

Monday, 22 June 2020

<b>Tutorials</b>					
<b>T1</b>	10:00 11:30	<b>Machine Learning for Application in Metrology</b> Alen Bosnjakovic, Tanja dorst, Ehlimana Jugo, Haris Lulic, Tizian Schneider, Physikalisch-Technische Bundesanstalt, Berlin (Germany)	<b>T2.1</b>	10:00 11:30	<b>Dealing with Distributed Sensor Networks 1</b> Bang Xiang Yong, Björn Ludwig, Maximilian Gruber, Benedikt Seeger, Alen Bosnjakovic Physikalisch-Technische Bundesanstalt, Berlin (Germany)
<b>T3</b>	12:00 13:30	<b>Testing of Gas and Humidity Sensors</b> Carlo Tiebe, Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin (Germany)	<b>T2.2</b>	12:00 13:30	<b>Dealing with Distributed Sensor Networks 2</b>
<b>T4</b>	14:00 15:30	<b>Handheld Near-Infrared Spectroscopy: Realistic on-site Applications versus Empty Promises</b> Heinz W. Siesler, University of Duisburg-Essen (Germany)	<b>T2.3</b>	14:00 15:30	<b>Dealing with Distributed Sensor Networks 3</b>
15:00	<b>Welcome Reception</b>				
16:00-18:00	<b>Opening Ceremony</b> Chairs: G. Gerlach, Technische Universität Dresden, Dresden (Germany) K. D. Sommer, TU Ilmenau, Ilmenau (Germany)  <b>Opening Speech</b>  <b>Presentaton of the AMA Innovation Award 2020</b>  Plenary Talk: <b>Measurement and Sensor Technology in the Digital Transformation Process</b> U. Kaiser, Endress+Hauser Group Services AG, Reinach (Switzerland)				
18:30	<b>Committees Dinner</b>				

Tuesday, 23 June 2020

Chairs:		G. Gerlach, Technische Universität Dresden, Dresden (Germany); K. D. Sommer, TU Ilmenau, Ilmenau (Germany); J. Hendricks, NIST – National Institute of Standards and Technology, Gaithersburg (USA)	
	09:00	<b>Plenary talk 2:</b>	
		<b>NIST on a Chip: Revolutionizing metrology through deployable, quantum-based sensors</b> B. Goldstein, NIST - National Institute of Standards and Technology, Gaithersburg (USA)	
	09:45	<b>Plenary talk 3:</b>	
		<b>High Throughput Development of Structural Materials Using Descriptors</b> L. Mädler, IWT - Leibniz-Institute for Materials Engineering and University of Bremen (Germany)	
	10:30	<b>Plenary talk 4:</b>	
		<b>Realising the Redefined Kelvin</b> G. Machin, National Physical Laboratory (NPL), Teddington (Great Britain)	
	11:15	<i>Coffee Break</i>	
<b>Session A1 Magnetic Sensors</b>			
Chair: R. Lerch, University Erlangen-Nuremberg, Erlangen (Germany)			
<b>A1.1</b>	11:30	348	<b>Analytic Method for Magnetic System Calibration</b> M. Ortner, P. Malagò, S. Lumetti, Silicon Austria Labs, Villach (Austria), D. Spitzer, Infineon Technologies Austria, Villach (Austria), S. Zaruba, Infineon Technologies AG, Neubiberg (Germany)
<b>A1.2</b>	12:00	316	<b>Noise-free Inspection of Rotary Encoder Magnets</b> K. Vervaeke, Magcam NV, Leuven (Belgium)
<b>A1.3</b>	12:20	225	<b>Multichannel Heterodyning-Based Eddy Current Testing with Magnetoresistive Sensors</b> H. Ehlers, M. Pelkner, Federal Institute for Materials Research and Testing (BAM), Berlin (Germany), R. Thewes, Institute of Technology Berlin, Berlin (Germany)
<b>A1.4</b>	12:40	363	<b>Highly Sensitive Compact Room Temperature Quantum Scalar Magnetometer</b> L. Horsthemke, C. Bischoff, P. Glösekötter, FH Münster - University of Applied Sciences, Steinfurt (Germany), B. Burchard, Elmos Semiconductor AG, Dortmund (Germany), R. Staacke, J. Meijer, Leipzig University, Leipzig (Germany)
	13:00	<i>Lunch Break</i>	
<b>Session B1 Hydrogen Sensors (Special Session)</b>			
Chair: J. Zosel, Kurt-Schwabe-Institute für Mess- und Sensortechnik Meinsberg e.V. (Germany)			
<b>B1.1</b>	11:30	392	<b>Hydrogen-Sensors for Selected Fuel Cell Applications</b> O. Kiesewetter, UST Umweltsensortechnik GmbH, Geschwenda (Germany)
<b>B1.2</b>	12:00	387	<b>Sensitivity and Selectivity of Pd-based Thin Film Hydrogen Sensors</b> M. Wienecke, L. Godenrath, M. Hoffmann, Materion GmbH, Wismar (Germany), J. Heeg, Hochschule Wismar (Germany)
<b>B1.3</b>	12:20	252	<b>Development and Characterization of a Miniaturized Hydrogen Gas Sensor System for Safety Monitoring</b> P. Sood, M. Mertig, J. Zosel, Kurt-Schwabe-Institut für Mess- und Sensortechnik Meinsberg e.V., Waldheim (Germany), O. Herrmann, M. Woratz, Analytical Control Instruments GmbH, Berlin (Germany)
