



BRISTOL VISION INSTITUTE

BVI REFRESH – AUTUMN 2013

Welcome to the BVI newsletter – the latest BVI news.

EVENTS

Matthew Postgate gives the 2013 Richard Gregory Memorial Lecture



The 2013 Richard Gregory Lecture, held in memory of great interdisciplinary thinker, Professor Richard Gregory was given by Matthew Postgate, Controller, BBC

Research and Development 28th October in The Great Hall, Wills Memorial Building.

The BBC has led or been involved with many of the advances that have shaped our media landscape. It is now working with BVI on emerging technologies to bring increasing realism to the images it presents, to give the audience greater control over those images and present an experience that is beyond reality.

Matthew took the audience on a journey from early crackly pictures to the latest wide screen ultra-high definition smart TVs. Then, using examples from the current work of BBC R&D, leading to a future of multiple screens, deep immersion and explore what that means for us as individuals and as a society.

BMVC2013 – A success for Bristol



The 24th British Machine Vision Conference (BMVC) was held at the University of Bristol, Sept 2013.

The conference was hosted by the Visual Information Laboratory,

and was chaired by four of its members: Tilo Burghardt, Dima Damen, Walterio Mayol-Cuevas and Majid Mirmehdi. This year, the conference received the most number of papers it has ever received - 439 submissions. 131 papers were accepted, with an overall acceptance rate of 30%. More than 200 delegates attended the talks and poster presentations.

The conference had two keynotes from distinguished scholars, Prof. Andrew Zisserman from the University

of Oxford and Prof. Frank Dalaert from Georgia Institute of Technology. Tutorials were given by Dr. Andreas Krause from ETH Zurich and Dr. Adam Coates from Stanford University and other keynote addresses were given by Dr. Gabriel Brostow from UCL and Dr. Edward Rosten from Computer Vision Consulting. The conference reception was held in the Great Hall of the Wills Memorial Building and featured a talk from the Bristol-based internationally-renowned Aardman Animation studios' technical director, Tom Barnes.

VI lab wishes to thank Qualcomm, Dyson, Microsoft, HP and the IET for their financial support of BMVC.

BVI Workshops



The BVI summer workshop series was designed to foster new research collaborations in three target areas, all falling within the remit of Bristol Vision. As such, an effort was made to draw in researchers who are not regular attendees of BVI seminars, and there were no formal 'conference style' presentations.

The emphasis was on (i) identifying the 'grand challenges' and areas of overlapping interest and unique expertise and (ii) establishing who might move forward with a view to putting together grant applications or proposing new, jointly supervised, PhD students.

Full reports can be found on the BVI website

BVI Seminars

This year's series of BVI Seminars got off to a great start with talks by Dr. Denize Atan from Bristol's Department of Ophthalmology, Osian Haines, Visual Information Lab and Dr. Andreas Jarvstad, Experimental Psychology.

The series continues through the Autumn term with a varied schedule culminating in a BVI Xmas special, 13th December 2013.

You can find all the details on the [BVI website](http://www.bristol.ac.uk/vision-institute).

2013 Young Researchers Colloquium

In partnership with Cardiff University and the University of the West of England, this years' BVI Young Researchers Colloquium was hosted by Cardiff University on Friday June 28th 2013 at the School of Optometry and Vision Sciences.

The hugely popular annual event was a great success with 40 presentations and posters and around 70 attendees from across the region.

CamoCon 2013

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CamoCon 2013 took place in Bristol on Friday 5th July 2013 supported by the AVA and BVI.

This one-day meeting on camouflage, provided a snapshot of the state-of-the-art, five years on from the AVA meeting in Cambridge, on the same topic.

Research on camouflage, both in biological and military contexts, has boomed in the last 10 years; CamoCon 2013 brought together leading researchers from academia and the defence industry to discuss how the field has advanced since then. Tom Sherratt (Carlton University, Ottawa) gave the plenary lecture, generously sponsored by QinetiQ, on "Isolating the function of disruptive coloration". The rest of the one-day meeting, in Clifton Hill House, followed a workshop format, with pairs of 'theme leaders' introducing each of seven controversial or under-researched topics, suggested by the delegates in advance of the meeting, and chairing the open discussions which followed.

The organisers, Dr. Nick Scott-Samuel (Experimental Psychology) Professor Innes Cuthill (Biological Sciences), thank BVI, QinetiQ, the AVA and the students of UoB's CamoLab, for making the meeting an unqualified success.

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

VISUAL MOVERS AND SHAKERS

EPSRC funded BBC secondment

Marc Price, Senior Engineer, BBC R&D who has been working with us in BVI's Immersive Technology Laboratory for the past 12 months, has been awarded a 1 year EPSRC Impact Award to continue this relationship on a full-time basis.

Marc is an employee of BBC R&D, with many years experience in cutting edge audiovisual technology. He will be working on high dynamic range and high frame video technologies.

RESEARCH NEWS

New BBC research collaboration on Immersive Technologies

The BBC has awarded a 3.5 year EPSRC Industrial CASE award to BVI. Alex Mackin, a graduate of Bristol's Engineering Mathematics Department will undertake his PhD on the topic of 'the extended video parameter space - beyond 3D', jointly supervised by Professor David Bull and Professor Iain Gilchrist.

Collaboration with Rochester

Following the visit of *Professor David Williams* (one of the world's leading experts on human vision) from Rochester University USA in April, research collaboration has been established between the Rochester Center for Visual Science and Professor Andrew Dick in Bristol's Department of Ophthalmology. They will be undertaking research on immune cell imaging, working on the labelling of cells and their detection using adaptive optics.

Marie Curie Research Network in Video Compression

A new 4M Euro Marie Curie Network ITN has been established by BVI in partnership with Fraunhofer HHI Berlin, University of Nantes, University of Aachen, BBC, Microsoft Asia, Purdue University and Technicolor. Motivated by the challenge to deliver higher volumes of more immersive content over congested band-limited channels, BVI will deliver world-leading technical innovation in the area of video compression.

For further details contact Professor David Bull
dave.bull@bristol.ac.uk

Vision aids cow health

Melvyn Smith, Mark Hansen and Lyndon Smith, from the UWE Centre for Machine Vision have been awarded £715,000 from Kingshay Ltd., to undertake a 3 year research project investigating innovative 3D-imaging technology to enhance the simultaneous measurement of cow body condition score (BCS), liveweight and mobility (gait). The aim is to improve the identification of these key quality and production traits for animal welfare, sustainability and profitability.

The imaging technology and web-based analysis software will enable the farmer and others in the value chain such as vets, nutritionists and livestock advisers to make use of much more precise, consistent and frequent measurements, creating greater opportunities to improve cow performance and welfare.

For further information contact: Melvyn Smith
Melvyn.Smith@uwe.ac.uk

RESEARCH OPPORTUNITIES

UWE

PhD Scholarship in 3D Computer Vision

A funded full-time PhD studentship is available in 3D computer vision in the Centre for Machine Vision (CMV) within the Bristol Robotic Laboratory (<http://www.brl.ac.uk/>)

Toulouse

CIMI in Toulouse have a number of vision-related positions at postdoctoral level in mathematics, computer science. These should attract outstanding junior scientists (within 3-8 years of PhD).

<http://www.cimi.univ-toulouse.fr/-CIMI-positions-?lang=en>

For article submissions, queries, feedback and/or anything BVI related, please contact [Jen Hawkins](#) or [Professor Dave Bull](#)