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**Palmerston North, New Zealand
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Program

Tuesday, November 29

S0: Opening Ceremony

S1: Keynote Address - I

S2: S2A: MEMS and NEMS

Quantitative Analysis of Silver Nanoparticle Ink using Laser-induced Breakdown Spectroscopy

Satoshi Ikezawa (Waseda University, Japan); Muneaki Wakamatsu (Waseda University, Japan); Toshitsugu Ueda (Waseda University, Japan)
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Nano-Level 3-D Shape Measurement System Using RGB Color Interference Fringes

Seiji Hata (Kagawa University, Japan); Daisuke Kimura (Kagawa University, Japan); Ichiro Ishimaru (University of Kagawa, Japan); Masanobu Kaneda (REXXAM Co. Ltd., Japan); Shigeaki Morimoto (REXXAM Co. Ltd., Japan); Hiroaki Kobayashi (Kagawa Prefecture Industrial Technology Center, Japan)
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Sensors based on metal oxide nanostructures synthesized by arc discharge

Fang Fang (GNS Science, New Zealand); John Futter (GNS Science, New Zealand); John Kennedy (GNS Science, New Zealand); Andreas Markwitz (GNS Science, New Zealand)
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S2: S2B: Sensors for Robotic Applications

Development of FBG sensor system for Force-feedback in Minimally Invasive Robotic Surgery

Hoseok Song (Korea Advanced Institute of Science and Technology, Korea); Heechul Kim (Korea Advanced Institute of Science and Technology, Korea); Juwon Jeong (Korea Advanced Institute of Science and Technology, Korea); Jungju Lee (Korea Advanced Institute of Science and Technology, Korea)
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Interaction in Robotics with a Combination of Vision, Tactile and Force Sensing

Angel del Pobil (Universitat Jaume I, Spain); Mario Prats (University of Jaime I, Spain); Pedro J Sanz (University of Jaime I & IEEE, Spain)
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New Generation of Optical Robotic Sensor applied to Small Notch Detection

Aime' Lay-Ekuakille (University of Salento, Italy); Nicola Ivan Giannoccaro (University of Salento, Italy); Luigi Spedicato (University of Salento, Italy); Patrizia Vergallo (University of Salento, Italy); Alessandro Massaro (IIT, Italy); Roberto Cingolani (IIT, Italy); Athanassia Athanassiou (Italian Institute of Technology, Italy)

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Dynamic Focusing Technique with Magnification Adjustment in an Electro-optical Lens

Seung Jae (NANO Manufacturing Research Institute, Korea); Dong Hwan Kim (Seoul National University of Science and Technology, Korea)

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S2: S2C: Image Sensors

Development and Application of the Human Visual Using Image Tracking System

Tsung-Han Lee (Tatung University-Department of Mechanical Engineering & Tatung University, Taiwan); Kuei-Shu Hsu (Chia Nan University of Pharmacy & Science, Taiwan); Long-Jyi Yeh (Tatung University, Taiwan); Yueh-Min Huang (National Cheng Kung University, Taiwan)

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From a Review of HDR Sensing and Tone Compression to a Novel Imaging Approach

Amal Punchihewa (Massey University & Senior Lecturer, New Zealand); Takayuki Hamamoto (Tokyo University of Science, Japan); Takahiro Kojima (Tokyo University of Science, New Zealand)

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Objective Evaluation of Imager Performance

Francine Amon (National Institute of Standards and Technology, Sweden); Dennis Leber (National Institute of Standards and Technology, USA); Nicholas Paulter, Jr. (National Institute of Standards and Technology, USA)

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An Intelligent Scanner with Handwritten Odia Character Recognition Capability

Sukadev Meher (National Institute of Technology, Rourkela, India); Debasish Basa (Biju Patnaik University of Technology, India)

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S3: Invited Session - I

New Ultrasonic Thermometry and its applications to Temperature Profiling of Heated Materials

Ikuo Ihara (Nagaoka University of Technology, Japan); Hiroyuki Yamada (Nagaoka University of Technology, Japan); Akira Kosugi (Nagaoka University

of Technology, Japan); Manabu Takahashi (Sendai National College of Technology, Japan)
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MOS Gas Sensors: What determines our choice?

Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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Prediction and Validation of Outcomes from Air Monitoring Sensors and Networks of Sensors

Aime' Lay-Ekuakille (University of Salento, Italy); Patrizia Vergallo (University of Salento, Italy); Nicola Ivan Giannoccaro (University of Salento, Italy); Alessandro Massaro (IIT, Italy); Diego Caratelli (Delft University of Technology, The Netherlands)
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Cooperative Spectrum Sensing for Primary User Detection in Cognitive Radio

Ramanarayanan Viswanathan (Southern Illinois University Carbondale, USA)
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S4: S4A: Magnetic Sensors

Electrical Interference with Pickup Coil in Induction Magnetometer

K. Tashiro (Shinshu University, Japan); Hiroyuki Wakiwaka (Shinshu University, Japan); Shin-ichiro Inoue (Shinsh University, Japan)
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All-oxide magnetic field sensor

Aur lie Solignac (CEA Saclay, France); Ruben Guerrero (CEA Saclay, France); Myriam Pannetier-Lecoeur (CEA Saclay, France); Philippe Lecoeur (IEF-Universit  Paris Sud, France); Guillaume Agnus (IEF-Universit  Paris Sud, France)
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Metal Detector Head Analysis

Zhuoran Tang (University of Auckland, New Zealand); Lawrence J. Carter (The University of Auckland, New Zealand)
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Micro Elements for Interrogating Magnetoelastic Sensors

