



BRISTOL VISION INSTITUTE

## BVI REFRESH – SPRING 2013

*Welcome to the BVI newsletter – keeping you up to date with the latest BVI news.*

### EVENTS

#### Richard Gregory Lecture 2013



The 2013 Richard Gregory Lecture, held in memory of great interdisciplinary thinker, Professor Richard Gregory, will be presented by Matthew Postgate, Controller of BBC Research and Development. The provisional date is 28 October 2013.

#### Bristol to host BMVC2013



The Visual Information Laboratory is to host next year's British Machine Vision Conference (BMVC2013) from 9-13th September 2013. This will offer an exciting programme of events, including excellent invited speakers, topical tutorials and a Student Workshop.

Keep up with all VI-Lab news and events [here](#). For further information:

<http://bmvc2013.bristol.ac.uk/>

#### BVI Workshops

BVI is pleased to announce a programme of three Vision workshops during the summer term:

17th May 2013: Finding and Hiding things,  
25th June 2013: Immersive experience.  
8th July 2013: Locomotion

For further information or to register attendance, please contact: [i.cuthill@bristol.ac.uk](mailto:i.cuthill@bristol.ac.uk)

You can find details of all events [here](#)

#### BVI Seminars

The final BVI seminars of the academic year take place this term with talks by Professor Daniel Levin, Vanderbilt University, Tennessee (May 3rd 2013 "Bridging the gap between rich and sparse accounts of vision: A cinematic lens for visual

cognition?") and Dr Matteo Naccari of BBC R&D (May 10th 2013 "Perceptual Video Compression")

#### 2013 Young Researchers Colloquium

In partnership with Cardiff University and the University of the West of England, the 2013 BVI Young Researchers Colloquium will be hosted by Cardiff University on Friday June 28<sup>th</sup> 2013 at the [School of Optometry and Vision Sciences](#).



This hugely popular annual event gives young researchers the invaluable opportunity to present their research. There are opportunities for posters, talks and demos and we have scaled up the event this year, taking in submissions from our new GWE partners Bath and Exeter; ensuring that the event will be bigger and better than ever.

Contact Jen Hawkins, [J.hawkins@bristol.ac.uk](mailto:J.hawkins@bristol.ac.uk) for more information, to submit an abstract, or to register attendance at the event. The deadline for submission of abstracts is 10 May 2013.

#### CamoCon 2013

CamoCon 2013 will take place on Friday 5th July 2013 in Bristol, supported by the AVA and the Bristol Vision Institute. It will be a one-day meeting on camouflage, intended to provide a snapshot of the state-of-the-art, five years on from the AVA meeting in Cambridge on the same topic.

Tom Sherratt (Carleton University, Canada) will give the keynote. For registration go to:

<http://www.theava.net/meetings/camocon2013.html>

## VISUAL MOVERS AND SHAKERS

### Congratulations!

The Institute of Electrical and Electronic Engineers (US) is the world's leading professional organisation for advancing technology. BVI Director, David Bull, has been honoured as an IEEE Fellow, recognised for his contributions in video analysis, compression and communications. His work has been highlighted in the award, not just for its academic excellence but also because of its commercial significance. IEEE Fellowship is conferred by the IEEE Board of Directors upon a person with an outstanding record of accomplishments and is recognised by the technical community world-wide as a prestigious honour. Only 298 individuals from its 400,000 members across 160 countries were elevated in 2013.

### A Warm Welcome

*Marc Price* has joined BVI's Immersive Technology Laboratory as a visiting research Fellow. Marc is an employee of BBC R&D, with many years experience in cutting edge audiovisual technology. Marc is spending 12 months seconded to BVI to work on future immersive video formats.

### Distinguished Visitors

BVI is pleased to host the visit of *Professor David Williams* from Rochester University USA on 25 April. David is one of the world's leading experts on human vision and has pioneered new technologies that are improving the eyesight of people around the globe. His laboratory has developed an automated method to measure and correct the optical defects of the eye far more accurately than had been possible before. David is Dean for Research in Arts, Sciences, and Engineering and is Director of the Rochester Center for Visual Science

## RESEARCH NEWS

### Pyrotechnic Spectacular in Millenium Square



While it could be argued that 3D has been successful in cinema and gaming, the sense of immersion can be disappointing due to light attenuation, fatigue, poor production or other discomforting effects. The 'wow factor' surrounding 3D does not always map onto sustained immersion in the experience. Some of the key questions are: how can challenging content be generated to evaluate immersion, how could this impact be assessed and quantified and furthermore, once quantified, how can these results be used to inform and optimise the creation, capture, production, delivery and display sub processes?



Through the Bristol Immersive Technology Laboratory (Bull, Gilchrist), formed jointly with BBC R&D, a video shoot was held on 4th April at

Bristol's innovative and creative hub, Millennium Square. The aim of this was to shape the technology of the future creating formats for new immersive experiences for cinema audiences, broadcasting and internet streaming. The shoot has created reference test material at high resolution, high frame rate and high dynamic range which will be used for international video compression standardization and immersive measurements. This event was unique and emphasises the University of Bristol's position as the leading research institution on extended video parameter spaces.

### Does Motion Break Camouflage?

Jo Hall, Nick Scott-Samuel, Roland Baddeley and Innes Cuthill have been working on a project investigating the effects of camouflage patterns on moving objects. Human participants performing a computer based task showed that while cryptic camouflage patterns are effective for stationary targets, they cannot prevent detection or capture of moving targets. However, these cryptic patterns can affect the identification of a moving target when similarly patterned objects are present. So, if one has to move, it is best to be surrounded by similar targets (e.g. other animals in a herd) to reduce the chance of being identified. Despite previous assumptions, motion does not entirely break camouflage.

### BVI wins Marie Curie Research Network in Video Compression

While the demand for new video services will, to some extent, be addressed through efficiency improvements in network technology, video compression is a key component. The PROVISION Marie Curie Network ITN was motivated by the challenge to deliver higher volumes of more immersive content over congested band-limited channels. In partnership with Fraunhofer HHI Berlin, University of Nantes, University of Aachen, BBC, Microsoft Asia, Purdue University and Technicolor, BVI will deliver world-leading technical innovation through a unique highly integrated research programme, producing skilled staff, efficient and validated solutions and impact through standardisation.

For further details contact David Bull [dave.bull@bristol.ac.uk](mailto:dave.bull@bristol.ac.uk)