany); Thomas Krah (Physikalisch-Technische Bundesanstalt, Germany); David Metz (Technische Universität Braunschweig, Germany); Karin Kniel (Physikalisch-Technische Bundesanstalt, Germany); Frank Härtig (Physikalisch-Technische Bundesanstalt, Germany); Andreas Dietzel (Technische Universität Braunschweig, Germany); Stephanus Büttgenbach (Technische Universität Braunschweig, Germany)
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An experimental study of the fluids mechanism and effects of liquid for capacitive pressure sensor

Mohd Norzaidi Mat Nawi (Universiti Sains Malaysia & Underwater Robotic Research Group, Malaysia); Asrulnizam Abd Manaf (Universiti Sains Malaysia, Malaysia); Mohd Rizal Arshad (Universiti Sains Malaysia, Malaysia); Mohamad Faizal Abd Rahman (Universiti Sains Malaysia & Universiti Teknologi Mara Malaysia, Malaysia)
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Magnetic tactile sensing method with Hall element for artificial finger

Jun-ichiro Yuji (Kumamoto National College of Technology, Japan)
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S7: Combined Lunch and Short Oral 1

An add-drop ring resonator interferometer sensor with high sensitivity

Yun Dong Zhang (Harbin Institute of Technology, P.R. China); Xiaoqi Liu (Harbin Institute of Technology, P.R. China); Kaiyang Wang (Harbin Institute of Technology, P.R. China); Xuenan Zhang (Harbin Institute of Technology, P.R. China)
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RF Capacitive Piezoelectric Displacement Extraction

Mahmoud Alahmad (UAEU, UAE)
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Glucose Detection Using an Electro-Optical Fluidic Device Based on Pulse Width Modulation

Jing-Yau Tang (National Cheng Kung University, Taiwan); Ming-Kun Chen (National Cheng Kung University, Taiwan); Min Haw Wang (Chinese Culture University, Taiwan); Ling-Sheng Jang (National Cheng Kung University, Taiwan)
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Recent evolution of smart force transducers -

Dan Mihai Stefanescu (Romanian Measurement Society, Romania)
pp. 330-333

Detection of Snail Tracks on Photovoltaic Modules using a Combination of Raman and Fluorescence Spectroscopy

Martin De Biasio (Carinthian Tech Research AG, Austria); Raimund Leitner (CTR AG, Austria); Christina Hirschl (Carinthian Tech Research AG, Austria)
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MobiDriveScore - A System for Mobile Sensor Based Driving Analysis

Chirabrata Bhaumik (Tata Consultancy Services & TCS Innovation Labs, India); Tapas Chakravarty (Tata Consultancy Services, India); Avik Ghose (Tata Consultancy Services, India); Arijit Chowdhury (Tata Consultancy Services, India)
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Compressed Sensing for Wireless Pulse Wave Signal Acquisition

Kan Luo (Southeast University, P.R. China); Jianfeng Wu (Southeast University, P.R. China); Jianqing Li (Southeast University, P.R. China); Hua Yang (Southeast University, P.R. China); Zhipeng Cai (Southeast University, P.R. China)
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Measurement of Wireless Power Transfer

Andi Sudjana Putra (National University of Singapore, Singapore); Sriharsha Bhat (National University of Singapore & National University of Singapore, Singapore); Vinithra Raveendran (National University of Singapore, Singapore)
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Develop a reading tracking function on e-book reading system by using sensing and cloudized storage technologies

Chia-Hung Lai (National Cheng Kung University, Taiwan); Lu-Chun Pan (National Cheng Kung University, Taiwan); Chia-Cheng Hsu (National Cheng Kung University, Taiwan); Yen-Ning Su (National Cheng Kung University, Taiwan); Yu-Lin Cheng (Institute for Information Industry, Taiwan); Chia-Ju Liu (National Kaohsiung Normal University, Taiwan); Yueh-Min Huang (National Cheng Kung University, Taiwan)
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Contactless Potentiometers for Automotive Applications

Antonio J López-Martín (Public University of Navarra, Spain); Alfonso Carlosena (Public University of Navarra, Spain)
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Coupled add-drop ring resonator for highly sensitive sensing

Yun Dong Zhang (Harbin Institute of Technology, P.R. China); Xiaoqi Liu (Harbin Institute of Technology, P.R. China); Xuenan Zhang (Harbin Institute of Technology, P.R. China); Ping Yuan (Harbin Institute of Technology, P.R. China)
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Temperature resilient measurement of refractive index for liquids

