The Enlighten Conference

DAY 1: Wednesday 12th October
Meetings at a Glance

	Hyperspectral Imaging Ricoh Media Centre (Lower Ground floor)	Graphene & emerging 2D materials (pm only) Lounge South (First floor)	Nano-Spectroscopy & Bio-Imaging Jaguar Lounge (Ground floor)	Optical Engineering & Design Jaguar Suite (Ground floor)	Photonics Tutorials Enlighten Theatre (Exhibition Hall)	Industrial Vision Vision Theatre (Exhibition Hall)
09:00						
09:10						
09:20						
09:30	Introduction and Welcome **Prof. Steve Marshall, University of Strathclyde**					
09:40	**KEYNOTE** Mapping composition in food samples by NIR Hyperspectral imaging (HSI **Martin Whitworth, Campden BRI, UK**					
09:50						
10:00						
10:05						
10:10	Rice seed varietal purity inspection using hyperspectral imaging **K. Trung, L. Thi, I. Andonovic & S. Marshall, MICA, Hanoi Univ. of Science and Tech & Uni of Strathclyde**					
10:20						Introduction and Welcome **Dr Denis Bulgin UKIVA, In Press PR**
10:30	Analysis and detection of counterfeit drugs with hyperspectral cameras **M. Marmion, S. Wilczynski and B. Parker, SPECIM Spectral Imaging Ltd, Finland, Medical University of Silesia in Katowice, Poland, and LOT QuantumDesign Ltd, UK**		Introduction and Welcome **Dr Sumeet Mahajan, University of Southampton**	Introduction and Welcome **Jon Maxwell, Consultant**		**KEYNOTE** The Challenges Associated with Imaging Technology in Space **Jason Gow,Centre for Electronic Imaging, The Open University**
10:40			Semiconductor nanomaterials in biology - from organic semiconductors to biosynthesis **Prof. Mark Green, King's College London**	An introduction on optical systems for nuclear fusion experiments **Dr Alexandru Boboc, UKAEA, Culham Centre for Fusion Energy**		
10:45						
10:50						
10:55	**BREAK**				Introduction and Welcome **Laurence Devereux, Xmark Media**	
11:00						
11:05			Microcavity-enhanced optical sensing of chemicals and nanoparticles in fluids **Dr Aurelien Trichet, University of Oxford**	**KEYNOTE** Optical design software VirtualLab Fusion: How to do fast physical optics design of laser systems **Dr. Hagen Schweitzer, LightTrans International UG, Germany**	Spectroscopy & gas sensing: is the future MOEMS? **Adnan Quazi, Hamamatsu Photonics UK Ltd**	Chemical colour imaging - making hyperspectral imaging avaliable for machine vision **Tristan Hurley, Stemmer Imaging**
11:10	HSI for rapid screening of quality parameters in granular food commodities **N. Caporaso, M. Whitworth & I. Fisk Campden BRI & University of Nottingham**					
11:20			Exploring Red Blood Cells for Blood Diagnostics **Prof. Kenith Meissner, University of Swansea**	Design challenges for a new 4-metre robotic telescope **Prof. Iain Steele, Liverpool John Moores University**	Crystalline optics: Principles of manufacture & metrology **Mark J Middleton, Crystran Ltd**	
11:30	Rapid detection and visualization of organic spelt (Triticum spelta L.) flour adulteration using HSI and multivariate analysis **W-H. Su, D-W. Sun, University College Dublin**					3D Imaging with the latest Time-of-Flight Camera Technology **Mike Morgan, Multipix Imaging**
11:40			MIP nanoparticles in diagnostics & bioimaging **Prof. Sergey Piletsky, University of Leicester**	Simplify the optics to opto-mechanical transition **Dr Chris Normanshire, Zemax Europe Ltd**	Optics off the shelf - how to quickly find the components you need **Chris Bridle, Manx Precision Optics Ltd**	
11:50						
12:00	Using NIR HSI for the Differentiation of pathogenic bacteria **T.-L. Kammies, M. Manley, P. Gouws and P. Williams Stellenbosch University, South Africa**		Life, Death & Spectroscopy **Dr Colin Cambell, University of Edinburgh**	Insights into Laser Damage Testing **Dr Kieran Mulholland, Belford Research Ltd**	Continuously variable filters for hyper-spectral imaging **Oliver Pust, Delta Optical Thin Films**	An overview of Machine Vision standards **Sean Wood, Clearview Imaging**
