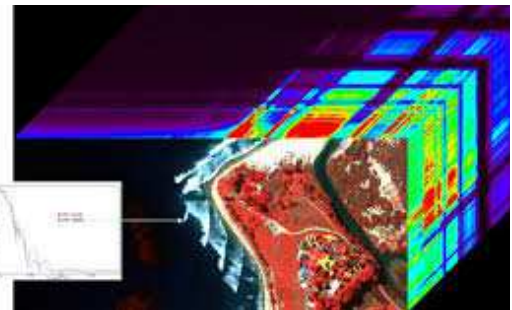




In collaboration with the
Hyperspectral Imaging Centre



DRAFT PROGRAMME Hyperspectral Imaging & Applications

Date: Wednesday 12th & Thursday 13th October 2016

Venue: Ricoh Arena Coventry, UK

GOLD SPONSOR



SILVER SPONSOR



PROGRAMME: DAY 1 : WEDNESDAY

Registration from 08:30 and exhibition is open: 10:00 to 17:00

09:30 **Introduction to meeting**
Prof Stephen Marshall, *Hyperspectral Imaging Centre*

SESSION 1 – FOOD & DRINK | Chair: S. Morgan

09:40 **KEYNOTE**
Mapping composition in food samples by NIR Hyperspectral imaging
Martin Whitworth, *Campden BRI, UK*

10:10 **Rice seed varietal purity inspection using hyperspectral imaging**
K. Trung¹, L. Thi¹, I. Andonovic² & S. Marshall²,
¹MICA, *Hanoi Univ. of Science and Technology, Vietnam*, ²*University of Strathclyde, Glasgow, UK*

10:30 **Analysis and detection of counterfeit drugs with hyperspectral cameras**
M. Marmion¹, S. Wilczynski² and B. Parker³,
¹*SPECIM Spectral Imaging Ltd, Finland*, ²*Medical University of Silesia in Katowice, Poland*, and ³*LOT-QuantumDesign Ltd, UK*

10:50 - refreshment break

11:10 **HSI for rapid screening of quality parameters in granular food commodities**
N. Caporaso^{1,2}, M. Whitworth¹ and I. Fisk²,
¹*Campden BRI, Chepping Campden, UK*, ²*University of Nottingham, School of Biosciences, Nottingham, UK*

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, *Food Refrigeration &*

Computerised Food Technology, University College Dublin, Ireland

11:50 **Using NIR HSI for the differentiation of pathogenic bacteria**
T-L. Kammies, M. Manley, P. Gouws and P. Williams,
Stellenbosch University, South Africa

12:10 - lunch break and exhibition

SESSION 2 – REMOTE SENSING & DATA ANALYSIS | Chair: J Ren

13:30 **KEYNOTE**
Remote HSI activities in the Chester F. Carlson Center for Imaging Science at RIT; phenomenology, algorithms, modeling and simulation, and applications
Professor A. Vodacek, *Center for Imaging Science, Rochester Institute of Technology, USA*

14:00 **A new method for supervised optimum multispectral and hyperspectral data subset selection**
Robert McConnell, *WAY-2C, USA*

14:20 - refreshment break

SESSION 3 - INDUSTRIAL | Chair: S Marshall

14:55 **Real-time HSI – realising the potential of simultaneous, co-registered, 2D spectral capture at video rates**
N. Barnett¹ and R. Michels², ¹*Pro-Lite Technology Ltd, UK* and ²*Cubert GmbH, Germany*

15:10 **Linear variable bandpass filters for HSI**
O. Pust and H. Farbricius, *Delta Optical Thin Film A/S, Denmark*

15:25 **xiSpec hyperspectral snapshot mosaic and multi-linescan cameras**
J. Hillmann, *XIMEA GmbH, Germany*