Cai Liang (King Abdullah University of Science and Technology, Saudi Arabia); Chinthaka Gooneratne (King Abdullah University of Science and Technology, Saudi Arabia); Leslie Mathison (Auburn University, USA); Bryan Chin (Auburn University, USA); J rgen Kosel (King Abdullah University of Science and Technology, Saudi Arabia)
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GMR based integrated non-contact voltage sensor for fuel cells monitoring

Myriam Pannetier-Lecoeur (CEA Saclay, France); Claude Fermon (CEA Saclay, France); Alain Giraud (CEA Saclay, France)
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A Half-Ring GMR Sensor for Detection of Magnetic Beads Immobilized On a Circular Micro-Trap

Chinthaka Gooneratne (King Abdullah University of Science and Technology, Saudi Arabia); Cai Liang (King Abdullah University of Science and Technology, Saudi Arabia); Arthur Useinov (Integrated NanoTechnology Fab, KAUST, Saudi Arabia); Ioanna Giouroudi (Vienna University of Technology, Austria); Jürgen Kosel (King Abdullah University of Science and Technology, Saudi Arabia)

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S4: S4B: Gas Sensors

Oxygen Detection Using Nanoporous Anodized Aluminum Oxide Sensors

Suresh Babu Vunnam (Skeptor Technologies, USA); Michael J. Haji-Sheikh (Northern Illinois University, USA); Alekha Andolu (United Airlines, USA); Martin Kocanda (Northern Illinois University, USA); Dave Ballantine (Northern Illinois University, USA); Anima Bose (University of Houston, USA)

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Study of nano Fe₂O₃ MOS thick films as ethanol gas sensor

Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India); Nitin Pawar (K A A N S Arts, Commerce and Science College, India)

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Preparation and characterization of nanostructured Zirconia for gas sensing application

Pratap Patil (Department of Physics, Ruia College, Matunga, Mumbai India & Department of Physics, Arts Science and Commerce College, Nandgaon, District Nasik India, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)

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A novel optical fiber sensor for gas temperature monitoring in chemically polluted environments

Giovanna Saviano (SAPIENZA - Rome University, Italy); Carla Lupi (SAPIENZA - Rome University, Italy); Ferdinando Felli (SAPIENZA- Rome University, Italy); Cristian Vendittozzi (SAPIENZA- Rome University, Italy); Luigi Benussi (INFN - Laboratori Nazionali di Frascati & CERN, Italy); Stefano Bianco (Laboratori INFN Frascati, Italy); Davide Piccolo (INFN Frascati, Italy); Michele Arturo Caponero (ENEA Frascati Research Centre, Italy)

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Advanced oxygen sensor with oxide electrode materials

Pavel Shuk (Emerson, USA); Robert Jantz (Rosemount Analytical Inc., USA); Hans Guth (Dresden University of Technology, Germany)

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Gas Sensing Characteristics of Pure and Fe-Doped Tungsten Oxide Thin Films

Tuquabo Tesfamichael (Queensland University of Technology, Australia); Mohammed Ahsan (Queensland University of Technology, Australia); Andrea

Ponzoni (University of Brescia, Italy); Guido Faglia (University of Brescia, Italy)
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S4: S4C: Special Session on Autonomous Sensors and Sensors Systems

Highly Stable Capacitance-to-Digital Converter with Improved Dynamic Range

Roumen Nojdelov (Velista - Roumen Nojdelov, Bulgaria); Ruimin Yang (Technical University Delft, The Netherlands); Xiaodong Guo (TU Delft, The Netherlands); Stoyan Nihtianov (Technical University - Delft, The Netherlands)
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LED Based Spectroscopy - a Low Cost Solution for High Resolution Concentration Measurements e.g. for Gas Monitoring Applications

Martin Degner (University of Rostock, Germany); Hartmut Ewald (University of Rostock, Germany); Elfed Lewis (University of Limerick, Ireland)
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Integration of hybrid sensing networks in indoor intelligent homes

Juan Antonio Nazabal (Universidad Pública de Navarra, Spain); Carlos Fernández (Universidad Publica de Navarra, Spain); Francisco Falcone (Universidad Publica de Navarra, Spain); Ignacio R. Matias (Public University of Navarra, Spain); Subhas Mukhopadhyay (Massey University, New Zealand)
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Automatic breathing segmentation from wearable respiration sensors

Paulo Lopez-Meyer (The University of Alabama, USA); Edward Sazonov (The University of Alabama, USA)
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A simulation based comparative study of two broadband probes for NMR of magnetically ordered materials

José F. M. L. Mariano (University of Algarve and ICEMS, Portugal); Mircea Rogalski (Instituto Superior Tecnico and ICEMS, Portugal); Octavian Adrian Postolache (Institute of Telecommunication - IT/IST & Escola Superior de Tecnologia de Setubal, Portugal)
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S5: S5A: Sensors for Novel Applications - I

Sensing Technologies for Homeland Security in Cloud Environments

Maria Fazio (University of Messina, Italy); Massimo Villari (University of Messina, Italy); Antonio Puliafito (University of Messina & Engineering Faculty, Italy)
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External Smart Microphone for Mobile Phones

Péter Völgyesi (Vanderbilt University, USA); Sándor Szilvási (Vanderbilt University, USA); János Sallai (Vanderbilt University, USA); Ákos Lédeczi (Vanderbilt University, USA)
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Intensity control of a phase-shift based laser scanner for reducing distance errors caused by different surface reflectivity

Junhwan Jang (Gwangju Institute of Science and Technology, Korea); Sungui Hwang (Gwangju Institute of Science and Technology, Korea); Kyihwan Park (Gwangju Institute of Science and Technology, South Korea, Korea)
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S5: S5B: Sensors for Health and Biomedical Applications

Characterizations and Performance Evaluations of Thin Film Interdigital Sensors for Gram-Negative Bacteria Detection