Vijaya Kumar Narayanan (Government Engineering College, Thiruvananthapuram, India)
pp. 369-373

Detection of norovirus and rotavirus by dielectrophoretic impedance measurement

Michihiko Nakano (Kyushu University, Japan); Ryoji Obara (Kyushu University, Japan); Ding Zhenhao (Kyushu University, Japan); Junya Suehiro (Kyushu University, Japan)
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Direct Integration of Field Effect Transistors as Electro Mechanical Transducer for Stress

Sven Haas (Chemnitz University of Technology & Center for Microtechnologies, Germany); Michael Schramm (TU Chemnitz, Germany); Danny Reuter (Chemnitz University of Technology, Germany); Kay-Uwe Loebel (TU Chemnitz, Germany); Andreas Bertz (University of Chemnitz, Germany); John T Horstmann (Chemnitz University of Technology, Germany); Thomas Gessner (Chemnitz University of Technology, Germany)
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Sensing and actuating applications of potassium sodium niobate

Asha Dahiya (University of Delhi & NSIT, India); Om Thakur (NSIT, Delhi University & Faculty of Technology, India)
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Graphene pattern by gravure printing for wireless strain sensor

Lei Huang (Shanghai Normal University, P.R. China)
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CHLAC based Vision Sensing Method for Bicycle Rider Detection to Avoid Confusing Similar Shape Pedestrian

Yuki Ishii (Tokyo University of Science, Japan); Hiroshi Hisahara (Tokyo University of Science, Japan); Masahito Ota (Tokyo University of Science, Japan); Takeki Ogitsu (Tokyo University of Science, Japan); Hiroshi Takemura (Noda Tus, Japan); Hiroshi Mizoguchi (Tokyo University of Science, Japan)
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Low Temperature Low ppm Acetone Detection by Pd/TiO₂/p-Si Metal-Insulator-Semiconductor Devices

Arnab Hazra (Bengal Engineering and Science University, India); Basanta Bhowmik (Bengal Engineering and Science University, India); Koushik Dutta (Bengal Engineering and Science University, India); Partha Bhattacharyya (Bengal Engineering and Science University, Shibpur, India)
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Feedback Control of Outer Rotor Spherical Actuator Using Adaptive Neuro-Fuzzy Inference System

Junghyun Chu (Osaka University, Japan); Noboru Niguchi (Osaka University, Japan); Katsuhiro Hirata (Graduate School of Engineering, Osaka University, Japan)
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Common-path Heterodyne Interferometric and Magnetic Sensitivity-enhanced Surface Plasmon Resonance Carbon Monoxide gas sensor

Kai-Pian Huang (Department of Mechatronics Engineering National Changhua University of Education, Taiwan); Shen Chih-Hsiung (National Changhua University of Education, Taiwan); Jing-Heng Chen (Feng Chia University, Taiwan)
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A Review of Sensor Technology for In-field Phosphate monitoring

Sheetal Mapare (Massey University, New Zealand); Pak Yu (Massey University, New Zealand); Abhimanyu Sarkar (AgResearch, Grasslands Research Centre, New Zealand); Subhas Mukhopadhyay (Massey University, New Zealand)
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Highly Sensitive Magnetic-Catalytic Gas Sensor

Shen Chih-Hsiung (National Changhua University of Education, Taiwan); Shu-Jung Chen (National Changhua University of Education, Taiwan)
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Design and Analysis of a GMR Eddy Current probe for NDT

Rodrigo W Porto (UFRGS, Brazil); Valner Brusamarello (UFRGS, Brazil); Ricardo de Azambuja (Plymouth University, United Kingdom); Osmar Frison Jr. (UCS, Brazil)
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Error in mathematical modelling and enhancement of sensing performance of electrostrictive capacitive sensors

Om Thakur (NSIT, Delhi University & Faculty of Technology, India); Nidhi Agrawal (Netaji Subhas Institute of Technology, University of Delhi, India)
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Practicable Camera Modeling Technique Applying Fuzzy Modeling for 3D Sensing Based on Stereo Vision

Toshihiko Watanabe (Osaka Electro-Communication University, Japan); Yuichi Saito (DACS, Japan)
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Sensors for Evaluation of Thermodynamical Model of pMA

Lukas Kopečný (Brno University of Technology, Czech Republic); Ludek Zalud (Brno University of Technology, Czech Republic)
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S8: Invited Session 2

14:00 - 14:45 Jagadeesh Kumar; 14:45 - 15:15 Technic (Industry Sponsor); 15:15 - 15:45 TBC (Industry Sponsor)

