

SUNDAY EVENING 6.30 – 7.30. Welcome Drinks Reception and Registration at the Pavilion, North Campus UL**MONDAY (AM)**

Time	Activity
08.00 – 18.00	Registration. Room EGO 10 (Same as Exhibitors)
09.00 – 09.35	Welcome Session (Jean Monet Theatre)

Plenary Session 1 (Jean Monet Theatre). Chairs: Professor Elfed Lewis and Professor Tongyu Liu

Time	Paper no /Session	Title	Author/ Affiliation
09.40 - 10.25	Plen 1/ M1-1	Development of China's smart mines and underground spatiotemporal perception detection technology	Professor Guofa WANG Academician of China Engineering Academy, China Coal Technology Engineering Group
10.25 – 11.10	Plen 2/ M1-2	Fibre Optic Sensor Systems for Industry 4.0 – promise and potential	Professor K.T.V. Grattan City University of London, Northampton Square, London EC1V 0HB

COFFEE 11.10 – 11.30. This coffee break has kindly been sponsored by Ward & Burke Construction Ltd.

Industrial Sensing 1 (Room A) EMO-09				Spectroscopy (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation		Paper no /Session	Title	Authors/ Affiliation
11.30 – 12.00	60/ M2 – 1A Invited	System for filling pipeline leakage based on Distributed fiber optic acoustic sensing Technology	Jin Guangxian et al/ Shandong Micro-sensor Photonics Ltd., Shandong, China		12/ M2 – 1B Invited	A signal processing method to improve the detection accuracy of co gas concentration in TDLAS detection	Yingshuai Li et al/ Laser Institute, Qilu University of Technology (Shandong Academy of Sciences), China
12.00 – 12.20	100/ M2 – 2A	Innovative optical fibre sensor system for sewage pump station monitoring	Heriberto Bustamante et al/ Sydney Water, Sydney Australia and City University of London, UK		30/ M2 – 2B	Covalent/non-covalent recognition strategies for visualized sensing of trace organic amines	Liu Yuan et al/ Xinjiang Institute Of Physics And Chemistry, Chinese Academy Of Sciences, China
12.20- 12.40	11/ M2 – 3A	Multiplexed fiber strain sensors for field seismic monitoring	Wei Jin et al/ Harbin Engineering University, Harbin, China.		40/ M2 – 3B	Optical Fiber-Based Sensor Using the Localized Surface Plasmon Resonance Effect	Anand VR/ Yuliya Semenova et al/ TU Dublin Dublin 7 Ireland

LUNCH 12.40 - 13.30

MONDAY (PM) Session 3							
Industrial Sensing 2 (Room A) EMO-09				Optical Fibre Sensors 1 (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation		Paper no /Session	Title	Authors/ Affiliation
13.30-2.00	103/ M3 – 1A Invited	Monitoring of pipeline fractures in aged infrastructure in the water industry	Matthias Fabian et al/ City University of London, Northampton Square, London EC1V 0HB and Sydney W		29/ M3 – 1B Invited	Dual parametric sensors based on multi-core fiber	Chunying Guan et al/ Harbin Engineering University Harbin, China.
14.00-14.20	49/ M3 – 2A	Piezoelectric energy harvesting and self-powered pressure sensing with hen egg white lysozyme	Krittish Roy et al/ Department of Physics and Bernal Institute, University Of Limerick, Ireland		45/ M2 – 3B	Laser Structure Based on a Fiber Ring and Peanut-Shaped Whisper Gallery Mode Microresonator	Anuradha Rout, Yiming Shen et al/ TU Dublin, Dublin 7, Ireland.
14.20-14.40	44/ M3 – 3A	Utilising Instrumentation to Monitor the Construction of a Large Underground Shaft in Ireland	Laura Willis et al/ Ward And Burke Construction Ltd. & University Of Limerick, Ireland		07/ M3 – 3B	Characterization of tilted fibre gratings under bending	Si Can Zheng et al Laser Research Institute, Qilu University of Technology (Shandong Academy of Sciences) Jinan, Shandong, China
14.40-15.00	20/ M3 – 4A	Solid rocket motor integrity health monitoring based on high performance femtosecond grating array	Dayong Wang et al/ Beijing University Of Technology, Beijing, China		15/ M3 – 4B	Ultrahigh-Resolution Whispering Gallery Mode Thermometer based on Silica-Microsphere	Jiaxing Gao et al/ Harbin Engineering University Harbin, China.
15.00-15.20	20/ M3 – 5A						
COFFEE (15.20 – 16.00)							