Abdul Rahman Mohd Syaifudin (Massey University, New Zealand); Subhas Mukhopadhyay (Massey University, New Zealand); Pak Yu (Massey University, New Zealand); Cheng-Hsin Chuang (Southern Taiwan University, Taiwan); Hsun-Pei Wu (Department of Mechanical Engineering & Institute of Nanotechnology & Southern Taiwan University, Taiwan); 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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Social Media, Mobile Devices and Sensors: Categorizing New Techniques for Health Communication

Robert Steele (The University of Sydney, Australia)
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Towards Non-invasive and Continuous Monitoring of Blood Glucose Level based on CW Photoacoustics: New Concept for Selective and Sensitive Measurements of Aqueous Glucose

Serge Camou (NTT Corporation, Japan); Yuko Ueno (NTT Corp., MI labs, Microsensor Research group, Japan); Emi Tamechika (NTT Corp., MI labs, Microsensor Research group, Japan)
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S5: S5C: Sensors for Dielectric Measurement

The Use of Dielectric Models to Determine Moisture Content in Aggregate Material

Ian G Platt (Lincoln Ventures Ltd, New Zealand); Ian M Woodhead (Lincoln, New Zealand); Michael Hagedorn (LVL, New Zealand)
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Dielectric Measurement of Logs for Improved Internal Imaging

Wayne Holmes (Unitec Institute of Technology, New Zealand); Saeed Ur Rehman (Unitec Institute of Technology, New Zealand); Steve Riley (Scion (New Zealand Forest Research Institute Limited), New Zealand)
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Dielectric characteristics of lipid droplets suspended in YEPD media

Richard Blakey (Liverpool John Moores University, United Kingdom); Alex Mason (Liverpool John Moores University, United Kingdom); Ahmed I Al-Shamma'a (Liverpool John Moores University, United Kingdom); Carole Rolph (University of Central Lancashire, United Kingdom); Gary Bond (University of Central Lancashire, United Kingdom)
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S6: Keynote Address - II

S7: S7A: Temperature and Humidity Sensors

Flexible pH Sensor with Polyaniline Layer based on Impedance Measurement

Cheng-Hsin Chuang (Southern Taiwan University, Taiwan); Hsun-Pei Wu (Department of Mechanical Engineering & Institute of Nanotechnology & Southern Taiwan University, Taiwan); Cheng-Ho Chen (Department of Chemical and Materials Engineering, Taiwan); Peng-Rong Wu (Peng-Rong, Taiwan)
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Temperature Sensors for use in Muscle Microcalorimetry

Callum Johnston (University of Auckland, New Zealand); Poul F Nielsen (University of Auckland, New Zealand); Andrew Taberner (University of Auckland, New Zealand); Ian Hunter (MIT, USA)
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A Smart Conductivity Sensor with Temperature and Water Tide Level Compensation Capabilities

Jose Costa Pereira (ESTSetúbal, Portugal); Octavian Adrian Postolache (Institute of Telecommunication - IT/IST & Escola Superior de Tecnologia de Setúbal, Portugal); Pedro Girão (Instituto de Telecomunicações, Portugal)
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Characterisation of a Fibre Bragg Grating System for Strain and Temperature Sensing

Kevin Stevens (Quest Reliability Ltd, New Zealand)
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S7: S7B: Thick and Thin Film Sensors

LPG Gas Sensing Properties of CuO Loaded ZnO Thick Film Resistors

Madhavrao Keshavrao Deore (Arts, Science and Commerce College, Ozar (Mig), India); Vishwas Gaikwad (K.T.H.M. College, Nashik, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
pp. 233-238

Sol-gel synthesis of TiO₂ nano powder and study of their gas sensing performance using thick film resistors

Vishwas Gaikwad (K.T.H.M. College, Nashik, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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Synthesis of nano barium zirconate (BaZrO₃) and its gas sensing performance using thick films

Ramnath Choudhari (KTHM College, Nashik, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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Nanocrystalline CdSnO₃ thin film as highly sensitive ethanol sensor

Ganesh E. Patil (Arts, Commerce & Science College, Nandgaon, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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S7: S7C: Optical, Fibre Optic Sensors and Smart Grid

Non-invasive measurement of blood components

Jens Kraitl (University of Rostock, Germany); Ulrich Timm (University of Rostock, Germany); Hartmut Ewald (University of Rostock, Germany); Elfed Lewis (University of Limerick, Ireland)
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A Signal Correction Technique for Raman-Scattering Based Temperature Sensing Using Optical Fibers

Takeo Kasajima (Fujitsu Laboratories Ltd., Japan); Kazushi Uno (Fujitsu Laboratories Ltd., Japan); Fumio Takei (Fujitsu Laboratories Ltd., Japan)
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Optical Sensing: A New Approach to Measurements with Fiber Bragg Grating

Sayuj Nath (National Instruments, New Zealand); Mark Phillips (National Instruments, New Zealand)
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Interconnecting ZigBee and 6LoWPAN Wireless Sensor Networks for Smart Grid Applications

Chia-Wen Lu (National Chi Nan University, Taiwan); Shu-Cheng Li (National Chi Nan University, Taiwan); Quincy Wu (National Chi Nan University, Taiwan)
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S8: Poster Session - I

Lunch cum Poster Session

Synthesis, characterizations and gas sensing properties of nanocrystalline In₂O₃ thick film sensor

Ramesh Bari (GMD Arts, KRN Commerce and MD Science College, Jamner, India); Dnyaneshwar Chavan (Arts, Commerce and Science College, Lasalgaon, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
pp. 273-277

Studies on gas sensing performance of pure and surface modified ZrO₂ thick film resistors