<b>B1.4</b>	12:40	390	<b>Microstructural Investigations of Blackening in YSZ Sensors for Hydrogen Coulometry</b> M. Graff, W. Münchgesang, F. Altmann, Fraunhofer-Institut - IMWS, Halle (Germany), C. Hincinschi, T. Köhler, Technische Universität Bergakademie Freiberg (Germany), P. Sood, J. Zosel, M. Mertig, Kurt-Schwabe-Institut für Mess- und Sensortechnik Meinsberg e.V., Waldheim (Germany)
	13:00	<i>Lunch Break</i>	
<b>Session C1 IRS<sup>2</sup> Satellite Conference: Infrared Detectors</b>			
Chair: G. Gerlach, Technische Universität Dresden, Dresden (Germany)			
<b>C1.1</b>	11:30	206	<b>Thermal-electrical Design Improvements of a New CMOS Compatible Pyroelectric Infrared Sensor Based on HfO<sub>2</sub></b> R. Lehmkau, M. Ebemann, D. Mutschall, N. Neumann, InfraTec GmbH, Dresden (Germany), J. Lienig, TU Dresden, Dresden (Germany)
<b>C1.2</b>	12:00	249	<b>A Radiation Thermometer based on an InGaAs-Photodiode at 1.6 µm for Temperatures down to 80 °C</b> J. Bories, I. Mueller, B. Gutschwager, J. Hollandt, Physikalisch-Technische Bundesanstalt, Berlin (Germany)
<b>C1.3</b>	12:20	159	<b>Absolute Calibration of the Spectral Responsivity of Detectors in the MIR at the PTB</b> T. Pohl, P. Meindl, U. Johannsen, L. Werner, J. Hollandt, Physikalisch-Technische Bundesanstalt (PTB), Berlin (Germany)
<b>C1.4</b>	12:40	240	<b>Multi-spectral mid-IR Temperature Measurement Using Tuneable Detectors</b> M. Gillott, F. Turner, P. Droegmoeller, Ametek Land, Dronfield (United Kingdom)
	13:00	<i>Lunch Break</i>	
<b>Session D1 Model-based Measurement</b>			
Chair: E. Benoit, Université Savoie Mont Blanc, Chambéry (France); F. Puente-León, Karlsruhe Institute of Technology - KIT, Karlsruhe (Germany)			
<b>D1.1</b>	11:30	257	<b>Minimal Model Selection for Calibrating a Hall-Stress- Temperature Multisensor System Using LASSO Regression</b> M. Berger, O. Paul, University of Freiburg, Freiburg (Germany), S. Huber, C. Schott, Melexis Technologies SA., Bevaix (Switzerland)
<b>D1.2</b>	12:00	259	<b>Precision measuring chain out of reference strain gauge sensor and inductive-voltage-divider-based digital amplifier</b> A. Schäfer, Hottinger Baldwin Messtechnik - HBM, Darmstadt (Germany)
<b>D1.3</b>	12:20	292	<b>Increasing the Sensitivity in the Determination of Material Parameters by Using Arbitrary Loads in Ultrasonic Transmission Measurements</b> D. Dreiling, N. Feldmann, B. Henning, Paderborn University, Paderborn (Germany), D. Itner, H. Gravenkamp, University of Duisburg-Essen, Essen (Germany)
<b>D1.4</b>	12:40	157	<b>Measurements at Laser Materials Processing Machines: Spectrum Deconvolution, Including Uncertainties and Model Selection</b> R. Behrens, B. Pullner, M. Reginatto, Physikalisch-Technische Bundesanstalt (PTB), Braunschweig (Germany)
	13:00	<i>Lunch Break</i>	
<b>Session E1 Traditional and Quantum-based Measurement Standards</b>			
Chair: J. Hendricks, NIST – National Institute of Standards and Technology, Gaithersburg (USA)			
<b>E1.1</b>	11:30	201	<b>Innovative Mass Standards for the Worldwide Transfer of the Redefined Unit Kilogram</b> K. Lehmann, D. Knopf, F. Härtig, Physikalisch-Technische Bundesanstalt (PTB), Braunschweig (Germany)
<b>E1.2</b>	12:00	293	<b>SI Realization of the Farad at LNE</b> A. Imanaliev, O. Thevenot, K. Dougdag, F. Piquemal, LNE, Trappes (France)
<b>E1.3</b>	12:20	234	<b>Studies on the Use of Bandgap References as a Voltage Standard</b> B. Schumacher, C. Rohrig, Physikalisch-Technische Bundesanstalt, Braunschweig (Germany), G. Weckwerth, wekomm engineering GmbH, Planegg (Germany)
<b>E1.4</b>	12:40	364	<b>Photonic Thermometry at PTB – Challenges and Perspectives for Contact Temperature Metrology Utilizing Optical Sensors</b> S. Krenek, R. Eisermann, S. Rudtsch, Physikalisch-Technische Bundesanstalt, Berlin (Germany), G. Winzer, Leibniz-Institut für innovative Mikroelektronik, Frankfurt/Oder (Germany), T. Habisreuther, Leibniz-Institut für Photonische Technologien, Jena (Germany)
	13:00	<i>Lunch Break</i>	

