BMVA News

BMVA News [1] is published every three months. Contributions on any activity related to machine vision or pattern recognition are eagerly sought. These could include reports on technical activities such as conferences, workshops or other meetings. Items of timely or topical interest are also particularly welcome; these might include details of funding initiatives, programmatic reports from ongoing projects and standards activities. Items for the next edition should reach the Editor by 1 June 2011.

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[1] The British Machine Vision Association and Society for Pattern Recognition is a Company limited by guarantee, No. 2543446, registered in England and Wales. Registered Office: Granta Lodge, 71 Graham Road, Malvern, WR14 2JS. The Association is a non-profit-making body and is registered as charity No. 1002307.

Editorial: *Fast Hardware for Free!*

From the earliest days of pictorial pattern recognition, carrying out image processing operations on a serial computer was a very slow process, very far from the possibility of real-time. While it was reasonable to think in terms of processing acoustic signals in real time, to do the same with images was a nonsense, as $O(N)$ operations became $O(N^2)$, while general search operations involving arbitrary rotations and scales were unimaginable. Gradually the situation improved as Moore's law bit into the problem, and by the 1980s it became possible to contemplate and achieve real-time inspection with computers if they were augmented by suitable hardware accelerators. TTL technology helped with this, albeit adding a lot of PCB design and fabrication, and devices such as bit-slices and Transputers all played their part. But during the process, aspiring image analysis software experts had to spend much of their time producing hardware solutions to software problems – with all the expense and lack of flexibility that followed from this.

Fortunately, the situation gradually eased, with DSP chips taking the lead, but by the 2000s, FPGA technology started permitting middleware solutions, i.e. making general purpose designs that could be rewired as necessary – even on the fly in real-time. Thus the emphasis shifted back to the software, and people's time moved back to the production of more sophisticated algorithms that didn't have to embody so many cunning short cuts. At the same time, FPGAs acquired embedded microprocessors, so they became considerably more powerful and adaptable, and able to cope with a great many inspection and other applied tasks. However, their floating point capabilities lagged behind, and left an important need unfulfilled for practical 3D vision.

Curiously, it was the games market that was to provide a way forward, as the demand for realistic computer games operating real-time 3D HCI necessitated exactly this sort of technology. Thus video cards of greater and greater power came onto the scene: these were designed to work in parallel both with each other and with PC CPUs. The big question now is how dedicated they are to games programs as distinct from operations that could be of value for vision. Interestingly, vision can be regarded as inverse graphics: but the simple difference is that going from 3D concept to graphics is logical and therefore easy, while going from pictures to vision isn't, because inference rather than deduction is involved. However, such fears turn out to be largely groundless, as at the last BMVC, May *et al*. showed that (at minimum) *all* the SIFT modules could be programmed on a general purpose GPU (it should be remarked that May *et al*. are far from being the only workers involved in such exercises).

All this bodes well for the future of our subject, not least because the games industry is a powerhouse that is not going to lie down idly waiting for more exciting times (though one wonders when learn-as-you-sleep technology will start up). With all this in mind, it is of interest that the BMVA is shortly to have a meeting dedicated to *Using GPUs for Vision*. The applications will be in the 3D, motion, surveillance and medical areas, and they hardly look like a watered down set that have been thought up just to try out a few odd new bits of technology. On the contrary, they look like a foretaste of things to come. What I like about this scenario is that one gets the hardware with no effort, unlike my early days in the subject.

Professor Roy Davies
Editor, BMVA News
email: e.r.davies@rhul.ac.uk

Wanted: Chairs for BMVA Technical Meetings

We are currently SEEKING VOLUNTEERS to chair meetings for the academic year 2011–2. Any BMVA member can propose a topic and chair a relevant meeting and this is evident by the history. From well-regarded professors to young researchers, alone, in pairs or even in groups, BMVA members take the opportunity to bring existing research communities together or develop forums for new research areas. This volunteering task is not only important for the success of the meetings, but also very beneficial for the chairs themselves, as it provides them with valuable experience and visibility.