Sudhakar Deshmukh (Arts Science and Commerce College, Manmad, India); Ramesh Bari (GMD Arts, KRN Commerce and MD Science College, Jamner, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India); Ganesh E. Patil (Arts, Commerce & Science College, Nandgaon, India); Lalchand Patil (Nanomaterials Research Lab., Pratap College, Amalner, India)
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Gas sensing studies of thick and thin films of WO₃

Krishnakumar Thakur (KTHM College, Nashik, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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Synthesis of SnO₂ nanoparticles for gas sensing applications

Varsha Patil (BHAVAN's College, Mumbai, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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Synthesis, characterization of WO₃ nanopowder and its gas sensing properties

Suresh Nahire (G. M. D. Arts, B. W. Commerce and Science College, Sinnar, India); Ramesh Patil (K T H M College Nashik, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)
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High precision fiber-optic inclinometer based on abrupt-tapered Mach-Zehnder interferometers

Nan-Kuang Chen (National United University, Taiwan); Zhi-Zheng Feng (Department of Electro-Optical Engineering, National United University, Taiwan)
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Biquaternion Beamspace for Polarization Estimation and Direction Finding

Jingfei Jiang (Fudan University, P.R. China); Dan Li (Fudan University, P.R. China); JianQiu Zhang (Fudan University, P.R. China); Bo Hu (Fudan University, Shanghai, P.R. China); Qiyong Lu (Fudan University, P.R. China)
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A Micro Gas Sensor Based on a WO₃ thin Film for Aromatic Hydrocarbon Detection

Chia-Yen Lee (National Pingtung University, Taiwan); Yu-Hou Su (National Cheng Kung University, Taiwan); Lung-Ming Fu (National Pingtung University)

of Science and Technology, Taiwan); Joe-Air Jiang (National Taiwan University, Taiwan)
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A Tracking Technique Incorporating Partial Regions utilized the Particle Filter Algorithm with Hierarchical Structure

Toyohiro Hayashi (Kyushu Institute of Technology, Japan); Taiki Hibira (Kyushu Institute of Technology, Japan); Shuichi Enokida (Kyushu Institute of Technology, Japan)
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Development of a Performance Test System for Evaluation of Automatic Tank Gauging System

Sangil Lee (Korea Research Institute of Standards and Science, Korea); Hyon Ho Kim (Korea Research Institute of Standards and Science, Korea); Hae Choi (Korea Research Institute of Standards and Science, Korea)
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Optoelectronic Applications of MOS Capacitors Fabricated on High Resistivity Silicon

Oleksandr Malik (Institute National for Astrophysics, Optics and Electronics, INAOE, Mexico); Francisco De la Hidalga-W (Institute National for Astrophysics, Optics and Electronics, Mexico); Elizabeth Meza-P (INAOE, Mexico)
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Fiber Bragg Grating Temperature Sensing System for Large Air Cooled Hydrogenerators

Marcelo Werneck (Coppe/Ufrj, Brazil); Regina Allil (Brazilian Army, Brazil); Bessie de Assumpção Ribeiro (Federal University of Rio de Janeiro & COPPE, Brazil)
pp. 329-334

Load Distribution Scheme for Power Saving Efficiency in Wireless Sensor Networks

Tsukasa Goto (Kanagawa University, Japan); Masato Noto (Kanagawa University, Japan)
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Adaptive Model Based Predictive Networked Control over WSN with Tolerance to Transmission Faults on the Forward Channel

Paulo Gil (New University of Lisbon, Portugal); Gonçalo Brito Nunes (CISUC, Portugal); Luis Palma (FCTUNL, Portugal); Amâncio Santos (ISEC, Portugal); Alberto Cardoso (University of Coimbra, Portugal)
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Minutiae based Fingerprint Recognition

Sujitkumar Chaudhary (Pune University, India); Pramod Kanjalkar (Vishwakarma Institute of Technology Pune, India); Nitin Jagannath Patil (D. N. Patel College of Engineering, India)
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Building a Sensor Network with PSoC

Rakhee Mohiddin (BITS-Pilani, Hyderabad Campus, India); Manoj Kumar (BITS, Pilani- Hyderabad, India); Shashi Kumar Palakurty (BITS-Pilani,

Hyderabad Campus, India); Surabhi Bothra (BITS-Pilani, Hyderabad Campus, India); Sai Phaneendra P (BITS-Pilani, Hyderabad Campus, India); Mb Srinivas (Birla Institute of Technology and Science – Pilani, Hyderabad, India); Narayana Pidugu (Cypress Semiconductors, India); Karthikeyan Mahalingam (Cypress Semiconductors, India); Patrick Kane (Cypress Semiconductors, India)

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A real time fiber optic micro displacement level sensor

Dipankar Sengupta (National Institute of Technology, India); M. Sai Shankar (National Institute of Technology, India); P. Saidi Reddy (National Institute of Technology, USA); R. L. N SaiPrasad (National Institute of Technology, USA); K. S. Narayana (National Institute of Technology, USA); Putha Kishore (National Institute of Technology Warangal, India)

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Wireless Network for Health Monitoring

Amir Kioumars (SEAT, New Zealand); Liqiong Tang (Massey University, New Zealand)

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Refractive Index Measurement Using Laser Diffractometer

C. C. Hsu (National Chiao Tung University, Taiwan); T. S. Liu (National Chiao Tung University, Taiwan)

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Humidity sensor based on silver nanoparticles embedded in a polymeric coating

Pedro Rivero (Universidad Publica de Navarra, Spain); Aitor Urrutia (Public University of Navarre, Spain); Javier Goicoechea (Public University of Navarre, Spain); Francisco J Arregui (Universidad Publica de Navarra, Spain); Ignacio R. Matias (Public University of Navarre, Spain)

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Optical sensor based on polymer electrospun nanofibers for sensing humidity

