### 9th World Congress on Biosensors and Bioelectronics

August 29-30, 2018, Radisson Hotel Narita, Tokyo, Japan

Day 1 August 29, 2018

Registrations

**Opening Ceremony** 

**Group Photo** 

**Networking and Refreshments Break** 

**Title:** Principle of Geoexchanger Systems for Buildings Heating and Cooling

Abdeen Mustafa Omer, Energy Research Institute (ERI), United Kingdom

Title: Application of MEMS cantilevers in the label-free single analyte detection to improve quality-factor

Anupama Ailib, University of Texas at Arlington

**Title:** A Multiplex Self-Referencing Detection of extremely low counts of Pathogens Using Surface Enhanced Raman Scattering Nanoprobes in a Nano-DEP Microfluidic Biosensor

Chenxu Yu, Iowa State University, USA

Title: Detection and Quantification of Heavy Metals in Water Bodies by Label-Free Optical Biosensors

Giorgi Shtenberg, Israel Institute of Technology, Israel

Title: Developments of Microfluidic Sensors for Single-Cell and Small - Population Analysis

Jian Chen, University of Chinese Academy of Sciences, China

Title: Au/Graphene Hybrid Nanostructure UltraSensitive Probe for the Detection of Glucose

Mashkoor Ahmad, Nanomaterials Research Group, Pakistan

**Lunch Break** 

**Title:** Development of Surface Activated Disposable Screen Printed Electrochemical Sensor utilizing functionalized Carbon nanotube for the Detection of Secondary Metabolite in *Ganoderma boninense* Infected Oil Palm (*Elaeis guineensis*) Root

Nor Azah Yusof, Institute of Advanced Technology (ITMA), Universiti Putra Malaysia

Title: Evolution of DNA aptamers for use as a biological receptor in biosensing platforms

Shalen Kumar, Victoria University of Wellington, New Zealand

Title: Effect of the size of gold nanoparticles on the sensitivity and rapidity of immunobiosensing

Youngsang You, University of Wisconsin-Madison, USA

### **Networking and Refreshments Break**

**Title:** Ultrahigh sensitivity, self-referenced, and multimodal photonic biosensors

**Ibrahim Abdulhalim,** Electro-optical Engineering Unit and the Ilse-Katz Center for Nanoscale Science and Technology, Ben Gurion University of the Negev, Israel

**Title:** Design and Implementation of Embedded Sensors Nodes for wireless Network control system and data Transfer using Long Range RF Transceiver

Hafez Fouad, Electronics Research Institute, Egypt

Title: Direct, label-free and rapid transistor-based immunodetection in whole serum

Oscar Gutierrez Sanz, BioMed X Innovation Center, Germany

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## Day 2 August 30, 2018

### Will be Updating Soon

Speaker Slots Available Speaker Slots Available Speaker Slots Available

Speaker Slots Available Speaker Slots Available

Panel Discussion

Awards & Closing Ceremony

# **Past Speakers**

Title: An impedance biosensor for rapid detection of low concentration of Escherichia coli 0157:H7

Mahmoud Almasri, University of Missouri, USA

**Title:** Recent developments in magnetic impedance biosensors and related medical devices

Manh-Huong Phan, University of South Florida, USA

**Title:** Novel redox polymer films for biosensing and biofuel cell applications

David W Schmidtke, University of Texas, USA

**Title:** From bioengineering and cognitive engineering to brain inspired systems

Yingxu Wang, University of Calgary, Canada

Title: Neutrophils: No longer just simple suicidal killers associated with implanted biomaterial tissue regeneration templates

Gary L Bowlin, University of Memphis, USA

**Title:** From particulate processes to in vitro fertilization modeling and optimization

**Urmila M Diwekar,** University of Illinois, USA

**Title:** Novel processing of biodegradable and biocompatible polymers at small scales for medical applications

Thanh Duc Nguyen, University of Connecticut, USA

**Title:** A novel optical flow method for intravascular blood velocimetry: A validation study

**Zifeng Yang,** Wright State University, USA

**Title:** Sleep apnea prognosis for pediatric applications

Janet Roveda, University of Arizona, USA

Title: H-LCBF - Harvesting of Chlorella sp. with low-cost bio-flocculant: An approach for clean environment with bioprocess engineering