MONDAY (PM) Plenary Session 2 (Jean Monet Theatre)							
Time	Paper no /Session	Title	Author/ Affiliation				
16.00 – 16.45	Plen 3/ M4-1	Adlayer Structure Innovation and Film-BASED Fluorescent Sensors	Professor Yu Fang Academician of the Chinese Academy of Sciences and Shaanxi Normal University, Xi'An, Shaanxi, China				
MONDAY (PM) Session 4							
Biomedical Sensors 1. (Room A) EMO-09				Photonic Sensors (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation		Paper no /Session	Title	Authors/ Affiliation
16.50 – 17.10	36/ M4 – 2A	Specific and sensitive detection with nucleic acid sensors	Luyan Yang/ Center Of Materials Science And Optoelectronics Engineering, University Of Chinese Academy Of Sciences, Beijing, China		18/ M4 – 2B	Photonic Sensors Including Optical and Optical Fibre Sensors	Yiyang Xie et al/ key Laboratory Of Optoelectronics Technology, Beijing University Of Technology, Beijing, China
17.10 – 17.30	42/ M4 – 3A	Leveraging deep learning for reconstruction of cancer cells from 3D IR thermography for faster cancer diagnosis	Charlie O'Mahony et al/ Department of Physics, University of Limerick, Ireland		31/ M4 – 4B	Vertical cavity surface emitting lasers with SiO2/ZNS dielectric distributed Bragg reflector	Baolu Guan et al/ key Laboratory Of Optoelectronics Technology, Beijing University Of Technology, Beijing, China
17.35-18.05	M4 - 4	<p>“Innovative MIR LASER-, LED- and PD-cascade technologies for sensing” Special Invited technical paper by our Exhibitor Dr Lars Hildebrandt of Nanoplus Systems GmbH, Germany, To Be Located at the Jean Monet Theatre.</p>					
BARBEQUE (19.15 – LATE)							

TUESDAY (AM) Plenary Session 3 (Jean Monet Theatre)							
Time	Paper no /Session	Title	Author/ Affiliation				
08.00 – 18.00		Registration. Room EGO 10 (Same as Exhibitors)					
09.15 – 10.00	Plen 4/ T1-1	TBC	Professor Desheng Jiang / Prof Zhengying Li Wuhan Technology University, Wuhan, China				
TUESDAY (AM) Session 6							
Biomedical Sensors 2 (Room A) EMO-09				Optical Fibre Sensors 2 (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation	Paper no /Session	Title	Authors/ Affiliation	
10.05 – 10.35	T2 – 1A Invited	Original presentation Moved to Wed W1-1A		13/73 T2 – 1B Invited	An intelligent optical fiber device integrating sensing, storage, and computing functions.	Zhihai Liu/ Harbin Engineering University Harbin, China.	
10.35 – 10.55	35/ T2 – 2A	Pediatric consultations: a multi-sensory monitor for optimal engagement and diagnosis	Olga Korostynska et al/ Oslo Metropolitan University, Oslo, Norway.	17/ T2 – 2B	Strain measurement with a high sensitivity based on an optoelectronic oscillator incorporating chirped fiber Bragg gratings	Jing Zhang/ School of Physics and Optoelectronic Engineering, Beijing University of Technology, Beijing	
10.55 – 11.15	52/ T2 – 3A	Gamified orthosis for muscle rehabilitation: escape splint	Olga Korostynska, Oslo Metropolitan University, Oslo, Norway.	09/ T2 – 3B	Design and analysis of group attitude detection device for hydraulic support	Qingliang Zeng et al/ Shandong University Of Science And Technology, Qingdao, Shandong, China.	
COFFEE (11.15-11.30)							
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TUESDAY (AM) Session 7							
Biomedical Sensors 3 (Room A) EMO-09				Optical Fibre Sensors 3 (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation		Paper no /Session	Title	Authors/ Affiliation
11.30 – 12.00	19/ T3-1A Invited	Ultrasensitive visualized artificial olfactory system	Xincun Dou/ Center of Materials Science and Optoelectronics Engineering, University of Chinese Academy of Sciences, Beijing, China		57/ T3 – 1B Invited	Differential Fiber Optic Gyroscope for Rotational Seismic Observation	Yuanhong Yang et al/ School Of Instrumentation And Optoelectronic Engineering, Beihang University, Beijing, China
12.00 – 12.20	46/ T3 – 2A	Development of an optical fibre-based plasmonic sensor for specific detection of target biomolecules	Saumyakanti Khatua et al/ Indian Institute Of Technology Gandhinagar, Gandhinagar Gujarat India		48/ T3 – 2B	Monitoring of composite pressure vessels using surface-applied distributed fibre optic sensors	Christos Karapanagiotis et al/ Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin Germany
12.20-12.40	58/ T3 – 3A	An optical fibre sensor probe for oxygen measurement in hypoxic tumours during radiotherapy treatment	Sanober Farheen Memon et al/ Optical Fibre Sensors Research Centre, University of Limerick, Limerick, Ireland		38/ T3 – 3B	A disturbance localization method based on region segmentation and FNLM algorithm for ϕ -OTDR	Tingyun Wang/Wei Shen et al, Shanghai University, Shanghai, China
12.40–13.00	64/74 T3 – 4A	On-Site Rapid Detection of Ethidium Bromide Using Ultramicroelectrode Sensors	Marcello Valente et al/ Tyndall National Institute, Cork, Ireland		68/ T3 – 4B	Bent optical microfiber sensor and its application for nanonewton force measurement	Qiang Wu et al/ Northumbria University, Newcastle Upon Tyne, United Kingdom
13.00–13.20	T3 – 5A				50/ T3 – 5B	Challenges in Adapting Fiber Optic Sensors for Biomedical Applications	Sahar Karimian et al, Atlantic Technology University, Sligo, Ireland