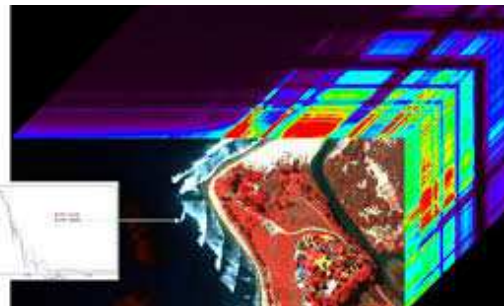
CONFERENCE ADMINISTRATION

Brenda Hargreaves, Enlighten Meetings
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- 15:40 **State of the art of UV – MIR spectral imaging: Innovated possibilities and applications**
L. Urbonas, *Inno-spec, Germany*
- 15:55 **Colour chemical imaging – intuitive hyperspectral imaging for the machine vision market**
R. Webb, *Stemmer Imaging, UK*
- 16:10 - 17:30
POSTER SESSION – PAPER LIST | Chair: J Ren
- P1 **Overview of hyperspectral data processing at the NERC-ARF**
L. Harris¹, G. Llewellyn², C. MacLellan³, M. Warren¹, B. Taylor¹, D. Clewley¹, A. Mata¹, S. Goult¹ & S. Groom¹,
¹Plymouth Marine Laboratory, ²British Antarctic Survey, ³NERC Field Spectroscopy Facility, UK
- P2 **Close range HSI for mapping salinity stress induced by Red Sea water irrigation in tobacco leaves**
P. Mishra¹, H. Shah², M. F McCabe², R. M. Houborg² and S. Almashawari², ¹University of Antwerp, Belgium, ²King Abdullah University of Science and Technology, Saudi Arabia
- P3 **Comparison of methods for the location and correction of bad pixels present in HSI**
R. Dorrepaal and A. Gowen, *University College Dublin, Ireland*
- P4 **HSI acquisition and analysis for the discrimination of bacterial colonies on blood agar plates images**
S. Arrigoni¹, G. Turra² and A. Signoroni¹, ¹University of Brescia, Italy, ²K Copan SpA - University of Brescia, Italy
- P5 **An iterative procedure for identification of foreign products in powder foods in NIR HSI spectroscopy: frauds and contaminations**
A. Herrero-Langreo¹, B. Diezma², L. Lleó², N. Gorretta¹, M. Boiret³, T. Cuadrado⁴, P. Barreiro², and J. Michel Roger¹, ¹UMR-ITAP, Irstea, Montpellier, France, ²LPF-TAGRALIA, ETSIAAB, Universidad Politécnica de Madrid, Madrid, Spain, ³Technologie Servier, Orléans, France, ⁴Facultad de Agronomía y Veterinaria, UASLP, San Luis de Potosí, México
- P6 **Hybrid tissues surface HSI and shape recovery**
J. Lin¹, N. Clancy¹, X. Sun¹, J. Qi¹, M. Janatka², D. Stoyanov² and D. Elson¹, ¹Imperial College London, UK and ²University College London, UK
- P7 **Effect of Kernel width on classification accuracy: Using SVM for hyperspectral dataset**
R. Munsaf Khan, *Institute of Space Technology, Pakistan*
- P8 **High performance snapshot spectral imaging using a generalisation of a Lyot filter**
J. Fernandez Ramos, L. Brewer and A. Harvey, *University of Glasgow, UK*
- P9 **Enhanced CASSI snapshot imager using dual prism dispersion**
M. Ding, P.W.T. Yuen, U. Soori, M. Selvagumar and U. Zahidi, *Cranfield University, UK*
- P10 **Discriminative imaging for washing powder production by multispectral sensing**
U. Soori¹, P.W.T. Yuen¹, J. Ren², S. Selvagumar¹, M. Ding¹, U. Zahidi¹, M. Gunes¹ and J. Piper¹, ¹Cranfield University, UK and ²University of Strathclyde, UK
- P11 **HSI for monitoring of continuous crystallisation process of fine pharmaceuticals**
J. Dziejewicz, J. McGinty, P. MacFhionnghaile, V. Svoboda, J. Sefcik, A. Gachagan, A. Nordon, S. Marshall, A. Cleary and I. Andonovic, *University of Strathclyde, UK*
- P12 **Introduction of separation boundary in sub-pixel mapping based on a traction model**
A. Eskandari and A. Karami, *Shahid Bahonar, University of Kerman, Iran*
- P13 **Visible and NIR HSI to early detection of fungal infection in strawberry fruits**
A. Siedliska, P. Baranowski and M. Zubik, *Institute of Agrophysics Polish Academy of Science, Poland*
- P14 **Hyperspectral imaging and multivariate data analysis as a sensitive determinant of cut flower age**
Alan P. Gay¹, Helen J. Ougham¹, Hilary J. Rogers², Janet Taylor¹, Carol Wagstaff² Anthony D. Stead³
¹IBERS, Plas Gogerddan, Aberystwyth, ²Cardiff School of Biosciences, Cardiff University, ³Royal Holloway, University of London
- 17:30 - end of day
There will be a conference dinner within the Ricoh Arena Complex at 19.30pm. Details on website.