Richa Kothari, University of Nebraska-Lincoln, USA

**Title:** Intelligent electro spun nanofibrous matrices for gene and cell therapy applications

Jae-Hyung Jang, Yonsei University, South Korea

**Title:** Pulmonary vibro-acoustics: A tool for aiding medical diagnosis

Hansen A Mansy, University of Central Florida, USA

Title: Fusion of hard and soft control strategies in biomedical engineering: Robotic/prosthetic hand

**D Subbaram Naidu,** University of Minnesota Duluth, USA Networking & Refreshment

**Title:** A professional life that took a non-linear path

Mariusz Ziejewski, North Dakota State University, USA

Title: Intracellular glucose sensing

Raphael Ap Sanches Nascimento, Federal University of Lavras (UFLA), Brazil

Title: Dynamic spectral imaging for the diagnosis and screening of epithelial neoplasia

Costas Balas, Technical University of Crete, Greece

**Title:** New microRNA biotechnology to inhibit inflammation and regenerate bone

Brad Amendt, University of Iowa, USA

Title: Carbon dots for dotting and knotting the progress of cancer

Santosh K Misra, University of Illinois, USA

**Title:** Development of an entropy-driven DNA strand displacement reaction for the colorimetric detection of species-specific DNA sequences

Peter Kuhn, Edgewood College, USA

**Title:** Electrochemical and label-free immunosensors applied to point-of-care testings

Rosa F Dutra, Federal University of Pernambuco, Brazil

**Title:** Epitope-imprinted polymers for diagnostics

Meenakshi Singh, Banaras Hindu University, India

Title: Bio metamaterials for orthopedics

**N'Dea Irvin-Choy**, Rowan University, USA

**Title:** Copper II ions sensing using localized surface plasmon resonance

Jinsung Park, Korea University, South Korea

Title: Multiparameter in vivo sensing platform for intra-uterine studies and subfertility diagnostics

Roel Mingels, University of Southampton, UK

**Title:** Whole-cell Pseudomonas aeruginosa detection using a localized surface plasmon resonance aptasensor

Jiayun Hu, University of Notre Dame, USA

Title: A contactless high frequency LC-resonant sensor for bioenvironmental monitoring

Chiran Witanachchi, University of South Florida, USA

**Title:** Real-time monitoring of bacterial growth and antimicrobial susceptibility by oligonucleotide aptamer-based capacitance sensor

Namgyeong Jo, Yonsei University, Korea

**Title:** A hybrid MoS2 nanosheet – CdSe nanocrystal phototransistor with a fast photoresponse also

Jong-Soo Lee, DGIST, Republic of Korea

**Title:** Three mechanisms responsible for pore formation in solids

**Wei Peng-Sheng,** National Sun Yat-Sen University, Taiwan

Title: Body balance ability monitoring based on acceleration spectrum analysis

Zewei Shi, Beijing No.4 High School, China

**Title:** Advances in terahertz spectroscopy Nano-scanner and sub-surface 3D imaging for biomaterial

Anis Rahman, Applied Research & Photonics Inc., USA

**Title:** Biosensors for genes, pathogens, parasites, biomarkers and toxins

Raj Mutharasan, Drexel University, USA

**Title:** Turning the glucose sensor into a versatile point-of-care platform for the detection of a wide range of biological analytes

Jeroen De Buck, University of Calgary, Canada

Title: An impedance biosensor for rapid detection of low concentration of escherichiacoli O157:H7

Mahmoud Almasri, University of Missouri, USA

Title: Translating biosensors to market at the unviersity

Jeffrey T La Belle, Arizona State University, USA

**Title:** Shear horizontal surface acoustic wave sensors for rapid detection of enterohemorrhagic Escherichia coli

Justin T Baca, University of New Mexico, USA

**Title:** Interferometric biosensors for advanced Point-of-Care diagnostics

Ana Belen Gonzalez-Guerrero, Catalan Institute of Nanoscience and Nanotechnology, Spain

**Title:** Optical and electrical properties of bacteria were based bio-detector for heavy metals (CdCl2 and NiCl2 ) pollutants