Fortunately, chairs' duties are not onerous. Initially, they need to propose a suitable topic to the BMVA Meeting Secretary. Once their proposal is accepted, they have to prepare a "Call for Participation" to invite contributions to the meeting. At the same time they may want to personally invite speakers (BMVA has a budget for their expenses). Then, they need to prepare a schedule for a one-day event. Finally, they will chair the meeting on the day. They even have the option to edit a relevant special issue for the BMVA Annals.

BMVA will normally take care of all the other tasks, such as to advertise the Call for Participation and the Programme via its website and mailing list, book a venue, arrange catering and finally take care of the registration process.

The diversity of meetings is also remarkable. They may focus on traditional topics (e.g. "Machine Learning", "Vision and Robotics"), on specific research problems (e.g. "Human Articulated Motion", "Facial Analysis and Animation", "Segmentation of Anatomical Soft Tissue Regions in Medical Data"), on specific approaches (e.g. "Group Theory, Invariance and Symmetry in Vision"), on specific applications (e.g. "Automotive Application", "Security and Surveillance") or even go across different disciplines (e.g. "Biological and Computer Vision").

While the majority of the meetings are hosted in Central London, they may take place anywhere in Britain. For instance, two years ago a "Facial Analysis and Animation" meeting took place in Edinburgh and proved very successful (that was attributed to the enthusiasm of the chairs – a group of four young researchers) and this year the joint AVA/BMVA technical meeting on Biological and Computer Vision will take place in Cardiff.

Chairing is an important task for the success of the BMVA technical meetings and is also rewarding for the chairs themselves. If you are interested in chairing one of the future BMVA technical meetings, do not hesitate to contact the BMVA Meeting Secretary (Dr Dimitrios Makris) and discuss your proposal with him, even if it does not exactly fit what has happened in the past. Visit the BMVA meeting webpage for up-to-date information on scheduled meetings, programmes, CfPs and detailed instructions for meeting chairs:

http://www.bmva.org/meetings

Dr Dimitrios Makris
Kingston University
email: d.makris@kingston.ac.uk

BMVC 2011 – Call for Papers
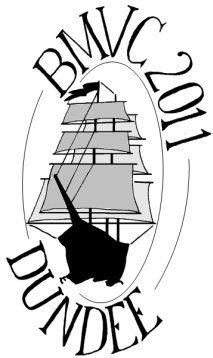
The British Machine Vision Conference is one of the major international conferences on machine vision and related areas. Sponsored by the British Machine Vision Association, the 22nd BMVC will be held in Dundee on 29 August – 2 September 2011. The single-track programme will include oral and poster presentations, invited talks, and a tutorial. Detailed instructions for authors are available on the conference website:

www.computing.dundee.ac.uk/bmvc2011

CONFERENCE CHAIRS

Stephen McKenna, University of Dundee
Emanuele Trucco, University of Dundee
Jesse Hoey, University of Waterloo

INVITED SPEAKERS

- David Fleet, University of Toronto, Canada: "Tracking and Understanding Human Motion"
- Nikos Paragios, Čcole Centrale de Paris/INRIA Saclay, Ile-de-France: "Shape Grammars and Procedural Modeling towards Large Scale 3D Modeling and Reconstruction"
- Matthew Blashcko, University of Oxford: Half-day tutorial on "Structured Prediction and Inference in Computer Vision".

PAPER SUBMISSIONS AND TOPICS

Authors are invited to submit full-length, high-quality papers on image processing and machine vision. Topics include, but are not limited to:

- Biomedical applications
- Document processing and recognition
- Image processing techniques and methods
- Model-based vision
- Motion, optic flow and tracking
- Person, face and gesture tracking
- Segmentation and features
- Statistics and machine learning for vision
- Stereo, calibration and geometry
- Texture, shape and colour
- Video analysis
- Vision for visualization and graphics.

IMPORTANT DATES

- Paper submission deadline: 15 April
- Author notification: 28 June
- Pre-conference tutorial: 29 August
- Conference: 30 August – 1 September.

Professor Stephen McKenna
University of Dundee
email: stephen@computing.dundee.ac.uk

BMVC Postgraduate Workshop – Call for Papers

2 September 2011

The 3rd British Machine Vision Conference (BMVC) Postgraduate Workshop will take place in Dundee on Friday 2 September, the day after the main BMVC conference. This workshop has now become a regular feature of BMVC. It gives PhD students in computer vision an opportunity to network and start collaborations at an early stage in their research careers.