S9A: Gas and Chemical Sensors 3

SERS from ZnO Nanorod Arrays and its Application for detecting N719

Wensheng Shi (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, P.R. China)
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Gas-Phase Biosensor with High Sensitive & Selective for Formaldehyde Vapor

Kohji Mitsubayashi (Tokyo Medical and Dental University, Japan)
pp. 447-450

In2O3:Ga-based Ceramics: Advantages and Shortcoming for Application in One-electrode Gas Sensors

Beongki Cho (Gwangju Institute of Science and Technology, Korea); Songhee Han (Mokpo National Maritime University, Korea)
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ISFET with Built-in Gold Electrode and Readout Circuit with Frequency-Adjustable Pulse Output

Ruey-Lue Wang (National Kaohsiung Normal University, Taiwan); Hsin-Hao Liao (National Chip Implementation Center, Taiwan); Hann-Huei Tsai (National Chip Implementation Center, Taiwan); Ying-Zong Juang (Chip Implementation Center, National Applied Research Laboratories, Taiwan); Chien-Cheng Fu (National Kaohsiung Normal University, Taiwan); Chi Yu (National Kaohsiung Normal University, Taiwan)
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Electronic nose for the early detection of different types of indigenous mold contamination in green coffee

Veronica Sberveglieri (University of Modena and Reggio Emilia, Italy); Elisabetta Comini (University of Brescia, Italy); Dario Zappa (University of Brescia, Italy); Estefania Nunez Carmona (University of Modena and Reggio Emilia, Italy); Andrea Pulvirenti (University of Modena and Reggio Emilia, Italy)
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S9B: Novel Applications 2

Novel Application of Ultrasonic Sensors and Kinect Sensors to Identify People and Measure Their Location -Realization of "Human SUGOROKU", A Large Scale Board Game in which People Play as Pieces-

Tomohiro Nakayama (Tokyo University of Science, Japan); Takayuki Adachi (Tokyo University of Science, Japan); Takeki Ogitsu (Tokyo University of Science, Japan); Hiroshi Takemura (Noda Tus, Japan); Hiroshi Mizoguchi (Tokyo University of Science, Japan); Fusako Kusunoki (Tama Art University, Japan); Masanori Sugimoto (Hokkaido University, Japan); Etsuji Yamaguchi (Kobe University, Japan); Shigenori Inagaki (Kobe University, Japan); Yoshiaki Takeda (Kobe University, Japan)
pp. 466-471

Microfluidic-based Capacitive Sensor for Underwater Acoustic Application

Mohamad Faizal Abd Rahman (Universiti Sains Malaysia & Universiti Teknologi Mara Malaysia, Malaysia); Asrulnizam Abd Manaf (Universiti Sains Malaysia, Malaysia); Mohd Rizal Arshad (Universiti Sains Malaysia, Malaysia); Mohd Norzaidi Mat Nawi (Universiti Sains Malaysia & Underwater Robotic Research Group, Malaysia)
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Low Cost Contour Check of Loading Units using PMD Sensors

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Jiebing Yan (Xi'an Jiaotong University, P.R. China); Xiaoxin Wang (Xi'an Jiaotong University, P.R. China); Hongli Hu (Xi'an Jiaotong University, P.R. China); Hongmei Wang (Xi'an Jiaotong University, P.R. China)
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Andreas Eckardt (DLR German Aerospace Center & Institute of Optical Sensor Systems, Germany); Ralf Reulke (Humboldt-Universität zu Berlin, Germany)
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Yang-Wen Chen (National Chi Nan University, Taiwan); Arak Sae Yuan (National Chi Nan University, Taiwan); Kuan-Ta Lu (National Chi Nan University, Taiwan); Quincy Wu (National Chi Nan University, Taiwan)
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Zhendong Wang (China University of Geosciences, P.R. China); Ming Deng (China University of Geosciences, P.R. China); Kai Chen (China University of Geosciences, P.R. China); Meng Wang (China University of Geosciences, P.R. China)
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Chi He (Changchun University of Science and Technology, P.R. China); Guangling Dong (China Baicheng Ordnance Test Center, P.R. China); Qiang Li (China Baicheng Ordnance Test Center, P.R. China); Hongqiang Wei (China Baicheng Ordnance Test Center, P.R. China); Jihua Zhang (China Baicheng Ordnance Test Center, P.R. China); Jian Lu (China Baicheng Ordnance Test Center, P.R. China)
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Christopher Scott (Researcher, New Zealand); Liqiong Tang (Massey University, New Zealand); Gourab Sen Gupta (Massey University, New Zealand)
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Haoru Su (University of Science and Technology Beijing, P.R. China); Zhiliang Wang (University of Science and Technology Beijing, P.R. China)
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Stanislav Klusáček (Brno University of Technology & CEITEC - Central European Institute of Technology, Czech Republic); Jiří Fialka (Brno University of Technology, Czech Republic); Petr