Al-Shanawa Maytham Abdala Ali, University of Basra, Iraq

**Title:** Pedot: Pss and gold nanocomposite activated electrochemical sensor for the recognition of fungal DNA

**Sabo Wada Dutse,** Hussaini Adamu Federal Polytechnic, Nigeria

**Title:** Wearable device for pH monitoring in wounds

Paola Fanzio, Delft University of Technology, Netherlands

**Title:** Tuning the selectivity of nitrogen doped carbon nanotubes using ionic liquid towards electrochemical sensing of dopamine

Anju Joshi, Indian Institute of Technology, India

**Title:** Biomedical and environmental sensing applications of lateral wave vector response to refractive index

Kevin L Lear, Colorado State University, USA

Title: Biomaterials as biosensors for microbial biomarkers in human tears and saliva: Proof of concept

Mouad Lamrani, Menicon Co., Ltd R&D, Geneva, Switzerland

**Title:** Backscattering interferometry marries aptamer-based assays to enable quantitation of nerve agent metabolites and human cytomegalovirusin urine at clinical relevant levels

Darryl J Bornhop, Vanderbilt University, USA

**Title:** Split deoxyribozyme sensors for highly selective analysis of nucleic acids

Yulia V Gerasimova, University of Central Florida, USA

Title: Capacitive sensor for respiratory monitoring

Victoria Wang Yue, Hill-Rom Services Private Limited, Singapore

**Title:** The BIOFOS-LoC: Microring resonator based biophotonic system for food analysis

**George Tsekenis,** Biomedical Research Foundation of the Academy of Athens, Greece

**Title:** Development toward a multi-marker and label-free platform sensor technology using electrochemical impedance spectroscopy and nanomaterials

Chi Lin, Arizona State University, USA

**Title:** Automated single cell arrays based on magnetophoretic circuits

Roozbeh Abedini-Nassab, Duke University, USA

**Title:** New SPR-based biosensor platform for fragment-based-drug-discovery

Tom Jobe, SensiQ Technologies, USA

**Title:** Deep transcranial magnetic stimulation for the treatment of neurological disorders

**David C Jiles,** Iowa State University, USA

**Title:** Spinal fiber optic monitoring

Thomas F Floyd, Stony Brook University, USA

**Title:** Electronic label - free biosensing assays

Mark A Reed, Yale University, USA

**Title:** Terahertz spectral profiling and imaging for skin cancer detection

**Anis Rahman**, Applied Research & Photonics Inc., USA

**Title:** PEG-BSA-Coumarin-GOx fluorescent hydrogel: Preparation, characterization and glucose biosensing

**Yu Lei,** University of Connecticut, USA

**Title:** The development of integrated capacitive array biosensors towards the selective and real-time detection of single bacterium

Laurent A Francis, University catholique de Louvain, Belgium

**Title:** Recent development in power systems for implantable bioelectronic devices

Gymama Slaughter, University of Maryland, USA

**Title:** Vertically aligned carbon nanofiber biosensors

Nicole McFarlane, University of Tennessee, USA

**Title:** Novel miniaturized, fully integrated, wireless, low-cost glucose sensing platform

Victoria Wang Yue, Hill-Rom Services Private Limited, Singapore

**Title:** Novel plasmonic sensing strategy based on semiconductor nanocrystals

Wing-Cheung Law, Hong Kong Polytechnic University, Hong Kong

**Title:** Biosensor based on CYP2D6-functionalised carbon nanotube transducer for continuous detection of xenobiotics

Matic Krivec, Carinthian Tech Research, Austria

**Title:** Application of gold nanoparticles-dotted 4-nitrophenylazo graphene in a label-free impedimetric deoxynivalenol immunosensor

Christopher Edozie Sunday, University of Western Cape, South Africa

**Title:** Fluorescent protein membrane-based biosensor for ultrasensitive heme/hemin detection

**Victoria Wang Yue,** Hill-Rom Services Private Limited, Singapore

**Title:** A multiplexed protein-based urine chip to distinguish recurrent from non-recurrent Bca

Gogalic Selma, Austrian Institute of Technology, Austria

**Title:** Amphiphile-enhanced antibiotic potency: Imaging penetration

George W Gokel, University of Missouri, USA

**Title:** A biosensing approach for detecting and managing head injuries in American football

John N Daigle, University of Mississippi, USA

**Title:** Free enzyme bio-material as D-glucose sensor

Mouad Lamrani, Menicon Co., Ltd R&D, Switzerland

**Title:** Quilt packaging advanced interconnect technology for biomedical applications

Jason M Kulick, Indiana Integrated Circuits LLC, USA

**Title:** Enhanced cobalt-based microelectrode and nano-textured phosphate sensor for in situ phosphate measurement in drinking water systems