PhD and masters research students studying in the UK are invited to submit full-length high-quality papers of which the main author is a student. All papers will be reviewed and selected for either oral or poster presentation. Detailed instructions for authors are available on the conference website.

PAPER SUBMISSIONS AND TOPICS

Suitable topics for workshop papers are the same as those applying for the main BMVC conference (see above). All accepted papers for the workshop will be published digitally, separately from the main conference proceedings.

IMPORTANT DATES

Submission deadline: 17:30 on 18 July
Notification of acceptance: 30 July
Camera ready papers: 13 August
Workshop: 2 September.

Workshop chair: Jianguo Zhang

Workshop venue: Queen Mother Building, School of Computing, University of Dundee, DD1 4HN, Scotland, United Kingdom

Further information about the conference and the workshop:

> http://www.computing.dundee.ac.uk/bmvc2011/
> email: bmvc2011@computing.dundee.ac.uk

Robert B. Fisher – *BMVA Distinguished Fellow 2010*

Bob Fisher is the first American recipient of the BMVA Distinguished Fellow Award, but many in the UK computer vision community think of him as Scottish, as he has been at the University of Edinburgh for almost thirty years. Bob began his career as an undergraduate Mathematician at Caltech, moving to Stanford for his master's. His academic career did not begin immediately, because he worked as a programmer for five years before coming to Edinburgh in 1983 to begin a PhD under Jim Howe. Edinburgh in the eighties was a world power in AI research, and vision was clearly established as one of the big AI challenges. At that time, the influence of Marr and Grimson meant that although everyone knew the "big problem" of object recognition was the ultimate goal, much attention was focussed on the low-level steps of recovering Marr's "2½D sketch", or other 3D representations (Grimson's "From images to surfaces"). Bob looked beyond that goal, to a future where 3D would be available using real-time high resolution depth cameras, and his PhD thesis, entitled "From surfaces to objects", explored the recognition of complex articulated 3D objects from range images. In common with most vision work of that era, the concepts in the thesis were proven on a relatively small dataset, but in this case there is a good reason why. Because these range cameras did not yet exist, Bob had to come up with an alternative: manual measurement using a tape measure of the distance between points in the scene and a 2D camera, followed by a custom surface interpolation technique, which made image collection rather more arduous than it is today: simply surfing Flickr. What he could not have known was how long it might take for technology to catch up. As we can see with this year's release of a new computer game controller based on real-time depth sensing, Bob was about 30 years ahead of his time.

Those early papers were the first of some 250 publications in many areas of computer vision, including 3D sensing and calibration, surface modelling, least squares fitting, attention, evolutionary algorithms, and recently medical imaging and video. His recent work displays an intriguing focus on animals and animal noises: humpback whale-song analysis and imaging of bats. Those wondering where the attraction lies in imaging bats may find some explanation in the fact that data collection for such studies is best achieved in exotic locations such as Panama.

I know Bob well, having studied for my PhD under his supervision, and recall his often ironically stated advice to PhD students. I'm sure that when he wrote "always ignore everything your supervisor says", he realised the irony was evident, as to obey the instruction would be to fail to ignore a supervisor's advice. In fact, one knew that it was an excellent idea not to ignore Bob's advice. One of the many things I learned from him is a principle I hold dear to this day: ensure your paper is clear and easy to read – if an idea is worth publishing it's worth explaining clearly and concisely with the minimum of extra fuss. I also learned that if one aims to solve the big or impossible problems, one will end up meeting and solving interesting problems along the way. I also learned that for any program we would write in Matlab or Perl, Bob could write the same program in less time in C! The value Bob places on clarity and in the promulgation of ideas is also visible in the vast amount of work he has done to make available computer vision teaching materials. Most of us will have used CVonline or HIPR at some point; and in the days before Wikipedia it was a lifeline for researchers not just in the UK but throughout the world. His more recent work on the "Dictionary of Computer Vision" and on the CAVIAR video dataset is further testament to his commitment to the vision community.

It is therefore my very great pleasure to announce that Robert Fisher is the recipient of the BMVA 2010 Distinguished Fellow Award.