12:05						
12:10						
12:20					Generation of large angle light patterns **Dr. Hagen Schweitzer, LightTrans Internation UG**	
12:30						
12:40	**BREAK IN THE EXHIBITION HALL** delegates are encouraged to visit the exhibition and meet some of the 100+ exhibitors		**BREAK IN THE EXHIBITION HALL** delegates are encouraged to visit the exhibition and meet some of the 100+ exhibitors	**BREAK IN THE EXHIBITION HALL** delegates are encouraged to visit the exhibition and meet some of the 100+ exhibitors	Silicon photomultipliers achieve industry-leading Photon Detection Efficiency and timing performance **Martin Sharratt A P Technologies/SensL**	Seeing beyond the Visible-SWIR and its applications **Raf Slotwinski, Alrad Imaging**
12:50						
13:00						CMOS Global Shutter features for Machine Vision applications **Arnaud Destuels, Sony Europe (Image Sensing Solutions)**
13:10					Horizon 2020's ERA-NET co-funded competition to support photonics-based sensing technologies **Anke Lohmann, KTN**	
13:25		Introduction and Welcome **Ray Whitehouse, Vac Techniche, UK**				
13:30	**KEYNOTE** Remote HSI activities in the Chester F.Carlson Center for Imaging Science at RIT; phenomenology, algorithms, modeling and simulation, and application **Professor A. Vodacek, Center for Imaging Science, Rochester Institute of Technology, USA**	From local structure to scalable nanotechnology **Dr Chris Howard, University College London**			Performance and application of Lilquid-Crystal based Shutter, Polerisation Controllers and Filters **Dr Fredrik Kihlborg, LC-Tec Displays AB**	**KEYNOTE** Machine Vision Cameras for Solar Imaging **Dr Stuart Green, Amateur Astronomer**
13:40						
13:50		**KEYNOTE** Room temperature detection of human body radiation using CVD graphene technolog **Dr Ugo Sassi, University of Cambridge**		Imperceptible smart coatings based on atomically thin materials **Professor Monica Craciun, University of Exeter**	The spectrum of detector selection, with an emphasis on the infrared **Chris Varney, Laser Components Ltd**	
14:00	A new method for supervised optimum multispectral and hyperspectral data subset selection **Robert McConnell, WAY-2C, USA**		**KEYNOTE** Optoacoutic techniques for single cell imaging **Dr Thomas Dehoux, French National Centre for Scientific Research**	Time-of-Flight Depth Profiling Applications Based on Single-Photon Detection **Dr Aongus McCarthy, Heriot-Watt University**	Measurement of Fluorescence-how to optimise the sample set up & specify the spectrometer **Ger Loop, Avantes UK Ltd**	End of Line Packaging and Label Inspection **Paul Cunningham, Acrovision**
14:10						
14:20		Graphene Standardisation: What actually is my material? **Dr Andrew Pollard, National Physics Laboratory**				
14:30	**BREAK**		Enabling deep tissue microscopy with adaptive optics **Dr Debora Andrade, University of Oxford**	Laser Communications from UAVs in Project AIRSTART **Dr Malcolm Watson, AVoptics Ltd**	Piezo motors are increasingly being used as an alternative to electric motors **Steven Lockett, PI (Physik Instrumente) Ltd**	**Close of meeting**
14:40		Sensors with Graphene and 2D Materials **Kasun Dissanayake, City University of London, UK**				
14:50			Corrolative scanning ion conductance and fluorescence confocal microscopy for bio applications **Dr Andrew Shevchuk, Imperial College London**	Efficient techniques for thermal imagery calculations for biomedical applications **Mr Tom Davies, Photon Engineering LLC**	Real time, high power laser process monitoring **Pierre Champert, Coherent Inc**	