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Sheng-Jui Chen (Industrial Technology Research Institute, Taiwan); Jian-Lin Huang (Industrial Technology Research Institute, Taiwan)
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Baya Hadid (University of Poitiers & Ecole Nationale Supérieure d'Ingénieurs de Poitiers, France); Régis Ouvrard (University of Poitiers, France); Laurent Le Brusquet (Supelec, France); Thierry Pointot (University of Poitiers, France); Erik Etien (University of Poitiers, France); Frédéric Sicard (EDF R&D, France)
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Guilherme Marcio Soares (Federal University of Juiz de Fora, Brazil); Henrique Braga (Federal University of Juiz de Fora, Brazil); Alcindo G. B. Almeida (Federal University of Juiz de Fora, Brazil); Estêvão Coelho Teixeira (Federal University of Juiz de Fora, Brazil); Raphael Mendes (Federal University of Juiz de Fora, Brazil); Missael Machado (Federal University of Espírito Santo, Brazil); Raphael Broetto (Federal University of Espírito Santo, Brazil); Murillo Castro (Federal University of Espírito Santo, Brazil); Helder Gomes Filho (Federal University of Espírito Santo, Brazil); Flávio Miguel Varejão (Federal University of Espírito Santo, Brazil); José Pereira Filho (Federal University of Espírito Santo, Brazil); André Candeia (EDP Escelsa, Brazil); Rafael Sousa (EDP Bandeirante, Brazil)
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Kevin J Stevens (Quest Integrity NZL Ltd, New Zealand); Keith Lichti (Quest Integrity NZL Ltd, USA); Ian Minchington (Quest Integrity NZL Ltd, New Zealand)
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Harikrishnan Vijayadharan Suseelakumari (Centre for Development of Advanced Computing, India); Sabarimuthu Irene (Ubiquitous Computing & CDAC, India); Pitchiah R (Centre for Development of Advanced Computing, India)
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Peng Xu (Nanjing University of Aeronautics and Astronautics, P.R. China); Jun Huang (Nanjing University of Aeronautics and Astronautics, P.R. China)
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Ahmed Talaat (Basque Country University, UPV/EHU, Spain); Valentina Zhukova (Basque Country University, UPV/EHU, Spain); Mihail Ipatov (Basque Country University, UPV/EHU, Spain); Juan Blanco (Basque Country University, UPV/EHU, Spain); Arcady Zhukov (Basque Country University, UPV/EHU & Ikerbasque, Science Foundation, Spain)
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Ahmed Talaat (Basque Country University, UPV/EHU, Spain); Valentina Zhukova (Basque Country University, UPV/EHU, Spain); Mihail Ipatov (Basque Country University, UPV/EHU, Spain); Lorena Gonzalez-Legarreta (Universidad de Oviedo, Spain); Blanca Hernando (Universidad de Oviedo, Spain); Arcady Zhukov (Basque Country University, UPV/EHU & Ikerbasque, Science Foundation, Spain)
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Ahmed Talaat (Basque Country University, UPV/EHU, Spain); Mihail Ipatov (Basque Country University, UPV/EHU, Spain); Valentina Zhukova (Basque Country University, UPV/EHU, Spain); Lorena Gonzalez-Legarreta (Universidad de Oviedo, Spain); Victor Prida (Universidad de Oviedo, Spain); Blanca Hernando (Universidad de Oviedo, Spain); Julian Gonzalez (Basque Country University, Spain); Arcady Zhukov (Basque Country University, UPV/EHU & Ikerbasque, Science Foundation, Spain)
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Patrizia Vergallo (University of Salento, Italy); Aime' Lay-Ekuakille (University of Salento, Italy); Claudio De Capua (University of Reggio Calabria, Italy); Rosario Morello (University Mediterranea of Reggio Calabria, Italy)
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Harald Axmann (AVL DiTEST Fahrzeugdiagnose GmbH, Austria); Alexander Bergmann (AVL List GmbH, Austria); Bernd Eichberger (Graz University of Technology, Austria)
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