14:00 - 16:00 **Poster Session** (Please find the list at the end of the Conference Program)

Tuesday, 23 June 2020

Session A2 Piezoelectric High-temperature Sensors (Special Session)		Session B2 Flow Measurement		Session C2 IRS <sup>2</sup> Satellite Conference: Infrared Spectroscopic Gas Sensing (Special Session)		Session D2 AI-Approaches in Measurement		Session E2 Future Topics in Metrology (Special Session)	
Chair: Y. Suhak, Clausthal University of Technology, Goslar (Germany)		Chair: S. Rupitsch, University Erlangen-Nuremberg, Erlangen (Germany)		Chair: J. M. Harren, Radboud University, Nijmegen (The Netherlands)		Chair: A. König, Technical University Kaiserslautern, Kaiserslautern (Germany); K. D. Sommer, TU Ilmenau, Ilmenau (Germany)		Chair: S. Eichstädt, Physikalisch-Technische Bundesanstalt (PTB), Berlin; P. Ulbig, Physikalisch-Technische Bundesanstalt (PTB), Braunschweig (Germany)	
<b>A2.1</b>	16:00 303	<b>B2.1</b>	16:00 202	<b>C2.1</b>	16:00 279	<b>D2.1</b>	16:00 391	<b>E2.1</b>	16:00 381
	<b>Contributions to Acoustic Loss in Langasite, Langatate, and Catangasite Resonators at High Temperatures</b> W. L. Johnson, National Institute of Standards and Technology, Boulder (USA)		<b>Monitoring of Pumps and Valves in Fluidic Systems with Electro-Magnetic Flowmeters</b> J. Förster, T. Fritsch, J. Friderich, KROHNE Innovation GmbH, Duisburg (Germany), R. Gentemann, R. Vonnahme, WILO SE, Dortmund (Germany)		<b>FLAIR Airborne System for Multi-Species Atmospheric Gas Spectroscopy in the mid-IR</b> L. Balet, S. Chin, T. Herr, F. Lütolf, P. Renevey, J. Van Zaen, S. Dassen, J. Gouman, G. Buchs, S. Lecomte, CSEM SA, Neuchâtel (Switzerland), G. Vergara, New Infrared Technologies S.L., Madrid (Spain), H. Martin, SenseAir AB, Delsbo (Sweden), P. M. Moselund, NKT Photonic A/S, Birkerød (Denmark), F. J. M. Harren, Radboud University, Nijmegen (The Netherlands), C. Hüglin, EMPA, Dübendorf (Switzerland)		<b>Artificial Intelligence with Neural Networks in Optical Measurement and Inspection Systems – Opportunities and Challenges</b> M. Heizmann, M. Ulrich, Karlsruhe Institute of Technology, Karlsruhe (Germany), A. Braun, University of Applied Sciences, Düsseldorf (Germany), M. Hüttel, Fraunhofer IPA, Stuttgart (Germany), C. Klüver, University of Duisburg-Essen, Essen (Germany), Erik Marquardt, VDI e. V., Düsseldorf (Germany), M. Overdick, SICK AG, Waldkirch (Germany)		<b>Introduction “Future Topics in Metrology”</b> S. Eichstädt, Physikalisch-Technische Bundesanstalt, Berlin (Germany)
<b>A2.2</b>	16:30 296	<b>B2.2</b>	16:30 366	<b>C2.2</b>	16:30 291	<b>D2.2</b>	16:30 221	<b>E2.2</b>	16:30 393
	<b>CTGS: Advanced Piezoelectric Single Crystal for Sensor Applications over Extremely Wide Temperature Range</b> A. Sotnikov, R. Weser, H. Schmid, Leibniz IFW Dresden, Dresden (Germany), B. P. Sorokin, Technological Institute for Superhard and Novel Carbon Materials, Moscow (Russia), Y. Suhak, H. Fritze, Clausthal University of Technology, Goslar (Germany)		<b>A Hermetic Sensor Concept for Measuring Fluid Flows</b> P. Radler, J. Ringkamp, P. Lehardt, J. Langejürgen, Fraunhofer IPA, Mannheim (Germany)		<b>New Coherent Sources for mid Infrared Spectroscopic Applications</b> F. J. M. Harren, Radboud University, Nijmegen (The Netherlands)		<b>Visualizing Neural Network Decisions for Industrial Sound Analysis</b> D. Johnson, J. Liebetrau, Fraunhofer Institute IDMT, Ilmenau (Germany), S. Grollmisch, University of Technology, Ilmenau (Germany)		<b>Isentropic Information in Sensor Networks</b> M. Gruber, Physikalisch-Technische Bundesanstalt, Berlin (Germany)
<b>A2.3</b>	16:50 277	<b>B2.3</b>	16:50 359	<b>C2.3</b>	16:50 290	<b>D2.3</b>	16:50 226	<b>E2.3</b>	16:50 165
	<b>High-Temperature Acoustic Loss in Bulk AlN Piezoelectric Resonators</b> H. Fritze, I. Kogut, Clausthal University of Technology, Goslar (Germany), I. Gamov, K. Irmischer, M. Bickermann, Leibniz-Institut für Kristallzüchtung, Berlin (Germany)		<b>Development of a Capacitive Sensor System for Gas-Liquid Flow Monitoring and Application in Hazardous Areas</b> M. J. da Silva, E. Nunes dos Santos, D. Bertoldi, A. do Nascimento Wrasse, R. E. M. Morales, Federal University of Technology - Paraná (UTFPR), Curitiba (Brazil), D. C. dos Reis, R. da Fonseca Jr., Petrobras Research and Development Center (CENPES), Rio de Janeiro (Brazil)		<b>Uncooled High Speed MWIR Cameras Applied to Advanced Spectrometers</b> G. Vergara, R. Linares, R. Gutiérrez, C. Fernández, S. de la Fuente, A. Baldasano, New Infrared Technologies, Boadilla del Monte-Madrid (Spain)		<b>Adaptive Algorithms for Linear Position Measurement Applications</b> A. Voss, A. Bartos, TE Connectivity Sensors Germany GmbH, Dortmund (Germany)		<b>Propagation of Uncertainty for an Adaptive Linear Approximation Algorithm</b> T. Dorst, S. Eichstädt, Physikalisch-Technische Bundesanstalt, Braunschweig and Berlin (Germany), T. Schneider, ZeMA – Center for Mechatronics and Automation Technology gGmbH, Saarbruecken, (Germany), A. Schütze, Saarland University, Saarbruecken (Germany)
<b>A2.4</b>	17:10 264	<b>B2.4</b>	17:10 367	<b>C2.4</b>	17:10 318	<b>D2.4</b>	17:10 321	<b>E2.4</b>	17:10 380
	<b>Investigations of the Actuator Based on Lithium Niobate Diffuse Bonded Bimorph Structure</b> U. Yakhnevych, O. Buryy, S. Ubizskii, D. Sugak, Lviv Polytechnic National University, Lviv (Ukraine), Y. Suhak, H. Fritze, Clausthal University of Technology, Goslar (Germany), I. I. Syvorotka, Scientific Research Company “Electron-Carat”, Lviv (Ukraine)		<b>Microwave Mass Flow Sensor for Online Measurements of Pure Liquids and Mixtures</b> M. E. Euken, A. Penirschke, Technische Hochschule Mittelhessen, Friedberg (Germany)		<b>Highly Compact Laser Spectrometers for Mobile Trace Gas Sensing Applications</b> M. Graf, B. Tuzson, P. Scheidegger, H. Looser, A. Kupferschmid, J. Ravelid, L. Emmenegger, Empa Swiss Federal Laboratories for Materials Testing and Research, Dübendorf (Switzerland)		<b>Lean Data with Edge Analytics: Decentralized Current Profile Analysis on Embedded Systems using Neural Networks</b> T. Küfner, University Bayreuth, Bayreuth (Germany), A. G. Trenz, Fraunhofer IPA, Bayreuth (Germany), S. Schönig, Maxsima GmbH & Co. KG, Floss (Germany)		<b>Deep Neural Networks for Optical Form Measurements</b> L. Hoffmann, C. Elster, Physikalisch-Technische Bundesanstalt, Braunschweig and Berlin, (Germany)
<b>A2.5</b>	17:30 251	<b>B2.5</b>	17:30 357	<b>C2.5</b>	17:30 209	<b>D2.5</b>	17:30 298	<b>E2.5</b>	17:30 394
	<b>Electrical and Electromechanical Properties of Single Crystalline Li(Nb,Ta)O<sub>3</sub> Solid Solutions for High-Temperature Actuator Applications</b> Y. Suhak, B. Jerliu, H. Fritze, Clausthal University of Technology, Goslar (Germany), S. Ganschow, Leibniz-Institut für Kristallzüchtung, Berlin (Germany), D. Roshchupkin, B. Red'kin, Institute of Microelectronics Technology and High Purity Materials, Chernogolovka (Russia), S. Sanna, Justus Liebig University Gießen, Gießen (Germany)		<b>Modeling the Fluid-Structure Interaction of Non-conventional Vibrational Modes for MEMS Fluid Sensing</b> D. Platz, A. Gesing, U. Schmid, TU Wien, Vienna (Austria)		<b>Multispecies Trace Gas Sensor for Real-time Quality Control of Stored Fruits</b> A. Khodabakhsh, K. E. Jahromi, Q. Pan, M. Nematollahi, F. J. M. Harren, Radboud University, Nijmegen (The Netherlands)		<b>Application of Machine Learning Algorithms for the Analysis of an Optical Fiber Sensor for Use in Endovascular Coiling of Intracranial Aneurysms</b> S. Shojaei Khatouni, J. C. E. Ewald, H. K. Trieu, Hamburg University of Technology, Hamburg (Germany)		<b>Dynamic Calibration of Digital Sensors</b> B. Seeger, Physikalisch-Technische Bundesanstalt, Braunschweig (Germany)

19:00 Conference dinner at Bratwurst Röslein, Nuremberg (Germany)