14:55	Real-time HSI – realising the potential of simultaneous, co-registered, 2D spectral capture at video rates **N. Barnett and R. Michels, Pro-Lite Technology Ltd, UK and Cubert GmbH, Germany**					
15:00		**BREAK**				
15:10	Linear variable bandpass filters for HSI **O. Pust and H. Farbricius, Delta Optical Thin Film A/S, Denmark**					
15:15			Utrasound mediated optical imaging with incoherent light **Prof. Steve Morgan, University of Nottingham**	Concluding comments **Close of meeting**	High performance Swept Test System for SiPho applications **Andrea Geltrude, Santec Europe Ltd**	
15:20		Graphene for large volume applications; opportunities and needs **Michael Hart, Graphitene Ltd**				
15:25	xiSpec hyperspectral snapshot mosaic and multilinescan cameras **J. Hillmann, XIMEA GmbH, Germany**			**ZEMAX WORKSHOP** Introduction and Welcome **Chris Normanshire, Zemax Europe Ltd**		
15:30			**FLASH PRESENTATIONS OF POSTERS**		**Close of meeting**	
15:35						
15:40	State of the art of UV – MIR spectral imaging: Innovated possibilities and applications **L. Urbonas, Inno-spec, Germany**	Fast Raman imaging of graphene grown on copper **Ian Hayward, Renishaw plc**		Fifth UK meeting of the Zemax User Group		
15:50						
15:55	Colour chemical imaging – intuitive hyperspectral imaging for the machine vision market **R. Webb, Stemmer Imaging, UK**					
16:00		An Introduction to Versarien and 2-DTech **Dr Craig Dawson, 2D-Tech**				
16:10	**POSTER SESSION** in the exhibition hall		**POSTER SESSION** in the exhibition hall			
16:15		Supporting the research of Graphene and other ermering 2D materials **Ray Whitehouse, Vac Techniche, UK**				
16:20						
16:30						
16:35		Concluding comments **Patrick Frantz, PlanarTECH, USA**				
16:40		**Close of meeting**		Concluding comments **Close of meeting**		
16:50			**Close of meeting**			

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DAY 2: Thursday 13th October
Meetings at a Glance

	Hyperspectral Imaging Ricoh Media Centre (Lower Ground floor)	Innovation Live! Meeting Enlighten Theatre (Exhibition Hall)	Nano-Spectroscopy & Bio-Imaging Jaguar Lounge (Ground floor)	Industrial Vision Vision Theatre (Exhibition Hall)	Vacuum Tutorials Enlighten Theatre (Exhibition Hall)
08:50					
09:00					
09:15			Introduction and Welcome **Dr Brian Patton, University of Strathclyde**		
09:20			Developing serum based high-throughput spectroscopic diagnostics **Dr Matthew Baker, University of Strathclyde**		
09:30					
09:40	Introduction and Welcome **Prof Steve Marshall, University of Strathclyde**		Brillouin spectroscopy to probe the elasticity and mapping stiffness across tissues **Dr Francesca Palombo, University of Exeter**		
09:50	**KEYNOTE** Real-time detection of human brain tumor using HSI **Dr Himar Fabelo, Universidad de Las Palmas de Gran Canaria, Spain**				
10:00			Application of Raman microscopy to cell imaging and cancer diagnosis **Dr Ioan Notingher, University of Nottingham**		
10:10					
10:20	Multispectral imaging at longwave-infrared wavelengths by a multi-aperture array of low-cost sensors **M. Preciado, G. Carles and A. Harvey, University of Glasgow**		**FLASH PRESENTATIONS OF POSTERS**	Introduction and Welcome **Dr Denis Bulgin, UKIVA, In Press PR**	
10:30					
10:40	**BREAK**			**KEYNOTE** Machine Vision Cameras for Solar Imaging **Dr Stuart Green, Amateur Astronomer**	
10:50		Introduction and Welcome **Laurence Devereux, Xmark Media**			
11:00	Hyperspectral Reflectance and Fluorescence Probe for Endoscopic Imaging **N. Clancy, J. Teare, G. Hanna and D. Elson, Imperial College London**	Optical fibre micro-structures and applications made with femtosecond laser **Dr Kaiming Zhou, Aston Institute of Photonic Technologies**		Chemical colour imaging - making hyperspectral imaging avaliable for machine vision **Tristan Hurley, Stemmer Imaging Ltd**	