CONFERENCE ADMINISTRATION

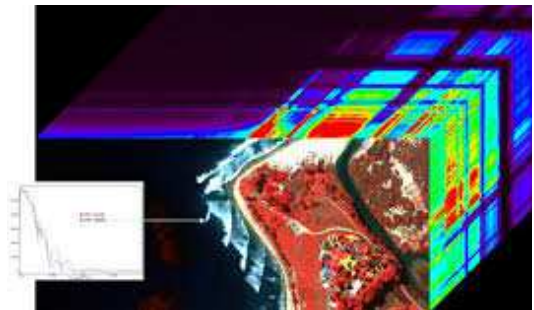
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PROGRAMME: DAY 2 : THURSDAY

Registration from 08:30 and exhibition is open: 10:00 to 16:00

09:40 Introduction to day 2

Prof Stephen Marshall, *Hyperspectral Imaging Centre*

SESSION 4 – SENSORS & SYSTEMS

| Chairs: A Harvey and P Yuen

09:50 KEYNOTE

Real-time detection of human brain tumor using HSI

Dr Himar Fabelo, *Universidad de Las Palmas de Gran Canaria, Spain*

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, UK*

10:40 - refreshments break

11:00 Hyperspectral reflectance and fluorescence probe for endoscopic imaging

N. Clancy, J. Teare, G. Hanna and D. Elson, *Imperial College London, UK*

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, Glasgow, UK*

11:40 Close range hyperspectral imaging for plant phenotyping

P. Mishra¹, M.S.M. Asaari¹, S. Mertens², S. Dhondt², N. Wuyts² and P. Scheunders¹, ¹*University of Antwerp, Belgium*, ²*University of Ghent, Belgium*

PROGRAMME COMMITTEE

Prof Steve Marshall (Chair)
Hyperspectral Imaging Centre,
University of Strathclyde.

Dr Jinchang Ren (Co-Chair)
Hyperspectral Imaging Centre,
University of Strathclyde.

Dr Aoife Gowen
(Technical Programme Organiser)
University College Dublin, Ireland

Dr Neil Clancy
(Technical Programme Organiser)
Department of Surgery and Cancer,
Imperial College London.

Prof Andy Harvey
School of Physics & Astronomy,
University of Glasgow.

Prof Steve Morgan
Faculty of Engineering,
University of Nottingham.

Dr Peter Yuen
Electro-Optics, Image & Signal
Processing, Centre for Electronics
Warfare, Cranfield University.

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*

12.20 - lunch break and exhibition

SESSION 5 –APPLICATIONS | Chair: N Clancy

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*

14.20 HSI for textile sorting and recycling in industry

C.B.P. Del Notario¹ and A. Lambrechts^{2,1} *IMEC, Spain and ²IMEC, Belgium*

14.40 Remote oil spill detection and monitoring on ice-covered waters

A. Polak¹, S. Marshall¹, J. Ren¹, B. Hwang², B. Hagan² and D. Stothard³, ¹*University of Strathclyde, Glasgow, UK*, ²*Scottish Association for Marine Science, Oban, UK*, ³*Fraunhofer UK, Glasgow, UK*

15:00 Closing remarks and end of conference

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