**Wednesday, 24 June 2020**

Chairs:		G. Gerlach, Technische Universität Dresden, Dresden (Germany), K. D. Sommer, TU Ilmenau, Ilmenau (Germany)	
	09:00	<b>Plenary talk 4:</b>	
		<b>The Revised SI for Innovation, Science and the Second Quantum Revolution</b> J. Ullrich, Physikalisch-Technische Bundesanstalt (Germany)	
	09:45	<b>Plenary talk 5:</b>	
		<b>Measurements beyond the SI: On the Longstanding Existence of Metrology-ready Precision Quantities in psychology and the Social Sciences</b> W. P. Fisher, University of California, Berkeley (USA)	
	10:30	Coffee Break	
<b>Session A3 Low-power Sensing and Energy Harvesting</b>		<b>Session B3 Biosensors and Sensors for Biology</b>	
Chair: E. Starke, SICK Engineering GmbH, Ottendorf-Okrilla (Germany)		Chair: U. Schmid, Technical University Vienna, Vienna (Austria)	
<b>A3.1</b>	11:00	<b>B3.1</b>	11:00
284	<b>System Design for Low Power Applications with Digital MEMS Sensors</b> P. Stukjunger, STMicroelectronics, Prague (Czech Republic)	343	<b>Integrated Intelligent Sensor Systems for In-Hive Varroa Infestation Control in Digital Bee Keeping</b> A. König, TU Kaiserslautern, Kaiserslautern (Germany)
<b>A3.2</b>	11:30	<b>B3.2</b>	11:30
368	<b>Flexible Equivalent Circuit Modeling for Piezoelectric Vibration Energy Harvesters</b> D. Gedeon, S. J. Rupitsch, University Erlangen-Nuremberg, Erlangen (Germany)	211	<b>Adaptive Soft Sensor for Bioprocess Monitoring</b> M. Siegl, V. Brunner, D. Geier, T. Becker, Technische Universität München, Freising (Germany)
<b>A3.3</b>	11:50	<b>B3.3</b>	11:50
188	<b>A Self-sustained Microcontroller Regulated Energy Extraction Network for Piezoelectric Energy Harvesters</b> P. Dorsch, S. Götz, F. Hubert, S. Rupitsch, Friedrich-Alexander-University Erlangen-Nuremberg, Erlangen (Germany)	314	<b>A Wearable Sweat Electrochemical Microsensor for Healthcare Applications</b> E.-M. Korek, J. Boudaden, I. Eisele, C. Kutter, Fraunhofer EMFT, München (Germany), C. Pfeffer, R. Brederlow, Technische Universität München, München (Germany)
<b>A3.4</b>	12:10	<b>B3.4</b>	12:10
231	<b>Universal Energy Harvesting Topology Used for Small Variable Temperature Gradients</b> M. Lenzofer, Silicon Austria Labs GmbH, Villach (Austria)	350	<b>Synthesis of MIP Nanoparticles for Selective Sensing of Penicillin V</b> M. Bagheri, P. A. Lieberzeit, University of Vienna, Vienna (Austria)
	12:30		12:30
	Lunch Break		Lunch Break
<b>Session C3 IRS<sup>+</sup> Satellite Conference: Infrared Cameras and Thermal Imaging</b>		<b>Session D3 Novel Measurement Approaches &amp; Measurement Uncertainty</b>	
Chair: J. Schieferdecker, Heimann Sensor GmbH, Dresden (Germany)		Chair: T. Fröhlich, TU Ilmenau, Ilmenau (Germany); L. Pendrill, SP Technical Research Institute of Sweden, Boras (Sweden)	
<b>C3.1</b>	11:00	<b>D3.1</b>	11:00
278	<b>Metrological Characterization and Calibration of Thermographic Cameras in the Temperature Range from 50 °C to 960 °C</b> S. König, B. Gutschwager, I. Müller, R. D. Taubert, J. Hollandt, Physikalisch-Technische Bundesanstalt, Berlin (Germany), Frank Nagel, DIAS Infrared GmbH, Dresden (Germany)	326	<b>Operational Measurement Uncertainty and Bayesian Probability Distribution</b> R. N. Kacker, National Institute of Standards and Technology, Gaithersburg (USA), R. Kessel, Metrodata, Braunschweig (Germany), K.-D. Sommer, Technical University of Ilmenau, Ilmenau (Germany)
<b>C3.2</b>	11:30	<b>D3.2</b>	11:30
239	<b>Evaluation of Cryogenic Preamplifiers for Infrared Focal Plane Array Detectors</b> C. Mandla, M. Plattner, Max-Planck-Institute for Extraterrestrial Physics, Garching (Germany), M. Engelhardt, N. Bezawada, D. Ives, European Southern Observatory, Garching (Germany)	283	<b>Light Stimulation of Gas Sensors with an LED Array in a Compact Setup</b> R. Falkowski, J. Joppich, T. Baur, T. Sauerwald, A. Schütze, Saarland University, Saarbrückenn (Germany)
<b>C3.3</b>	11:50	<b>D3.3</b>	11:50
236	<b>Development of a Scalable Nanotube-Microbolometer Technology</b> M. Michel, S. Weyers, D. Weiler, T. Geruschke, S. Blaeser, E. Zakizade, F. Hochschulz, H. Vogt, Fraunhofer Institute for Microelectronic Circuits and Systems IMS, Duisburg (Germany)	244	<b>Analysis of Accuracy Requirements to the Meteorological Sensors Used to Compensate for the Influence of the Earth's Atmosphere in High Precision Length Measurement</b> P. Neyezhnikov, V. Kupko, T. Panasenka, A. Prokopov, V. Skliarov, A. Shloma, National Scientific Centre "Institute of Metrology", Kharkiv (Ukraine)
<b>C3.4</b>	12:10	<b>D3.4</b>	12:10
227	<b>New High Resolution 120x84 Thermopile Arrays for IR Imaging Applications</b> J. Schieferdecker, M. Schnorr, B. Forg, F. Herrmann, C. Schmidt, W. Leneke, M. Simon, Heimann Sensor GmbH, Dresden (Germany)	192	<b>Difficulties in Understanding and Teaching the Definition of the Kilogram in the Revised SI</b> J. Valdés, Universidad Nacional de San Martín, Buenos Aires (Argentina)
	12:30		12:30
	Lunch Break		Lunch Break
<b>Session E3 Traceability, New Calibration and Testing Methods</b>		Chair: P. Neyezhnikov, National Scientific Centre "Institute for Metrology" - NSCIM, Kharkiv (Ukraine)	
<b>E3.1</b>	11:00	<b>E3.2</b>	11:30
215	<b>Metrological Support of VNIIFTRI for Air Ions Measurements</b> P. N. Zubkov, N. G. Oganyan, All-Russian Scientific Research Institute of Physicotechnical and Radio Engineering Measurements (VNIIFTRI), Moscow region (Russia)	285	<b>Traceable Measurements of Harmonic (2 – 150 kHz) Emissions in Smart Grids</b> D. Istrate, D. Amaripadath, LNE, Trappes (France), E. Toutain, EDF, Muret-sur-Loing (France), R. Roche, F. Gao, Univ. Bourgogne Franche-Comté, Belfort (France)
<b>E3.3</b>	11:50	<b>E3.4</b>	12:10
346	<b>Calibration Service as a Gateway to Sustainable Research and Development</b> M. Melzer, M. Fischer, M. Thomas, A. Subaric-Leitis, M. Bartholmai, Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin (Germany)	341	<b>Calibration of Digital Dynamic Pressure Sensors</b> R. Yilmaz, Y. Durgut, A. Hamarat, TUBITAK UME, Kocaeli (Turkey)
	12:30		12:30
	Lunch Break		Lunch Break