Aitor Urrutia (Public University of Navarre, Spain); Pedro Rivero (Universidad Publica de Navarra, Spain); Javier Goicoechea (Public University of Navarre, Spain); Francisco J Arregui (Universidad Publica de Navarra, Spain); Ignacio R. Matias (Public University of Navarre, Spain)

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S9: Invited Session - II

S10: S10A: Sensors Interfacing and Signal Analysis

Universal Low Power Smart Sensor Interface using Two-Wires for Data Transmission and Supply

Hendrik Krüger (University of Rostock, Germany); Frank Lebahn (University of Rostock, Germany); Hartmut Ewald (University of Rostock, Germany)

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IMU based Onboard-Unit to measure the driveability of transport buses

Fabian Hoeflinger (University of Freiburg, Germany); Abhishek Ojha (University of Freiburg, Germany); Leonhard Reindl (IMTEK - Institute for Microsystem Technology, Germany)
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Experimental Validation of a Leakage and Fill-level Estimation Method for Vented Tanks

Rudolf Brunnader (Graz University of Technology, Austria); Gert Holler (Graz University of Technology, Austria)
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S10: S10B: Sensors for Aquaculture and Agricultural Applications

Beyond the logistic growth model for nitrous oxide emission factors from agricultural soils

Kailash P. Thakur (LANDCARE RESEARCH, New Zealand); Donna Giltrap (Landcare Research, New Zealand); Anne-Gaëlle Ausseil (Landcare Research, New Zealand); Surinder Saggar (Landcare Research, New Zealand); Ashish Raj (Weill Cornell Medical College, USA)
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A WiFi based Smart Wireless Sensor Network for an Agricultural Environment

Gerard Mendez (Massey University, New Zealand); Mohd Amri Bin Md Yunus (Faculty of Electrical Engineering, Malaysia); Subhas Mukhopadhyay (Massey University, New Zealand)
pp. 405-410

Development of an Opto-chemical Carbon Dioxide Sensor for Aquaculture and Oceanography Applications

Merima Cajlakovic (Joanneum Research, Austria); Michael Suppan (Joanneum Research, Austria); Hannes Pressler (Joanneum Research, Austria); Volker Ribitsch (Joanneum Research, Austria); Frederic Bellouard (Ponsel Mesure, France); Stanislas Rault (P. D. G. Group AQUALABO Services, France)
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S10: S10C: Capacitive Sensors - I

Sensitivity of Capacitance Sensors for Quality Control in Blade Production

Norbert Eidenberger (Johannes Kepler University of Linz, Austria); Bernhard G. Zagar (University of Linz, Austria)
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Capacitive sensor arrays for the real time detection of volatile organic compounds

Nikolaos Pantazis (Technological Educational Institution of Athens, Greece); Georgios Patsis (Technological Educational Institution of Athens, Greece); Evangelos Valamontes (TEI of Athens, Greece); Ioannis Raptis (NCSR

Demokritos, Greece); Dimitrios Goustouridis (NCSR Demokritos, Greece);
Merope Sanopoulou (NCSR Demokritos, Greece)
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Thursday, December 1

S11: S11A: Sensors for Special Applications - I

RF Hand Gesture Sensor for Monitoring of Cigarette Smoking

Edward Sazonov (The University of Alabama, USA); Kristopher Metcalfe (The University of Alabama, USA); Paulo Lopez-Meyer (The University of Alabama, USA); Stephen Tiffany (The State University of New York at Buffalo, USA)
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Tunneling Magneto-Resistor based Angle Transducer

Chandrika Sreekantan Anoop (Indian Institute of Technology, Madras, India); Bobby George (Indian Institute of Technology Madras, India); Jagadeesh Kumar V (Indian Institute of Technology Madras, India)
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Lactate Detection Using a Microwave Cavity Sensor for Biomedical Applications

Jung Hean Goh (Liverpool John Moores University, United Kingdom); Alex Mason (Liverpool John Moores University, United Kingdom); Ahmed I Al-Shamma'a (Liverpool John Moores University, United Kingdom); Stephen Wylie (Liverpool John Moores University, United Kingdom); Mark Field (Liverpool Heart and Chest Hospital -NHS Foundation Trust, United Kingdom); Paul Browning (Liverpool Heart and Chest Hospital -NHS Foundation Trust, United Kingdom)
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S11: S11B: Electronic Nose / Tongue and Ultrasonic Sensors

Recognition of dried apples by hybrid electronic tongue system

Patrycja Ciosek (Warsaw University of Technology, Poland); Anna Kutyla-Olesiuk (Warsaw University of Technology, Poland); Sylwia Dziedzic (Warsaw University of Technology, Poland); Wojciech Jankowski (Warsaw University of Technology, Poland); Małgorzata Nowacka (Warsaw University of Life Sciences, Poland)
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Detection of Surface Cracks in Fibre Reinforced Composites using Ultrasonic Rayleigh Waves

Matthew Thomson (Victoria University of Wellington, New Zealand); Paul Harris (IRL, New Zealand); Gideon Gouws (Victoria University of Wellington, New Zealand)
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S11: S11C: Sensors for Novel Applications - II

Measurements of Metal Hydride Hydrogen Tank for Hybrid Electrical Chair with Photovoltaic and Fuel Cell

Yoshihiko Takahashi (Kanagawa Institute of Technology, Japan); Yuuta Kaji (Kanagawa Institute of Technology, Japan)
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An approach to estimating protein networks of cell cycle based on least-squares methods for periodic signals

Takehito Azuma (Utsuminiya University, Japan); Mayumi Ito (Keio University, Japan); Shuichi Adachi (Keio University, Japan)
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Continuous Monitoring of Physiological Parameters using Smart Sensors