11:10					
11:20	An integrated camera system for effective acquisition, capturing and transmission of hyperspectral data **J. Tschannerl, J. Ren, D. McKee and S. Marshall, University of Strathclyde**	Controlling your Scratch Dig inspection process **Mike Hobby, RedLux**			
11:30				3D Imaging with the latest Time-of-Flight Camera Technology **Mike Morgan, Multipix Imaging**	
11:40	Close range hyperspectral imaging for plant phenotyping **P. Mishra, M.S.M. Asaari, S. Mertens, S. Dhondt, N. Wuyts and P. Scheunders, University of Antwerp & University of Ghent, Belgium**	Speckle – if you can't use it can you lose it? **Dr Roy Clarke, LumOptica Ltd**			
11:50					
12:00	Ensemble Feature Selection for Plant Classification Using HSI **A. Bin Ghaith Alsuwaidi, H. Yin, B. Grieve, C. Veys and M. Hussey, University of Manchester, UK**	Novel optical techniques for chemical and biological sensing **Prof Zulfiqur Ali, Teeside University**		An overview of Machine Vision standard **Sean Wood, Clearview Imaging**	
12:10					
12:20					Has Vacuum Technology Advanced Significantly in the Last 30 Years? **Dr Graham Rogers, Leybold UK**
12:30				Seeing beyond the Visible-SWIR and its applications **Ian Alderton, Alrad Imaging**	
12:40					An Introduction into the Fundamentals of Vacuum – What is vacuum? **Dr Michael Thomson, Busch (UK) Ltd**
12:50					
13:00	**BREAK IN THE EXHIBITION HALL** delegates are encouraged to visit the exhibition and meet some of the 100+ exhibitors		**POSTER SESSION** in the exhibition hall	**BREAK IN THE EXHIBITION HALL** delegates are encouraged to visit the exhibition and meet some of the 100+ exhibitors	Optical gas and pressure sensing for process control of vacuum based industrial processes **Dr Joseph Brindley, Gencoa**
13:10					
13:20					Introduction to Atomic Layer Deposition **John O'Donnell, Kurt Lesker**
13:30			Vibrational micro-spectroscopies for label-free chemical imaging in biology and biomedical sciences **Dr Rabah Mouras, University of Limerick**	**KEYNOTE** The Challenges Associated with Imaging Technology in Space **Jason Gow, Centre for Electronic Imaging, The Open University**	
13:40					Pumping up air quality in the food and drink industry **Joe McIntee, Elmo Rietschle by Gardner Denver.**
13:50			Early steps in neuronal differentiation **Dr Paula Alexandre, UCL**		
14:00	Hyperspectral imaging for erosion detection in wind turbine blades **A. Young, S. Marshall, A. Kay, R. Torr and A. Gray, University of Strathclyde, Glasgow, UK**			End of Line Packaging and Label Inspection **Paul Cunningham, Acrovision**	
14:10			Information on localisation microscopy **Dr Susan Cox, King's College London**		
14:20	HSI for textile sorting and recycling in industry **C.B.P. Del Notario and A. Lambrechts, IMEC, Spain and IMEC, Belgium**				
14:30			Super-resolution imaging of receptor clusters in excitable cells - pushing the resolution **Prof. Christian Soeller, University of Exeter**	CMOS Global Shutter features for Machine Vision applications **Julian Parfitt, EG Electronics/ Sony Europe Image Sensing Solutions**	
14:40	Remote oil spill detection and monitoring on ice covered waters **A. Polak, S. Marshall, J. Ren, B. Hwang, B. Hagan and D. Stothard, Uni of Strathclyde, Glasgow, Scottish Association for Marine Science, Oban, UK, Fraunhofer UK, Glasgow**				
14:50			Award of poster prize and concluding comments **Close of meeting**		
15:00	Concluding comment **Close of meeting**			**Close of meeting**	
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