> Dr Andrew Fitzgibbon
> BMVA Chair
> email: awf@microsoft.com

Using GPUs for Vision

One-day BMVA Symposium at the British Computer Society, 5 Southampton Street, London, WC2E 7HA on 18 May 2011.

Chairs: Toby Breckon & Stuart Barnes (Cranfield University)

10:00 Registration and coffee
10:30 *Welcome and Introduction*, Toby Breckon (Cranfield University)
10:40 *Using GPU acceleration for real-time detection of facial micro-movements*, K. Emrith, L. Broadbent, L.N. Smith, M.L. Smith (University of West of England)
11:10 *Title – TBA*, Ian Reid (University of Oxford)
11:40 *Progress on GPU bundle adjustment*, Renato Salas-Moreno, Hauke Strasdat, Andrew Davison (Imperial College)
12:10 *Robust stereo matching for intelligent vehicles*, Alina Miron, Samia Ainouz, Alexandrina Rogozan, Abdelaziz Bensrhair (INSA Rouen, France)
12:40 Lunch
13:40 *Live Dense Reconstruction*, Richard Newcombe, Andrew Davison (Imperial College)
14:10 *A real-time biofeedback application using ultrasound imaging on the GPU*, Peter Harding, Nicholas Costen, Andrew Nisbet, John Darby (Manchester Metropolitan Univ.)
14:40 *Simulations of V1 neurons and applications to object and logo recognition*, Andreas Varnavas, Jeffrey Ng, Anil Anthony Bharath, (Kings College, Cortexica Vision Systems, Imperial College)
15:10 Tea and Coffee (& Posters)
15.30 *Low-latency face detection in high-definition H.264 video streams using GPUs*, David Oro, Carles Fernandez, Javier R. Saeta, Javier Hernando, Xavier Martorell, (Herta Security and Universitat Politecnica de Catalunya, Spain)
16:00 *Integrated framework for simultaneous segmentation and registration of carpal bones accelerated by GPU*, Xin Chen, Jim Graham, Charles Hutchinson (University of Manchester / University Hospital, Walsgrave Campus)
16:30 Discussion & Close
17:00 End of Meeting

REGISTRATION FORM: 18 May 2011 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: ……………………………………………
email: ……………………………………………
Address: ……………………………………………
Tel: ……………………………………………

BMVA member: YES/NO
Lunch: YES/NO
Vegetarian: YES/NO

AVA/BMVA meeting on Biological and Computer Vision

School of Psychology, Cardiff University, 26 May 2011

The website will be open for submission of abstracts and registration on Friday 1 April. It will then remain open for two weeks (until 15 April) for abstract submission. Registration can be done any time up to the day of the conference although we would like to encourage earlier registrations (see below).

Why should you come to the meeting in Cardiff? It is a joint meeting with the Applied Vision Association (AVA), which is the BMVA's equivalent for biological vision researchers. That offers several opportunities: you can find out if there are any new and interesting biological vision techniques that you can adopt; you can interest biological vision researchers in your research, in today's world that might mean valuable citations and "impact"; you might meet a potential co-applicant for a grant proposal.

We have invited two keynote speakers: John Tsotsos from Centre for Vision Research (CVR) at York University, Toronto and Michele Rucci, from Boston University: both provide excellent examples of the combination of biological and computer vision research.

EPSRC will be in attendance so you have an opportunity to highlight the importance of the convergence of these two research areas as well as your own great work.

Also in attendance will be people from a selection of commercial companies (Sony, EADS, CRS, etc). So again, this will be an opportunity to impress and make contacts.

We would like you to register early: we do not know how many people to expect, given the joint nature of the meeting. Getting the numbers wrong is expensive and causes difficulties. Therefore we are introducing a financial incentive to encourage you to register early: less than two weeks before the conference there will be a £5 penalty. Hopefully this will not be enough to deter anyone who genuinely does not have the opportunity to register until late, but enough to encourage people on tight budgets.

Please see the webpages for guidance on abstracts, registration and posters:

http://psych.cf.ac.uk/ava_bmva/

We are sure it will be a great meeting and we look forward to seeing a good many of you in Cardiff at the end of May.