LUNCH 13.10 - 14.00

TUESDAY (PM) Plenary Session 4 (Jean Monet Theatre)							
Time	Paper no /Session	Title	Author/ Affiliation				
14.00 – 14.45	Plen 5/ T4-1	Advance in Intelligent Mining System	Professor Jiachen Wang/ Vice-president, China University of Mining and Technology Beijing.				
TUESDAY (PM) Session 8							
Biomedical Sensors 4 (Room A) EMO-09					Microwave and Photonic Sensors (Room B) EMO-10		
Time	Paper no /Session	Title	Authors/ Affiliation		Paper no /Session	Title	Authors/ Affiliation
14.50 – 15.20	10/ T4 – 2A Invited	A fiber SPR respiration monitoring device based on SF-LiBr composite film	Yu Zhang et al/ Harbin Engineering University, Harbin, China.		69/ T4 – 2B Invited	Advancement of Low-power Microwave Sensors for Non-invasive Lactate Monitoring	Alex Mason/ Norwegian University Of Life Sciences, Aas, Norway
15.20 – 15.40	43/ T4 – 3A	Use of deep learning techniques to classify acoustic emission data from knee joints	Ivan Vatolik et al/ Kingston University, London, UK		21/ T4 – 3B	Microwave photonic chaotic radar with frequency up/down conversion capability	Yu Zhang et al/ School of Physics and Optoelectronic Engineering, Beijing University of Technology, Beijing, China
15.40 – 16.00	33/ T4– 4A	High-performance visualized sensing materials: from single mode to triple mode	Baiyi Zu/ Center of Materials Science and Optoelectronics Engineering, University of Chinese Academy of Sciences Beijing, China		24/ T4 – 4B	Microwave photonic filtering for fibre optic interferometer sensors	Wei Zhang et al/ Qilu University of Technology (Shandong Academy of Sciences), Jinan, Shandong, China
COFFEE (16.00-16.20)							
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TUESDAY (Late PM) Session 9							
Industrial Sensing (Room A) EMO-09				Environmental Sensing (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation		Paper no /Session	Title	Authors/ Affiliation
16.20 – 16.50	63/ T5 – 1A Invited	Characterisation of the FBGS infinityscan® , a code-division multiplexing interrogator for precision and dynamic scanning	Steffen Lochmann et al/ Hochschule Wismar, Wismar Germany		06/ T5 – 1B Invited	Optimization of sensor placement for gas leakage detection in commercial areas	Xiaobing Yuan et al/ Shenzhen Urban Public Safety Technology Institute Co. Ltd, Shenzhen, Guangdong Province, China
16.50 – 17.10	62/ T5 – 2A	Application of Low-Power Fiber Optic Demodulation Technology Based on VCSEL Laser and Wireless Monitoring of Coal Mine Roof	Lu Cao et al/ Shandong Micro-sensor Photonics Ltd, Jinan, Shandong, China		23/ T5 – 2B	Effect of film forming quality on the performance of PbSe detector	Yanyan Zheng/ Hanwei Electronics Group Corporation, Zhengzhou China.
17.10 – 17.30	70/ T5 – 3A	A multimodal adaptive detection algorithm for optical fiber mems Fabry-Perot sensor	Guoxiu Wu et al/ Laser Institute, Qilu University of Technology, Jinan, Shandong, China		25/ T5 – 3B	Design and simulation of a SAW gas sensor for detection of methane and nitric oxides	Eric Wickens et al/ Munster Technological University, Skibbereen, Ireland
17.30 – 17.50	37/ T5 – 4A	Sensing the Cyber-Physical: Extended Reality in Smart Manufacturing	Adam Dooley et al/ University of Limerick, Ireland		55/ T5 – 4B	Piezoelectricity in unpoled hydroxyapatite ceramics	Reena Rasheed et al/ University of Limerick, Ireland
17.50 – 18.10	53/ T5 – 5A	Robust On-Hand Robot-3D Camera Calibration Using Gradient Descent in Noisy Sensor Environments	Evgenii Dushkin et al/ Munster Technological University, Tralee, Kerry, Ireland		54/ T5 – 5B	Autonomous textile sorting using hyper spectral imaging	Jessica lo Faro Kingston University, London, UK