Woo Hyoung Lee, University of Central Florida, USA

Title: Optical-based integrated oxygen sensor for long-term 02 monitoring for use in organ-on chip platforms

Amir Sanati Nezhad, University of Calgary, Canada

**Title:** From the engineering to the final application of asymmetric nanomaterials in detection: Rapid and ultrasensitive HEATSENS® thermal based biosensor development

Mariantonietta Parrracino, Nanoimmunotech S.L, Spain

Title: Authenticity and classification of honeys from different geographical and botanical origins based on voltammetric electronic tongue

Nezha El Bari, Moulay Ismail University, Morocco

Title: FET ion sensor with nanometric lipid gate insulator for high sensitivety detection level

Ahmad Kenaan, Centre Interdisciplinaire de Nanoscience de Marseille, France

**Title:** PEG-fluorescein-GOx hydrogel for glucose biosensing

**Jun Chen,** University of Connecticut, USA

**Title:** A novel leaky surface acoustic wave (LSAW) biosensor for label-free detection of hepatitis B surface antibody (HBsAb)

Hong-Yu Yu, South University of Science and Technology, China

**Title:** Photonics-enhanced multi-functional labs-on-chips: From lab to fab

Jurgen Van Erps, Vrije Universiteit Brussel, Belgium

Title: Ordered DNA fragmentation on surfaces for NGS sequencing

NaHyun Cho, Stony Brook University, USA

**Title:** A facile, colorimetric assay for DPP IV activity and inhibition based on an enzyme-responsive nanoparticle system

**Hassan Aldewachi,** Sheffield Hallam University, UK

**Title:** Determination of effect factor for effective parameter on saccharification of lignocellulosic material by concentrated acid Sina Aghili, Islamic Azad University, Iran **Title:** Data analytics, the digital patient and simulation in healthcare C Donald Combs, Eastern Virginia Medical School, USA **Title:** Optimal reporters for electrochemical detection of protease activity Mark Bradley, University of Edinburgh, UK N **Title:** Magnetic nanoparticles meet microfluidics **Andreas Hütten,** Bielefeld University, Germany **Title:** Alkaline phosphatase or Q dots labeled antibody-based electrochemical biosensors for ultrasensitive tumor markers detection **Zuzana Bilkova,** University of Pardubice, Czech Republic Title: An electrochemical biochip based on human hepatic drug metabolising enzymes in the presence of graphene and/or AuNps **Sheila Sadeghi,** University of Torino, Italy **Title:** A review on surface plasmon resonance and its application as biosensing element Ritu Sharma, Malaviya National Institute of Technology, India **Title:** eDisc – Getting 21st century technology into lab on disc applications Dario Mager, Karlsruhe Institute of Technology, Germany Title: Smart materials: Advances in protein-based molecularly imprinted polymer biosensing Subrayal M Reddy, University of Central Lancashire, UK Title: Enzymatic synthesis and etching in situ of gold and semiconductor nanoparticles in biosensing Valery Pavlov, Centro de Investigación Cooperativa en Biomateriales CIC biomaGUNE, Spain **Title:** Acoustic and plasmonic biosensors for the detection of different classes of (bio) molecules Rodica Elena Ionescu, University of Technology of Troyes, France **Title:** New ultra-sensitive measurement method in ampere and voltammetry Vladimir Moshkin, "Sib-STRIM" LLC, Tomsk, Russia **Title:** Nucleic acid biosensors for the detection of heavy metal ions Lingwen Zeng, Wuhan Academy of Agricultural Science and Technology, China **Title:** LumiSense - A portable water pollutant monitoring system using whole cell array **Ji-Yen Cheng,** Research Center for Applied Sciences, Taiwan **Title:** Conducting polymer composite based on Nano-cellulose for biosensing application Mahnaz M Abdi, University Putra Malaysia, Malaysia **Title:** CYBERTONGUE®, a multiplexed biosensing platform where BRET meets flow - for food diagnostic and other applications **Stephen Trowell,** CSIRO, Australia **Title:** Amperometric biosensors for cancer maker detection using novel dumbbell-like gold-magnetite nanocomposites Ruey-anDoong, National Chiao Tung University, Taiwan **Title:** Photothermal effect of conjugated polymer surfaces for harvesting of live cell sheets **Eunkyoung Kim,** Yonsei University, South Korea **Title:** Development of modified ferrocenes DNA probes for electrochemical SNP sensing **Holly Roberts**, University of Birmingham, UK

