

## Microscopy Image Analysis for Biomedical Applications

One Day BMVA symposium at the British Computer Society,  
5 Southampton Street, London, WC2E 7HA, UK on April 21<sup>st</sup> 2010.

**Chairs:** Prof. Stephen McKenna (University of Dundee), Dr. Derek Magee (University of Leeds) and Dr. Nasir Rajpoot (University of Warwick).

- 10.00 **Registration and coffee**
- 10.25 **Welcome and Introduction**
- 10.30 **Invited Talk: Image analysis - a pathologist's perspective**  
Darren Treanor (Leeds Teaching Hospitals, NHS Trust, UK)
- 11.10 **Automatic nucleus segmentation of adherent cells from brightfield microscopy images**  
Rehan Ali, Tunde Szilágyi, Kamila Hussien, Martin Christlieb, Borivoj Vojnovic, Michael Brady (Stanford University, University of Oxford)
- 11.30 **Classification and scoring of breast tissue microarray spots**  
Telmo Amaral, Stephen McKenna, Katherine Robertson, and Alastair Thompson (University of Dundee)
- 11.50 **Automatic neuropathy quantification using corneal confocal microscopy image analysis**  
M. A. Dabbah, J. Graham, I. Petropoulos, M. Tavakoli, R.A. Malik (University of Manchester)
- 12.10 **Lunch and Poster Session**
- 14.00 **Invited Talk: Image analysis applications for whole slide imaging: Examples from diabetes, neuroscience and oncology research**  
Kate Lillard-Wetherell (Aperio Technologies Inc., USA)
- 14.40 **The application of support vector machines to detect cell nuclei for Automated microscopy**  
Ji Wan Han, Toby Breckon, David A. Randell, Gabriel Landini (Cranfield University, University of Birmingham)
- 15.00 **Segmentation of cell clumps for quantitative high throughput analysis**  
Simon Li, Claudia Buehnenmann, Bass Hassan, J Alison Noble (University of Oxford)
- 15.20 **Tea and Coffee**
- 15.40 **Tracing curvilinear structures in live microscopy images**  
Boguslaw Obara, David Gavaghan, Vicente Grau (University of Oxford)
- 16.00 **Segmentation and tracking of networks of Arabidopsis thaliana cells through Confocal laser microscope images**  
V. Sethuraman, A French, D Wells, T Pridmore (University of Nottingham)
- 16.20 **Three-dimensional model construction from confocal microscopy images for accurate diffusion MRI data synthesis**  
Eleftheria Panagiotaki, Matt G. Hall, Bernard Siow, Daniel C. Alexander (University College London)
- 16.40 **Closing remarks and finish**

## Posters

### **Multilevel feature extraction for oesophagus epithelial architecture**

Afzan Adam, Andy Bulpitt (University of Leeds)

### **Analysis of images for automatic targeting and data extraction in transmission electron microscopy**

N. Coudray, A. Karathanou, J.L. Buessler, G. Hermann, J.P. Urban  
(MIPS Laboratory, France)

### **Real time processing issues in segmentation of time lapse fluorescence imagery**

D Crookes, A McArdle, C Gillan, P Miller, H Gribben  
(Queen's University Belfast; Andor Bio-Imaging Division, Belfast)

### **The automatic identification of non-growing follicles in human ovaries**

T W Kelsey (University of St. Andrews)

### **Raman spectral mapping: improving our understanding of colon carcinogenesis**

C. A. Kendall, J. Wood, D. Carey, J. Hutchings, T. Cook, N. Shepherd, N. Stone  
(Gloucestershire Hospitals NHS Trust)

### **Automating yeast cell image analysis**

Yihui Liu, Ross D. King  
(Shandong Institute of Light Industry, China; Aberystwyth University)

### **A new design tool for feature extraction in noisy images based on greyscale hit-or-miss transforms**

Stephen Marshall, Paul Murray (University of Strathclyde)

### **Characterisation of morphological patterns in pulmonary neuroendocrine carcinoma histology images**

Poorna Chandra Suraj B. N., Nasir M. Rajpoot, Muhammad F. Bari, David Snead  
(University of Warwick)

### **The Open Microscopy Environment: informatics and quantitative analysis for biological microscopy, HCAs, and image data repositories**

Jason R. Swedlow (University of Dundee) and the OME Consortium

### **Detecting epithelial nuclei in virtual slides**

P Chomphuwiset, R D Boyle, D R Magee, D E Treanor (University of Leeds)

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## **REGISTRATION FORM: 21<sup>st</sup> April 2010 Meeting**

Please return this form to BMVA Secretary, Royston Parkin, 95 Queen Street, Sheffield, S1 1WG, Tel 0114 272 0306, Fax 0114 272 6158 or via email to BMVA@roystonparkin.co.uk. The meeting is free to members of the BMVA but a charge of £20 is payable by non-members. A sandwich lunch is available at a cost of £5 and should be booked in advance. When registering please enclose a cheque for the appropriate amount made payable to "The British Machine Vision Association".

NAME: .....

ADDRESS: .....

TEL: ..... BMVA MEMBER: YES/NO

email: ..... LUNCH: YES/NO

VEGETARIAN: YES/NO