DINNER 19.30 - LATE

WEDNESDAY (AM) Session 10							
Applications (Room A) EMO-09				Emerging Sensing Strategies and Applications (Room B) EMO-10			
Time	Paper no /Session	Title	Authors/ Affiliation	Paper no /Session	Title	Authors/ Affiliation	
08.30 – 12.00		Registration. Room EGO 10 (Same as Exhibitors)					
	Tongyu1/ W1 – 1A Invited	Advance of Laser and fibre optic sensors for coal mine hazard detection and prevention	H.T. Zubair et al/ Multimedia University, Cyberjaya, Malaysia.		39/ W1 – 1B Invited	Cyber ranges – real world skills development for OT & IT cybersecurity education	George O Mahony et al/ Munster Technological University Cork, Ireland
10.00-10.30	56/ W2 – 2A Invited	Stem Effect Correction Using Machine Learning Technique in Radioluminescence Sensors	H.T. Zubair et al/ Multimedia University, Cyberjaya, Malaysia		34/ W2– 2B Invited	Peak wavelength tracking for enhanced measurement sensitivity and range in an fibre optic interferometric sensor	Wei Zhang et al/ Qilu University of Technology (Shandong Academy of Sciences), Jinan, Shandong, China
COFFEE 10.30 – 11.00							
11.00-11.30	05/ W3 – 3A Invited	Construction of fluorescent compounds exhibiting strong luminescence and high photochemical stability for VOC sensing	Haonan PENG et al, Shaanxi Normal University. Xi'An, China		47/ W3 – 3B Invited	Radio frequency direction sensing enabled by broadside coupled split ring resonators	Xiaoguang Zhao et al, Tsinghua University, Beijing, China
11.30-11.50	41/ W3 – 4A	A review of uncooled thermal imager specifications and their influence on imager performance	Juan Coetzer et al, IMaR Research Centre, Munster Technological University, Tralee, Ireland		51/ W3 – 4B	Sensors and actuators from biodielectrics	Hema Dinesh Barnana et al University of Limerick, Ireland
11.50-12.10	65/ W3-4A	Three-dimensional detection of buried defects using infrared flash thermography: analytical framework, simulation and experimental validation	Charlie O'Mahony et al University of Limerick, Limerick Ireland		61/ W3 – 5B	An evaluation of modelling of propagation using Comsol for a singlemode-multimode-singlemode structure	Thomas Freir et al/ TU Dublin Dublin Ireland
12.15-12.45	Closing Remarks (Jean Monet Theatre)						