Tauseef Quazi (Massey University, New Zealand); Subhas Mukhopadhyay (Massey University, New Zealand)
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S12: S12A: Ubiquitous systems for HealthCare

An Online Telemetering System for Mobile Health Parameter Monitoring and Medical Assistance

Roman Agethen (University of Erlangen-Nuremberg, Germany); Fabian Lurz (University of Erlangen-Nuremberg, Germany); André Schwarzmeier (Institute for Electronics Engineering & University of Erlangen-Nuremberg, Germany); Georg Fischer (University of Erlangen-Nuremberg, Germany); Robert Weigel (University of Erlangen-Nuremberg, Germany); Dietmar Kissinger (University of Erlangen-Nuremberg, Germany)
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Wellness Determination of Inhabitant based on Daily Activity Behaviour in Real-Time Monitoring using Sensor Networks

Nagender Suryadevara (Massey University, New Zealand); Anuroop Gaddam (Massey University, New Zealand); Subhas Mukhopadhyay (Massey University, New Zealand); Ramesh Kumar Rayudu (Victoria University of Wellington, New Zealand)
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Smart Walker for Pervasive HealthCare

Octavian Adrian Postolache (Institute of Telecommunication - IT/IST & Escola Superior de Tecnologia de Setubal, Portugal); Pedro Girão (Instituto de Telecomunicações, Portugal); Jose Costa Pereira (ESTSetúbal, Portugal); Joao Pincho (Instituto de Telecomunicacoes, Portugal); Cláudia Moura (Universidade Atlantica, Portugal); Gabriela Postolache (Universidade Atlantica, Portugal)
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Development of Wireless Sensing System Monitoring Physiological Information for Healthcare in Daily Life

Chika Sugimoto (Yokohama National University, Japan); Ryuji Kohno (Yokohama National University, Japan)
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Acoustic sensor system for loosening detection of hip implants

Hartmut Ewald (University of Rostock, Germany); Ulrich Timm (University of Rostock, Germany); Cathérine Ruther (Universität Rostock, Germany); Wolfram Mittelmeier (Universität Rostock, Germany); Rainer Bader (Universität Rostock, Germany); Daniel Kluess (Universität Rostock, Germany)
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Corrosion Characterisation Using Pulsed Eddy Current Sensor Systems

Guiyun Tian (Newcastle University, United Kingdom); Yunze He (Newcastle University, United Kingdom); Mohammed Alamin (Newcastle University, United Kingdom); Hong Zhang (Newcastle University, United Kingdom); Paul Jackson (International Paint Ltd, United Kingdom)
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Unobtrusive packaging of optoelectronic devices for optical tactile and shear sensors

Erwin Bosman (Ghent University & IMEC, Belgium); Bram Van Hoe (Ghent University - IMEC, Belgium); Jeroen Missinne (Ghent University - IMEC, Belgium); Geert Van Steenberge (Ghent University - IMEC, Belgium); Sandeep Kalathimekkad (Ghent University - IMEC, Belgium); Peter Van Daele (Ghent University, Belgium)
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Condition Monitoring of High-Speed Flywheel using Modal Analysis Method

Rudolf Brunnader (Graz University of Technology, Austria); Christian Deinhammer (Graz University of Technology, Austria); Bernhard Schweighofer (Graz University of Technology, Austria); Hannes Wegleiter (Graz University of Technology, Austria); Gert Holler (Graz University of Technology, Austria)
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Design of a Wireless Sensor Network for Structural Health Monitoring of Bridges

Michael Reyer (Johann-Maus-Strasse, Germany); Stefan Hurlebaus (Texas A&M University, USA); John Mander (Texas A&M University, USA); Osman Ozbulut (Texas A&M University, USA)
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New magnetic connector for embedding of optical sensors in composite materials

Emanuele Basile (Sapienza Rome University, Italy); Andrea Brotzu (SAPIENZA - Rome University, Italy); Ferdinando Felli (SAPIENZA- Rome

University, Italy); Carla Lupi (SAPIENZA - Rome University, Italy); Giovanna Saviano (SAPIENZA - Rome University, Italy); Cristian Vendittozzi (SAPIENZA- Rome University, Italy); Michele Arturo Caponero (ENEA Frascati Research Centre, Italy)
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S12: S12C: Environmental Sensing and Monitoring

A Load Balancing Algorithm Based on Probabilistic Multi-Tree for Wireless Sensor Networks

Tzu-ping Chung (National Taiwan University, Taiwan); Tzu-Shiang Lin (National Taiwan University, Taiwan); Xiang-Yao Zheng (National Taiwan University, Taiwan); Ping-Lang Yen (National Taiwan University, Taiwan); Joe-Air Jiang (National Taiwan University, Taiwan)
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Wireless Sensor Network for Data-Center Environmental Monitoring

Michael Rodriguez (University of Puerto Rico, Mayaguez, USA); Luis Ortiz Uriarte (University of Puerto Rico, Mayaguez, USA); Yi Jia (University of Puerto Rico, Mayaguez, USA); Kazutomo Yoshii (Argonne National Laboratory, USA); Robert Ross (Argonne National Laboratory, USA); Pete Beckman (Argonne National Lab, USA)
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Application of Independent Component Analysis for Estimating Nitrate Contamination in Natural Water Sources Using Planar Electromagnetic Sensor

Mohd Amri Bin Md Yunus (Faculty of Electrical Engineering, Malaysia); Subhas Mukhopadhyay (Massey University, New Zealand); Amal Punchihewa (Massey University & Senior Lecturer, New Zealand)
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Development of an Embedded System-based Gateway for Environmental Monitoring Using Wireless Sensor Network Technology