Wednesday, 24 June 2020

Session A4 Measurement of Force, Pressure, and Strain			Session B4 Gas Sensors for Safety and Security			Session C4 IRS <sup>2</sup> Satellite Conference: Infrared Sensor Applications: Non-destructive Testing, Spectroscopy			Session D4 Condition Monitoring			Session E4 Advanced Measurement and Testing, Regulations		
Chair: T. Fröhlich, TU Ilmenau, Ilmenau (Germany)			Chair: R. Moos, Universität Bayreuth, Bayreuth (Germany)			Chair: J. Hollandt, Physikalisch-Technische Bundesanstalt, Berlin (Germany)			Chair: G. Fischerauer, University Bayreuth, Bayreuth (Germany); A. Schütze, Saarland University, Saarbrücken (Germany)			Chair: M. Bartholmai, BAM Bundesanstalt für Materialforschung und -prüfung, Berlin (Germany)		
<b>A4.1</b>	14:00	230 <b>Measuring Considerations for Jitter Characterization on Small Satellite Reaction Wheels</b> C. Cavalloni, M. Dumont, Institution Kistler Instrumente AG, Winterthur (Switzerland), B. Zwolinski, Kistler Instrument Corp., Amherst (USA)	<b>B4.1</b>	14:00	294 <b>Fluorescence Multi-Sensor System for the Simultaneous Detection of Various Types of Explosives in the Gas Phase</b> B. Heller, M. Biyikal, R. Noske, K. Rurack, Federal Institute for Materials Research and Testing (BAM), Berlin (Germany)	<b>C4.1</b>	14:00	312 <b>New Techniques in Super Resolution Photothermal Imaging for Nondestructive Testing</b> S. Ahmadi, P. Hirsch, J. Lecompaon, C. Hassenstein, M. Ziegler, Bundesanstalt für Materialforschung und -prüfung, Berlin (Germany), P. Jung, G. Caire, Technical University of Berlin, Berlin (Germany)	<b>D4.1</b>	14:00	287 <b>Optical Microphone-based Acoustic Response Analysis for Non-contact Non-destructive Testing</b> W. Rohringer, G. Kaniak, F. Lücking, N. Panzer, B. Fischer, XARION Laser Acoustics GmbH, Vienna (Austria)	<b>E4.1</b>	14:00	355 <b>Statistical Analysis of Nonlinear Time Series Based on Bearing Dynamic Response</b> N. Meier, A. Georgiadis, Leuphana University of Lüneburg, Lüneburg (Germany), B. Ambrozkiwicz, G. Litak, Lublin University of Technology, Lublin (Poland)
<b>A4.2</b>	14:30	179 <b>New Reference Force Transducer for Compressive Forces Based on the Radially Symmetric Shear-beam Principle</b> T. Kleckers, Hottinger Baldwin Messtechnik GmbH, Darmstadt (Germany)	<b>B4.2</b>	14:30	160 <b>Percolation Networks of Polypyrrole for Vapour Sensing of Improvised Explosive Devices</b> M. Lefferts, B. Armitage, K. Murugappan, M. Castell, University of Oxford, Oxford (United Kingdom)	<b>C4.2</b>	14:30	243 <b>Detection of Initial Subsurface Defects on Coated Glass-Fiber Reinforced Composite Components by Means of Active Micro-thermography</b> F. Jensen, M. Sorg, A. Fischer, University of Bremen, Bremen (Germany)	<b>D4.2</b>	14:30	317 <b>Condition Monitoring of Machine Elements using Magnetoresistive Sensors</b> R. Slatter, Sensitec GmbH, Lahnau (Germany)	<b>E4.2</b>	14:30	288 <b>Outline for a Radiometric Unit of Measure to Characterize SWIR Illumination</b> M. Hübner, HENSOLDT Optronics GmbH, Oberkochen (Germany), A. Richards, FLIR Systems Inc., Wilsonville (USA)
<b>A4.3</b>	14:50	305 <b>Development and Calibration of Dynamic Pressure Sensor for Motor Pressure Range</b> J. Salminen, R. Högström, S. Saxholm, J. Hämäläinen, VTT Technical Research Centre of Finland Ltd., Espoo (Finland)	<b>B4.3</b>	14:50	334 <b>Wireless Low-power Warning System for the Detection of Flammable Gases</b> B. Bierer, J. Wöllenstein, O. Yurchenko, L. Engel, H.-F. Pernau, Fraunhofer Institute IPM, Freiburg (Germany), L. Reindl, D. Grgic, University of Freiburg, Freiburg (Germany)	<b>C4.3</b>	14:50	195 <b>Emissivity Measurement of Semitransparent Samples</b> J. Gieseler, A. Adibekyan, C. Monte, J. Hollandt, Physikalisch-Technische Bundesanstalt (PTB), Braunschweig (Germany)	<b>D4.3</b>	14:50	237 <b>Inline Inspection of Ceramic Tape Casting Processes by Means of Optical and Eddy Current Methods</b> T. Härtling, M. Heymann, S. Münch, M. Schulze, Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden (Germany), B. Capraro, D. Schabbel, A. Vogel, Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Hermsdorf (Germany)	<b>E4.3</b>	14:50	218 <b>Measurement Uncertainty Consideration of Electric Field Meters</b> C. Schierding, M. Thedens, M. Beyer, Physikalisch-Technische Bundesanstalt, Braunschweig (Germany)
<b>A4.4</b>	15:10	247 <b>Measuring Load on Linear Guides in Different Load Scenarios Using an Integrated DLC Based Sensor System</b> D. Krampert, S. Unsleber, Bosch Rexroth AG, Schweinfurt (Germany), L. Reindl, Albert-Ludwigs-University Freiburg, IMTEK, Freiburg (Germany)	<b>B4.4</b>	15:10	273 <b>Ultra-fast Gas Spectroscopy with a Dual-comb Spectrometer</b> L. Nitzsche, J. Kießling, S. Wolf, F. Kühnemann, J. Wöllenstein, Fraunhofer Institute for Physical Measurement Techniques IPM, Freiburg (Germany)	<b>C4.4</b>	15:10	248 <b>Measurement of <sup>13</sup>C and <sup>18</sup>O Ratio in CO<sub>2</sub> Using Quantum Cascade Laser Based Tunable Absorption Spectroscopy</b> P. Nitzsche, C. Dinc, J. Wöllenstein, K. Schmitt, University of Freiburg, Freiburg (Germany)	<b>D4.4</b>	15:10	217 <b>Characterization of Sand and Sand-Binder Systems from the Foundry Industry with Impedance Spectroscopy</b> L. Bifano, A. Fischerauer, G. Fischerauer, Universität Bayreuth (Germany), A. Liedtke, Michenfelder Elektrotechnik, Mainz (Germany)	<b>E4.4</b>	15:10	260 <b>Higher Accuracy for Absolute Magnetic Position Measurement</b> T. Becker, BOGEN Electronic GmbH, Berlin (Germany)
<b>A4.5</b>	15:30	267 <b>Influence of Temporal Strain Evolution on Distributed Strain Sensing with OTDR in Polymer Optical Fibers</b> S. A. Dengler, N. Schmidt, M. Luber, J. Fischer, O. Ziemann, R. Engelbrecht, Technische Hochschule Nürnberg Georg Simon Ohm, Nuremberg (Germany), H. Hangen, HUESKER Synthetic GmbH, Gescher (Germany)	<b>B4.5</b>	15:30	205 <b>Sensory Options for Earthquake Victim Recovery</b> R. Jha, Vishvachi, W. Lang, R. Jedermann, University of Bremen, Bremen (Germany)	<b>C4.5</b>	15:30	365 <b>FT-IR Coupled Goniometer Setup for Characterization of the Spatial and Spectral Emission of IR-Sources</b> A. Eberhardt, C. Weber, M.-L. Bauersfeld, J. Wöllenstein, Fraunhofer Institute for Physical Measurement Techniques IPM, Freiburg (Germany)	<b>D4.5</b>	15:30	254 <b>Non-destructive Validation Method for Understanding Water Uptake Processes of Moldings in Electronic Packaging</b> P. Gierth, L. Rebenklau, U. Gierth, U. Langklotz, M. Schneider Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden (Germany)	<b>E4.5</b>	15:30	223 <b>Study the Co-C/Re-C Eutectics Fixed Point Measurements For High Temperature Radiation Thermometer</b> H. Ko, J. Liu, S. Liao, C. Yeh, C. Chen, Industrial Technology Research Institute, Hsinchu (Taiwan)