**Title:** Ordered DNA fragmentation using soft lithography and amplification for next generation sequencing

NaHyun Cho, Stony Brook University, USA

**Title:** Parametric electrical modelling of human forearm simulation response using multi-frequency electrical bio impedance

Gautam Anand, Auckland University of Technology, New Zealand

Title: Role of sympathetic nervous system in rat ovarian ageing

Maritza P Garrido, University of Chile, Chile

Title: DMSA-coated iron oxide nanoparticle greatly affects the expression of genes coding cysteine-rich proteins by its DMSA coating

Ling Zhang, Southeast University, China

**Title:** Quantifying Skin Stretch induced motion artifact from an Electrocardiogram signal

Anubha Kalra, Auckland University of Technology, New Zealand

**Title:** Triboelectric effect as a novel tool for the development and application of point-of-care testing devices

Everson Thiago Santos Geroncio da Silva, State University of Campinas, Brazil

**Title:** Sequence-specific recognition of DNA oligomer by DNA/DNA hybridization in silicon nitride nanopores

Shengwei Tan, Southeast University, China

**Title:** The use of the speckle dynamics for the quantitative analysis of micro and macro processes in cultured cells: Theory and experiment

**A. P. Vladimirov**, Ural Federal University, Russian

**Title:** Preparation and electrochemical characterization of ZNO based disposable urea biosensors

Sayed Ahmad Mozaffari, Iranian Research Organization for Science & Technology, Iran

**Title:** Ultrasensitive and selective impedance biosensing platform based on nanoporous silicon oxide

Chirasree Roy Chaudhuri, Indian Institute of Engineering Science and Technology, India

Title: An amperometric PAMAM G4.0-modified cytochrome P450 biosensor with PAMAM for the concentration-based sensing of caffeine

Michael Müller, Saarland University, Germany

Title: SIGNALMAN: Autonomous in-line biosensors for detection of microorganisms

Sonia Yadav, Institute of Technology Tallaght, Ireland

Title: Study on the effect of electrodeposited palladium nanoparticles to the electrochemical properties of carbon fiber paper electrode

Chun Lung Lien, National Chiao Tung University, Taiwan

**Title:** Effect of protein layer on the photo-thermal harvesting of cell sheets

Jongbeom Na, Yonsei University, South Korea

Title: All organic triboelectric generator for a self-powered glucose sensor based on an organic electrochemical transistor

Younghoon Kim, Yonsei University, South Korea

**Title:** Nanostructured platform based on polyaniline/cellulose nanocrystal composite for biosensor application

**Mahnaz M Abdi,** University Putra Malaysia, Malaysia

**Title:** Magnetite nanoparticles on paper: A platform for the diagnosis of dengue fever by magnetic -ELISA

Greter Amelia Ortega Rodríguez, Center for Applied Science and Advanced Technology of IPN, Mexico

Title: Surface plasmon resonance sensor based direct target DNA detection via gold nanoparticle signal enhancement without DNA amplification

Wonhwi Na, Korea University, Korea

Title: A new optical high-resolution three-axis sensor for navigation of medical devices

Christian Baumgartner, Graz University of Technology, Austria

**Title:** Establishing gene expression for early and high-throughput prediction of the hematological acute radiation syndrome

Michael Abend, Bundeswehr Institute of Radiobiology, Germany

**Title:** New ultrasensitive BDD-biosensor for influenza virus detection

**Dawid Nidzworski,** SensDx Ltd, Poland

Title: Multi-pores; controlling and measuring the flow of charged species through tunable nanopores producing a rapid, multiplex assay