Chun-Yi Liu (National Taiwan University, Taiwan); Cheng-Long Chuang (National Taiwan University, Taiwan); Chia-Pang Chen (National Taiwan University, Taiwan); Wan-Yi Chang (National Taiwan University, Taiwan); Jyh-Cherng Shieh (National Taiwan University, Taiwan); Chen-Han Lin (National Taipei University of Technology, Taiwan); Chwan-Lu Tseng (National Taipei University of Technology, Taiwan); Joe-Air Jiang (National Taiwan University, Taiwan)
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Developed Urban Air Quality Monitoring System Based on Wireless Sensor Networks

Jen-Hao Liu (National Taiwan University, Taiwan); Yu-Fan Chen (National Taiwan University, Taiwan); Tzu-Shiang Lin (National Taiwan University, Taiwan); Da-Wei Lai (National Taiwan University, Taiwan); Tzai-Hung Wen (National Taiwan University, Taiwan); Chih-Hong Sun (National Taiwan University, Taiwan); Jehn-Yih Juang (National Taiwan University, Taiwan); Joe-Air Jiang (National Taiwan University, Taiwan)
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S13: Poster Session - II

Lunch cum Poster Session

Development of Event Data Recorder for Pedestrians for Analysis of Traffic Accidents

Hitoshi Arakawa (Kyushu Institute of Technology, Japan); Shuichi Enokida (Kyushu Institute of Technology, Japan); Toyohiro Hayashi (Kyushu Institute of Technology, Japan); Masashi Ishikawa (Kyushu Institute of Technology, Japan); Eitaku Nobuyama (Kyushu Institute of Technology, Japan)
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Quartz Resonator Hydrogen Sensor Using Platinum Black

Hiroshi Oigawa (Waseda University, Japan); Yu Kirino (Waseda University, Japan); Daisuke Yamazaki (Waseda University, Japan); Toshitsugu Ueda (Waseda University, Japan)
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Accelerometer Based Wireless Wheel Rotating Sensor For Navigation Usage

Ji-De Huang (Industrial Technology Research Institute & Information and Communications Research Laboratories, Taiwan); Tong-Wen Wang (Industrial Technology Research Institute, Taiwan)
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Airborne Antenna Tracking for Sky-Net Mobile Communication

Chin E. Lin (Cheng Kung University, Taiwan); Ying-Chi Huang (National Cheng Kung University, Taiwan); Ya-Hsien Lai (National Cheng Kung University, Taiwan); Yung-Lan Yeh (National Cheng Kung University, Taiwan); Wei-Chi Huang (National Cheng Kung University, Taiwan)
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An Analysis of Sensitivity Distribution Using Two Differential Excitation Potentials in ECT

Elmy Johana Mohamad (Universiti Tun Hussien Onn Malaysia & Faculty Of Electrical & Electronic Engineering, Malaysia); Omar Mohd Faizan Marwah (Faculty of Mechanical & Manufacturing Engineering & Universiti Tun Hussien Onn Malaysia, Malaysia); Ruzairi Abdul Rahim (Universiti Teknologi Malaysia, Malaysia); Leow Ling (Universiti Teknologi Malaysia, Malaysia)
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Biased Kalman Filter

Jiajia Tan (Fudan University, Shanghai, P.R. China); JianQiu Zhang (Fudan University, P.R. China); Bo Hu (Fudan University, Shanghai, P.R. China); Qiyong Lu (Fudan University, P.R. China)
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Optical Fiber Refractometers based on Sputtered Indium Tin Oxide Coatings

Sergio Lopez (Public University of Navarra, Spain); Carlos Zamarreño (Public University of Navarra, Spain); Miguel Hernaez (Public University of Navarre, Spain); Ignacio Del Villar (Public University of Navarre, Spain); Francisco J Arregui (Universidad Publica de Navarra, Spain); Ignacio R. Matias (Public University of Navarra, Spain)
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Synthesis and gas sensing properties of MoO₃ thin films by spray pyrolysis

Daga Ahire (KTHM College, Nashik, India); Gotan H Jain (Arts, Commerce & Science College, Nandgaon, India)

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Optical probe current sensor module using the Kerr effect and its application to IGBT switching current measurements

Keisuke Ogawa (Shinshu University, Japan); Shin Suzuki (Shinshu University, Japan); Makoto Sonehara (Shinshu University & Faculty of Engineering, Japan); Toshiro Sato (Shinshu University, Japan); Kazushi Asanuma (Nagano Prefectural Institute of Technology, Japan)

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The Electrical Signals Measurement for Nanowire Field Effect Transistors

Chien-Hung Chen (National Applied Research Laboratories, Taiwan); Yi-Jr Su (National Chiao Tung University, Taiwan); Tai-Shan Liao (Instrument Technology Research Center, Taiwan); Yuh-Shyong Yang (National Chiao Tung University, Taiwan); Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)

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PVDF film micro fabrication for the robotics skin sensor having flexibility and high sensitivity

Hiro Han (Wakayama University, Japan); Yuusaku Nakagawa (ITOKI, Japan); Yasuyuki Takai (Wakayama University, Japan); Kunitomo Kikuchi (Wakayama University, Japan); Shigeki Tsuchitani (Wakayama University, Japan)

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Effectiveness of model-based motion estimation from an inertial measurement unit

Mark Finch (University of Auckland, New Zealand); Thomas Lintern (The University of Auckland & The Auckland Bioengineering Institute, New Zealand); Andrew Taberner (University of Auckland, New Zealand); Poul F Nielsen (University of Auckland, New Zealand)

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Optimization of Planar Interdigitated Electrode Array for Bioimpedance Spectroscopy Restriction of the number of electrodes

Mouhamad Ibrahim (Nancy University, France); Djilali Kourtiche (NANCY Université, France); Mustapha Nadi (Nancy University Henri Poincaré & Faculty of Sciences and technology, France); Francois Montaigne (University of Nancy, France); Gwladys Lengaigne (University of Nancy, France)