16:00 - 17:00 Science Slam



Thursday, 25 June 2020

Chairs:		G. Gerlach, Technische Universität Dresden, Dresden (Germany), K. D. Sommer, TU Ilmenau, Ilmenau (Germany)																	
	09:00	<b>Plenary talk 6:</b>																	
		<b>NIST on a Chip: Photonic and Quantum-Based Sensors for Measurements of Pressure, Vacuum, Temperature and Beyond!</b> J. Hendricks, Z. Ahmed, D. Barker, K. Douglass, S. Eckel, J. Fedchak, N. Klimov, J. Ricker, J. Scherschligt, NIST – National Institute of Standards and Technology, Gaithersburg (USA)																	
	09:45	<b>Plenary talk 7:</b>																	
		<b>Push and Pull in Digitalization: Technology Drivers for Sensor Data Fusion</b> W. Koch, Fraunhofer FKIE / University of Bonn (Germany)																	
	10:30	Coffee Break																	
<b>Session A5 Sensor Materials and Technologies</b>		<b>Session B5 Air Quality Monitoring</b>		<b>Session C5 Thermometry and Thermal Imaging</b>		<b>Session D5 Advanced Methods &amp; Measurement Systems</b>		<b>Session E5 Creative Metrology: From Research to Industry 4.0 (Special Session)</b>											
Chair: H. K. Trieu, Technische Universität Hamburg-Harburg, Hamburg (Germany)		Chair: M. Batholmai, Federal Institute for Materials Research and Testing (BAM), Berlin (Germany)		Chair: G. Fischerauer, University Bayreuth, Bayreuth (Germany)		Chair: C. Benoit, Université Savoie Mont Blanc, Chambéry (France)		Chair: B. Jeckelmann, Eidgenössisches Institut für Metrologie, Bern-Wabern (Switzerland); S. Gazal, CIM, Villeurbanne (France)											
<b>A5.1</b>	11:00	289	<b>Development of a 3D-integrated Thermocatalytic Sensor for Combustible Gas Detection</b> F. M. Münchenberger, S. Dreiner, H. Kappert, R. M. Neubieser, H. Vogt, Fraunhofer Institute for Microelectronic Circuits and Systems, Duisburg (Germany)	<b>B5.1</b>	11:00	388	<b>Evaluation of Commercial Metal Oxide Gas Sensors for Indoor Aeration Control</b> J. Zosel, M. Mertig, Kurt-Schwabe-Institut für Mess- und Sensortechnik e.V. Meinsberg, Waldheim (Germany), D. Deininger, Renesas Electronics America Inc., Longmont, (USA), R. Schreiber, C. Meyer, Renesas Germany GmbH, Dresden (Germany)	<b>C5.1</b>	11:00	313	<b>Using Spatial and Temporal Shaping for Laser-induced Diffuse Thermal Wave Fields in Thermography</b> S. Ahmadi, M. Ziegler, P. Hirsch, J. Lecomagnon, C. Hassenstein, E. Thiel, N. W. Pech-May, Bundesanstalt für Materialforschung und -prüfung, Berlin (Germany)	<b>D5.1</b>	11:00	360	<b>An Approach for Feature Interpolation Between Classes to Simplify Calibration of Sensor Systems for Odour Monitoring</b> J. Joppich, M. Bastuck, A. Schütze, T. Sauerwald, Saarland University, Saarbrücken (Germany)	<b>E5.1</b>	11:00	0	<b>Metrology, a Key Player of Industry 4.0</b> D. Jullien, DigiPlant (France)
<b>A5.2</b>	11:30	214	<b>Inline Quality Monitoring of Diesel Exhaust Fluid (AdBlue) by Using the 3w-Method</b> R. E. Bernhardsgrütter, C. J. Hepp, Innovative Sensor Technology IST AG, Ebnat-Kappel (Switzerland), M. Jäggle, H.-F. Pernau, K. Schmitt, J. Wöllenstein, University of Freiburg, Freiburg (Germany)	<b>B5.2</b>	11:30	266	<b>Metal Oxide Nanolayer Decorated Epitaxial Graphene Gas Sensors for Air Quality Monitoring</b> M. Rodner, A. Icardi, J. Eriksson, Linköping University, Linköping (Sweden), M. Kodu, R. Jaaniso, University of Tartu, Tartu (Estonia)	<b>C5.2</b>	11:30	349	<b>Application of Microwave-based Electrical Read-out of Fiber Bragg Gratings in Thermometry</b> U. Nordmeyer, N. Neumann, X. Wang, D. Plettemeier, TU Dresden, Dresden (Germany), T. Thiel, AOS GmbH, Dresden (Germany), K. Kojucharow, KMDC, Dresden (Germany)	<b>D5.2</b>	11:30	351	<b>Robust Optimization of Self-x Sensory Electronics in Presences of Environmental Variations for Industry 4.0</b> Q. Zaman, S. Alraho, A. König, TU Kaiserslautern, Kaiserslautern (Germany)	<b>E5.2</b>	11:30	0	<b>Hot Research Topics in Metrology</b> M. Chambon, Laboratoire National de Métrologie (LNE), Paris (France)
<b>A5.3</b>	11:50	271	<b>Single Cell Immobilization at High Flow Rates Using 2PP-Traps in a Microfluidic Channel</b> S. Reede, M. J. Vellekoop, University of Bremen, Bremen (Germany), H. Müller-Landau, N. Matscheko, U. Rant, Dynamic Biosensors, Martinsried/ Planegg (Germany), F. Lucklum, Technical University of Denmark, Kgs. Lyngby (Denmark)	<b>B5.3</b>	11:50	222	<b>Evaluation of Indoor Air Quality by High School Students</b> S. Höfner, A. Schütze, Saarland University, Saarbrücken (Germany), M. Hirth, Jochen Kuhn, Technical University Kaiserslautern, Kaiserslautern (Germany) B. Brück, Student Research Center, Saarlouis (Germany)	<b>C5.3</b>	11:50	373	<b>Thermographic Monitoring of Electrical Assets by Enhanced Thermal Images for Feature Extraction</b> A. Boyaci, S. Wildermuth, ABB AG, Ladenburg (Germany)	<b>D5.3</b>	11:50	253	<b>Three-directional Drift Correction Method Based on Iterative Closest Point (ICP) Algorithm</b> J. Degenhardt, G. Dai, Physikalisch-Technische Bundesanstalt, Braunschweig (Germany), R. Tutsch, Technische Universität Braunschweig, Braunschweig (Germany)	<b>E5.3</b>	11:50	0	<b>Enabling Technologies for Metrology of the Future</b> C. Corleto, STIL SAS, Aix-en-Provence (France)
<b>A5.4</b>	12:10	270	<b>Development of a New Measurement System for Electrical Conductivity and Hall Constant</b> R. Werner, J. Kita, R. Moos, University Bayreuth, Bayreuth (Germany), M. Gollner, F. Linseis, Linseis Thermal Analysis, Selb (Germany)	<b>B5.4</b>	12:10	347	<b>Semi-automatic Measurement Device for Long-term Monitoring of Ammonia in Gas Phase</b> K. Gawlitza, S. Johann, M. Mansurova, H. Kohlhoff, C. Tiebe, J. Bell, M. Bartholmai, K. Rurack, Federal Institute for Materials Research and Testing (BAM), Berlin (Germany)	<b>C5.4</b>	12:10	372	<b>Thermowells with Improved Response Time</b> M. Schalles, Technische Universität Ilmenau, Ilmenau (Germany), P. Vrdoljak, C. Peuker, Endress+Hauser Temperature and System Products, Nesselwang (Germany)	<b>D5.4</b>	12:10	302	<b>Compensation of Strong Aberrations with a Time Reversal Virtual Array for Ultrasound Imaging</b> L. Grüter, R. Nauber, C. Kupsch, J. Czarske, TU Dresden, Dresden (Germany)	<b>E5.4</b>	12:10	353	<b>Design and Implementation of Smart Multisensor Monitoring System for Safe Workplaces with LoRaWAN</b> S. Johann, A. Lapalus, C. Tiebe, M. Bartholmai, Bundesanstalt für Materialforschung und -prüfung, Berlin (Germany)
	12:30	Lunch Break			12:30	Lunch Break			12:30	Lunch Break			12:30	Lunch Break					

