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). Chair: Prof Elfed Lewis**						
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. Chair: Prof Joseph Walsh					**Spectroscopy (Room B) EMO-10. Chair Prof Tofail Syed**		
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. Chair: Prof Steffen Lochmann					Optical Fibre Sensors 1 (Room B) EMO-10: Chair: Prof Jinhui Li		
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). Chairs: Prof Andy Augousti and Prof Olga Korostynska			
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	"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. Chair Prof Tongyu Liu					
BARBEQUE (19.15 – LATE)							

TUESDAY (AM) Plenary Session 3 (Jean Monet Theatre). Chairs: Prof. Ken Grattan and Prof Yu Zhang			
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	Advanced Fiber Optical Sensor Networks and Applications	Professor Desheng Jiang / Prof Zhengying Li Wuhan Technology University, Wuhan, China

TUESDAY (AM) Session 6							
Biomedical Sensors 2 (Room A) EMO-09. Chair: Prof Eoin O'Connell					**Optical Fibre Sensors 2 (Room B) EMO-10. Chair: Prof** Ehtsham ul Haq		
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)							
Sessions continued on next page							

TUESDAY (AM) Session 7							
Biomedical Sensors 3 (Room A) EMO-09. Chairs: Dr Sanober Farheen Memon/ Prof. Elfed Lewis					**Optical Fibre Sensors 3 (Room B) EMO-10. Chairs Professor Jiasheng Ni/ Thomas Freir**		
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 microfibre 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). Chairs: Prof Tongyu Liu and Prof K.T.V. Grattan			
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. Chair: Prof Evgenii Dushkin					**Microwave and Photonic Sensors (Room B) EMO-10: Chair: Prof Alex Mason**		
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)							
Sessions continued on next page							

TUESDAY (Late PM) Session 9							
Industrial Sensing 3 (Room A) EMO-09. Chairs: Dr Charlie O'Mahoney and Prof George O'Mahony					**Environmental Sensing (Room B) EMO-10 Prof Andy Augousti and**		
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 Chairs: Prof Elfed Lewis and Prof K.T.V. Grattan					**Emerging Sensing Strategies and Applications (Room B) EMO-10 Chairs: Prof Olga Korostynska and Prof Alex Mason**		
Time	**Paper no /Session**	**Title**	**Authors/ Affiliation**		**Paper no /Session**	**Title**	**Authors/ Affiliation**
08.30 – 12.00		**Registration. Room EGO 10 (Same as Exhibitors)**					
09.30 - 10.00	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). Chair Professor Elfed Lewis						