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Application of an FBG sensors system for structural health monitoring and high performance trimming on racing yacht

Cristian Vendittozzi (SAPIENZA- Rome University, Italy); Giampiero Sindoni (SAPIENZA - Rome University, Italy); Claudio Paris (SAPIENZA - Rome University, Italy); Paolo del Marmo (GiPaC SRL, Italy)

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A Capacitive Array Sensing based Training System for Ophthalmic Anesthesia

Biswarup Mukherjee (Indian Institute of Technology, Madras, India); Bobby George (Indian Institute of Technology Madras, India); Mohanasankar Sivaprakasam (IIT Madras, India); Jagadeesh Kumar V (Indian Institute of Technology Madras, India); Jaichandran Venkatakrishnan (Sankara Nethralaya, India)
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A 23ppm/°C Readout Circuitry Improvement for Capacitive Sensor Acquisition Platforms

Raúl Aragonés (University & Universitat Autònoma de Barcelona, Spain); Joan Oliver (University & Universitat Autònoma de Barcelona, Spain); Carles Ferrer (Universitat Autònoma de Barcelona, Spain)
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Validation of an analytical model for contact mode plate deflection of touch mode capacitive pressure sensors

Giulio Fragiaco (Technical University of Denmark, DTU, Denmark); Erik Thomsen (Technical University of Denmark, Denmark); Thor Ansbæk (Technical University of Denmark, Denmark)
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Autonomous Sensing for Leakage Detection in Underground Water Pipelines

Abdullah Kadri (QU Wireless Innovations Center, Qatar); Adnan Abu-Dayya (QUWIC, Qatar); Daniele Trincherò (Politecnico di Torino & iXem Labs, Italy); Riccardo Stefanelli (Politecnico di Torino - iXem Labs, Italy)
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A Simple Multiple Loop Sensor Configuration for Vehicle Detection in an Undisciplined Traffic

Sheik Mohammed Ali (Indian Institute of Technology Madras, India); Bobby George (Indian Institute of Technology Madras, India); Lelitha Vanajakshi (IIT Madras, India)
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A Sensor-assisted Model for Estimating the Accuracy of Learning Retention in Computer Classroom

Jan-Pan Hwang (National Cheng Kung University, Taiwan); Ting-Ting Wu (National Cheng Kung University, Taiwan); Fu-Jou Lai (National Cheng Kung University, Taiwan); Yueh-Min Huang (National Cheng Kung University, Taiwan)
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Current Based Sensor Analog Signal Processing Technique for Extracting the Feedback Signal

Tommy Halim (University of Applied Sciences Giessen-Friedberg & CITY University London, Germany); Karsten Leitis (University of Applied Sciences Giessen-Friedberg, Germany)
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Model-Based Wheel Speed Acquisition by Interrupt Capture Method for Integrated Stability Control

Appalaraju Madeti (Tata Consultancy Services, India); Koustubh Vidyadhar Tilak (Tata Consultancy Services, India); Narasimha Bidi (Tata Consultancy Services, India); Ujjwala Karle (ARAI, India); Prasanna Venkatesan K (The Automotive Research Association of India, India)
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S14: S14C: Chemical and Biological Sensors

Development of Electrochemical Impedance Spectroscopy Based Sensing System for DEHP Detection

Asif Iqbal Zia (Massey University & COMSATS Institute of Information Technology, New Zealand); Abdul Rahman Mohd Syaifudin (Massey University, New Zealand); Subhas Mukhopadhyay (Massey University, New Zealand); Ibrahim Al-Bahadly (Massey University, New Zealand); Pak Yu (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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Optical sensing of protein adsorption on titanium implants

Raimo Silvennoinen (University of Eastern Finland, Department of Physics and Mathematics, Joensuu, Finland); Niko Penttinen (University of Eastern Finland, Department of Physics and Mathematics, Joensuu, Finland); Martti Silvennoinen (University of Eastern Finland, Department of Physics and Mathematics, Joensuu, Czech Republic); Jiří Vaněk (Masaryk University, Faculty of Medicine, Centre for Dental and Craniofacial Res, Czech Republic); Jana Šoukalová (Masaryk University, Faculty of Medicine, Centre for Dental and Craniofacial Res, Czech Republic); Vítězslav Březina (Masaryk University, Faculty of Medicine, Centre for Dental and Craniofacial Res, Czech Republic); Vladimír Vetterl (Masaryk University, Faculty of Medicine, Centre for Dental and Craniofacial Research, Czech Republic); Stanislav Hasoň (Masaryk University, Faculty of Medicine, Centre for Dental and Craniofacial Res, Czech Republic); Ladislav Cvrček (HVM Plasma, spol. s r. o., Czech Republic)
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Analysis of the Interference of Moisture on Ethylene Hormone Detection with a Palladium Complex

Arun Ghosh (AgResearch, New Zealand); Azam Ali (AgResearch Ltd, New Zealand); Stephen Ranford (AgResearch Limited, New Zealand)
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Novel Electrode Materials for Electrochemical Sensors

Hans Guth (Dresden University of Technology, Germany); Jens Zosel (Meinsberg Kurt-Schwabe Research Institute, Germany); Johanna Riedel (Meinsberg Kurt-Schwabe Research Institute, Germany); Nga Tran (Dresden University of Technology, Germany); Monika Berthold (Meinsberg Kurt-Schwabe Research Institute, Germany); Corinna Vonau (Meinsberg Kurt-Schwabe Research Institute, Germany); Ute Sasum (Sensor Research Center Greifswald, Germany); Pavel Shuk (Emerson, USA); Muthusamy Paramasivam (Central Electrochemical Research Institute, India); Vladimir Vashook (Dresden University of Technology, Germany)

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