Thursday, 25 June 2020

Session A6 MEMS Sensors		Session B6 Chemical Sensors for Water Analysis		Session C6 Optical Sensors and Measuring Systems		Session D6 Inverse Problems in Measuring Technology (Special Session)		Session E6 Applied Measurement Science	
Chair: R. Tutsch, Technische Universität Braunschweig, Braunschweig (Germany)		Chair: J. Zosel, Kurt-Schwabe-Institute für Mess- und Sensortechnik Meinsberg e.V. (Germany)		Chair: R. Tutsch, Technische Universität Braunschweig, Braunschweig (Germany)		Chair: B. Henning, Paderborn University, Paderborn (Germany); B. Zagar, Johannes-Kepler-University Linz, Linz (Austria)		Chair: M. da Silva, Federal University of Technology Parana, Curitiba-PR (Brasil); J. Valdés, Universidad Nacional de San Martín - UNSAM, Bueno Aires (Argentina)	
<b>A6.1</b>	13:30 173	<b>B6.1</b>	13:30 235	<b>C6.1</b>	13:30 338	<b>D6.1</b>	13:30 307	<b>E6.1</b>	13:30 261
	<b>Design, Simulation, Fabrication and Characterization of Piezoelectric MEMS Cantilever for Gas Density and Viscosity Sensors Applications</b> A. Mehdaoui, C. Huber, J. Becker, F. Schraner, TrueDyne Sensors AG, Reinach BL (Switzerland) L. G. Villanueva, Ecole Polytechnique Fédérale de Lausanne, Lausanne (Switzerland)		<b>Glass Electrode Half-cells for Measuring Unified pH in Water-organic Solvent Mixtures</b> A. Heering, F. Bastkowski, S. Seitz, Physikalisch-Technische Bundesanstalt, Braunschweig (Germany)		<b>Computational Laser Metrology Using In situ Calibration for Lensless Fiber Endoscopy</b> J. Czarske, E. Scharf, R. Kuschmierz, TU Dresden, Dresden (Germany)		<b>Determination of Murnaghan Constants of Plate-shaped Polymers under Uniaxial Tensile Load</b> S. Johannesmann, S. Becker, B. Henning, M. Webersen, Paderborn University, Paderborn (Germany)		<b>Towards 3D-Motion Tracking of Instrumented Flow Followers in Large Vessels</b> L. Buntkiel, S. Reinecke, U. Hampel, Helmholtz-Zentrum, Dresden-Rossendorf (HZDR), Dresden (Germany)
<b>A6.2</b>	14:00 310	<b>B6.2</b>	14:00 232	<b>C6.2</b>	14:00 258	<b>D6.2</b>	14:00 329	<b>E6.2</b>	14:00 268
	<b>Applications of Tactile Microprobes for Surface Metrology</b> C. Reuter, M. Holz, A. Reum, nano analytik GmbH, Ilmenau (Germany), M. Fahrbach, E. Peiner, Technische Universität Braunschweig, Braunschweig (Germany), U. Brand, Physikalisch-Technische Bundesanstalt, Braunschweig (Germany), M. Hofmann, I. Rangelow, Technische Universität Ilmenau, Ilmenau (Germany)		<b>Development of an Universal Measuring Instrument for Quality Monitoring of Ultrapure Water</b> S. Schäfer, J. Warmer, P. Kaul, Bonn-Rhine-Sieg University, Rheinbach (Germany), K. van Dyk, D. Schulze, Innovatec Gerätetechnik GmbH, Rheinbach (Germany), T. C. Schmidt, University of Duisburg-Essen, Essen (Germany)		<b>Microsecond Optical Frequency Tuning of DFB Laser Diodes for Coherent Optical Frequency Domain Reflectometry</b> G. Saur, R. Kruglov, S. Schroll, R. Engelbrecht, Technische Hochschule Nürnberg Georg Simon Ohm, Nuremberg (Germany)		<b>Model-based Acoustic Identification of Hidden Layers</b> S. Wöckel, H. Arndt, Institut für Automation und Kommunikation e.V., Magdeburg (Germany)		<b>Unmanned Aircraft Based Gamma Spectrometry System for Radiological Surveillance</b> M. Luchkov, S. Neumaier, Physikalisch-Technische Bundesanstalt (PTB), Braunschweig (Germany), A. Vargas, Technical University of Catalonia, Barcelona (Spain)
<b>A6.3</b>	14:20 311	<b>B6.3</b>	14:20 187	<b>C6.3</b>	14:20 216	<b>D6.3</b>	14:20 374	<b>E6.3</b>	14:20 309
	<b>Higher-Mode Contact Resonance Operation of a High-Aspect-Ratio Piezoresistive Cantilever Microprobe</b> M. Fahrbach, E. Peiner, Technische Universität Braunschweig, Braunschweig (Germany)		<b>HTCC Multilayer Based Ion Sensitive Sensors for Water Analysis</b> C. Feller, U. Partsch, S. Körner, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Dresden (Germany)		<b>Investigation of a Metrological Atomic Force Microscope System with a Combined Cantilever Position, Bending and Torsion Detection System</b> Y. Wu, E. Wirthmann, U. Klöpzig, T. Hausotte, Friedrich-Alexander-Universität Erlangen-Nuremberg, Erlangen (Germany)		<b>Guided Wave Based Characterization of Mechanical Parameters and Wall Thickness of Metal Tubes</b> M. Ponschab, L. Petzold, D. A. Kiefer, S. J. Rupitsch, Friedrich-Alexander-Universität Erlangen-Nuremberg, Erlangen (Germany)		<b>An Advanced Multi-Parameter Condition Monitoring System for Lubricants and Hydraulic Fluids</b> T. Voglhuber-Brunmaier, Johannes Kepler University, Linz (Austria), A. O. Niedermayer, Micro Resonant Technologies, Linz (Austria)
<b>A6.4</b>	14:40 281	<b>B6.4</b>	14:40 196	<b>C6.4</b>	14:40 274	<b>D6.4</b>	14:40 375	<b>E6.4</b>	14:40 219
	<b>A MEMS Micromachined Detector Platform for kW Power Radiation in a Wide Spectral Range</b> A. Laades, S. Görlandt, C. Heinze, F. Machalet, T. Ortlepp, CiS Forschungsinstitut für Mikrosensorik GmbH, Erfurt (Germany)		<b>Development of a Glass-Fiber-based Spectrometer for the Determination of Drug Residues in Groundwater</b> E. Melekhov, V. Abb, T. Weidauer, A. Lechner, M. Kammler, Regensburg University of Applied Sciences, Regensburg (Germany)		<b>Optical Multi-Distance Measurements of Spur Gears</b> M. Pillarz, A. von Freyberg, A. Fischer, University of Bremen, Bremen (Germany)		<b>Fundamentals of Dynamic Sensor Positioning with Nanoscale Accuracy by an Inverse Kinematic Concept</b> G. Straube, S. J. Fischer Calderón, I. Ortlepp, E. Manske, Technische Universität Ilmenau, Ilmenau (Germany)		<b>Electro-Magnetic Sensors for Online Condition Monitoring of Medium Voltage Cables</b> M. Shafiq, K. Kauhaniemi, University of Vaasa, Vaasa (Finland), A. Hussain, American University of Kuwait, Salmiya (Kuwait), Lauri Kutt, Tallinn University of Technology, Tallinn (Estonia)