Mark Platt, Loughborough University, UK

**Title:** Novel approach for multiplex detection of antibiotic residues in milk by means of electrochemical biosensors

Valerie Gaudin, ANSES-Laboratory of Fougères, France

**Title:** Three types of nanostructure platforms for plasmonics detection of target molecules on a solid surface or in a complex medium

Hiroyuki Takei, Toyo University, Japan

**Title:** An electrical model for silicon-nanowire electrodes in intracellular signal measurement in biological environments

Alex Hariz, University of South Australia, Australia

**Title:** Point-of-care nanosensor applied to diagnosis of high morbimortality diseases

Rosa F Dutra, Federal University of Pernambuco, Brazil

**Title:** Water bodies pollutants screening by nanostructured optical biosensors

Giorgi Shtenberg, Agricultural Research Organization, Volcani Center, Israel

**Title:** Closed solid state nanopore array - A unique device for ultrasensitive label free impedance biosensors

Chirasree Roy Chaudhuri, Indian Institute of Engineering Science and Technology (IIEST), India

**Title:** Microfluidic systems for pharma technology - the manipulation of cells, droplets and particles

Andreas Dietzel, Center for Pharmaceutical Engineering (PVZ), Germany

Title: Microfluidic chip ionization source coupling with mass spectrometry

Xiaohao Wang, Tsinghua-Berkeley Shenzhen Institute, China

**Title:** Recent and upcoming potential spacecraft missions requiring biosensor technologies: Current examples, what are we looking for and remaining challenges

Ike Chi, California Institute of Technology, USA

**Title:** Secure accuracy at increased precision of AFM-probe integrated biosensor

Sarmiza Elena Stanca, Leibniz Institute of Photonic Technology, Germany

**Title:** Detection of pH/H2 O2 and prostrate/breast cancer biomarker by using nickel-oxide/iridium-oxide sensing membrane in electrolyte-insulator-semiconductor structure

Siddheswar Maikap, Chang Gung University, Taiwan

Title: Bi12Ge020 Faraday crystal application in magnetic field measurement

**Slobodan J Petricevic,** University of Belgrade, Serbia

**Title:** Palladium nanostructured single carbon fiber electrodes for detection of early-onset sepsis and oxidative stress

Aaron McConville, Ulster University, UK

**Title:** Towards practical bacterial biosensor assays for on-site applications

Elizabeth Salvo, McMaster University, Canada

**Title:** Effect of thermal oxidation on the performance of nanostructured porous Si optical biosensors

Giorgi Shtenberg, Agricultural Research Organization, Volcani Center, Israel

**Title:** Stabilization of gold and silver nanoparticles for LSPR sensing operating in both visible and near-IR regimes in high salt concentration environments

**H Haraguchi,** Toyo University, Japan

**Title:** Development of miniaturized uniaxial cell stretching device Jaewon Kim, Sungkyunkwan University, South Korea **Title:** A novel capacitive biosensor for the detection of small molecule S-nitrosothiols James Seckler, Case Western Reserve University, USA **Title:** Development of an Optimal Bio-Sensor with quantitative Real-time Monitoring of Microbial Hazards in Water Environment Yoorae Noh, Yonsei University, Korea **Title:** Yeast whole cell sensors for the detection of acetic acid in biogas production Katja Hahne, Tech **Title:** Butterfly wing scales as a model template for SERS applications nische Universität Dresden, Germany K Nagata, Toyo University, Japan **Title:** Cu2+ detection realized with silicon nanowire ion-sensitive field effect transistor-based biosensor Olena Synhaivska, University of Basel, Basel, Switzerland **Title:** Synthesis of quantum dots conjugates with antibodies for immunochromatographic analysis Ibragimova Sagila Aladdinovna, State University Dubna, Russia **Title:** Surface modification of a microfluidic channel by a multiple metal layer coating method Young Ho Kim, Daegu-Gyeongbuk Medical Innovation Foundation, South Korea **Title:** Detection of β-thalassemia IVSI-110 mutation by using piezoelectric biosensor for noninvasive prenatal diagnosis **Umut Kokbas,** Cukurova University, Turkey **Title:** Application of twin-working electrode cell in characterizing biological electron mediators Mahamudul Hassan, Murdoch University, Australia

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