15:00 Fairwell reception and awards (best paper, best poster etc.)

<b>SMSI Poster Session</b> Tuesday, 23 June 2020, 14:00 – 16:00	
<b>P1</b>	<b>Topic "Chemical Sensors"</b>
<b>P1.1</b>	358 <b>Multi-sensor system for selective methane measurements in harsh environments</b> H. Lensch, T. Sauerwald, A. Schütze, Saarland University, Saarbrücken (Germany), M. Müller, F. Braunecker, T. Dudziak, 3S GmbH - Sensors, Signal Processing, Systems, Saarbrücken (Germany), H. Brünnet, Schaller Automation Industrielle Automationstechnik GmH&Co. KG, Blieskastel (Germany)
<b>P1.2</b>	286 <b>Compensation of siloxane poisoning of metal oxide semi-conductor gas sensors in temperature cycled operation</b> C. Schultealbert, T. Baur, T. Sauerwald, A. Schütze, Saarland University, Saarbrücken (Germany)
<b>P1.3</b>	330 <b>Smart gas sensor systems can help to reduce food waste</b> M. S. Marschibois, T. Sauerwald, A. Schütze, Saarland University, Saarbrücken (Germany), M. Leidinger, T. Conrad, 3S GmbH, Saarbrücken (Germany)
<b>P1.4</b>	337 <b>Systematic Investigations on the Reaction Potential of Catalytic Sensor Materials</b> O. Yurchenko, H.-F. Pernau, L. Engel, B. Bierer, M. Jägler, J. Wöllenstein, Fraunhofer Institute IPM, Freiburg (Germany)
<b>P1.5</b>	182 <b>The Optimization of a Photoacoustic Refrigerant Sensor System Using a Three-Chamber Concept</b> M. El-Safoury, C. Weber, J. Wöllenstein, Fraunhofer Institute for Physical Measurement Techniques, Freiburg (Germany), O. Kiesewetter, UST Umweltsensortechnik GmbH, Geratal (Germany)
<b>P1.6</b>	203 <b>Multispectral Readout System for Detecting Tiny Color Changes of Gas Sensitive Colorimetric Dyes</b> C. Weber, M. El-Safoury, C. Pannek, L. Engel, A. Eberhardt, M.-L. Bauersfeld, J. Wöllenstein, Fraunhofer IPM, Freiburg (Germany)
<b>P1.7</b>	306 <b>NO detection by pulsed polarization with Pt interdigital electrodes on yttria stabilized zirconia</b> N. Donker, M. Müller, D. Schönauer-Kamin, R. Moos, University of Bayreuth, Bayreuth (Germany), J. Zosel, A. Ruchets, Kurt-Schwabe-Institut für Mess- und Sensortechnik e.V. Meinsberg, Waldheim (Germany), U. Guth, Dresden University of Technology, Dresden (Germany)
<b>P1.8</b>	155 <b>Selective and reliable amperometric H<sub>2</sub>O<sub>2</sub> sensor based on Au-ZnO heterostructure electrode</b> S. Zhuyikov, M. Karbalaee Akbari, Gent University Global Campus, Yeonsu-gu, Incheon (South Korea)
<b>P1.9</b>	262 <b>Resonant Sensor for In-Situ Gas Detection in Heat Treatment Processes</b> S. Schroeder, H. Fritze, Clausthal University of Technology, Goslar (Germany), A. Strauß, P. Quadbeck, Fraunhofer Institute for Manufacturing Technology and Advanced Materials, Dresden (Germany)
<b>P1.10</b>	233 <b>Errors in Relative Humidity Measurements Due to Slow Temperature Response</b> H. Sairanen, Vaisala Oyj, Vantaa (Finland)
<b>P1.11</b>	352 <b>PVDF-SPEEK Blend based resistive humidity sensors</b> Z. Ahmad, S. A. Mallick, F. Touati, Qatar University, Doha (Qatar)
<b>P1.12</b>	204 <b>Cure Monitoring using Single-Sided NMR</b> N. Halmen, L. Mittelberg, E. Kraus, B. Baudrit, T. Hochrein, M. Bastian, SKZ – German Plastics Center, Würzburg (Germany)
<b>P1.13</b>	210 <b>Development of disposable antibiotic drug sensor based on screen-printed electrode modified with magnetic nanocomposites</b> R. P. Poo-arporn, King Mongkut's University of Technology Thonburi, Bangkok (Thailand), Y. Poo-arporn, Synchrotron Light Research Institute, Nakhon Ratchasima (Thailand), S. Pakapongpan, Thailand Organic and Printed Electronics Innovation Center, Pathum Thani (Thailand)
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