AVA/BMVA Biological and Computer Vision meeting organising committee: Simon Rushton, Tom Freeman, Petroc Sumner, Paul Rosin and David Marshall (all at Cardiff University), and Darren Cosker (University of Bath).

Contacts for queries (as indicated):

rushtonsk@cardiff.ac.uk (Human Vision and Local)
dpc@cs.bath.ac.uk (Computer Vision)

MIUA 2011 – Last Call for Papers

The 2011 Medical Image Understanding and Analysis Conference will be held at King's College London (Guy's Campus), London, UK on 14–15 July 2011.

http://www.miua.org.uk

Note that the deadline for submission has been extended to Monday 4 April 2011. Please submit your work in good time: this is the final deadline.

Important Dates

Deadline for receipt of submissions: 4 April
Notification of acceptance: 9 May
Deadline for final camera-ready copy: 27 May
Early Registration: 3 June
MIUA 2011 meeting: 14–15 July

MIUA is the principal UK forum for communicating research progress in image analysis applied in the medical and biomedical sciences. MIUA 2011 is the 15th in the series of successful annual meetings and will be held on the Guy's Hospital campus of King's College London. The meeting prides itself on attracting papers on a wide range of topics from a variety of viewpoints, offering many opportunities for discussion and inspiration.

MIUA is a single-track meeting with oral and poster presentations. All accepted contributions will be published and the full proceedings will be available at the conference and on-line. Selected papers will be invited for publication in the on-line journal, Annals of the BMVA, and prizes will be awarded for the best work.

Technical papers (5 pages) are solicited on any topic within the scope of the conference. Each paper will be evaluated by three reviewers. Challenge abstracts (1 page) are also solicited. These should outline challenging image-analysis applications and/or unsolved problems from a clinical perspective. They can be regarded as a "cry for help" or a way of raising awareness of interesting applications in the community.

Contributions from across the spectrum of medical image analysis – from technical advances to novel practical applications – are welcome. Contributions from both inside and outside the UK are welcomed and encouraged.

The conference will take place on the Guy's Campus of King's College London located adjacent to London Bridge Station which is easily accessible by train, tube and other public transport. The campus is just south of the river Thames, close to the river-bank and local amenities and attractions including Tower Bridge.

Further details of the conference, paper submission, scope and venue can be found at:

http://www.miua.org.uk

Bill Crum and Graeme Penney
King's College London
email: miua@jiscmail.ac.uk

Book for Review

A copy of the following book is available free for review. Please contact me if you would like to undertake this task on behalf of BMVA News.

Professor Roy Davies
Editor, BMVA News
email: e.r.davies@rhul.ac.uk
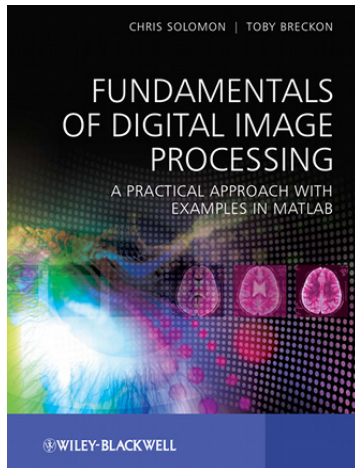
Fundamentals of Digital Image Processing: A Practical Approach with Examples in Matlab, by Chris Solomon and Toby Breckon: paperback: 344 pp., published in 2010 by Wiley-Blackwell.

This new book is an introduction to intermediate level vision, which employs the Matlab programming language to illustrate some of the key concepts in modern image processing and pattern recognition. It is intended as an undergraduate to graduate teaching companion.

Our approach was essentially to produce a practical book that offers a framework within which the concepts can be understood by a series of well chosen examples and exercises, drawing on specific cases from within science and engineering.

Overall we aimed to "start from the very beginning, a very good place to start" (to quote from the well-known musical).

Divided into eleven chapters, the book begins with a fast-start introduction to image processing to enhance the accessibility of later topics. Subsequent chapters offer increasingly advanced discussion of topics involving more challenging concepts, with the final chapter looking at automated image classification (with Matlab examples). Full instructor support materials (figures, equations, tables, exercises, Matlab code, Matlab fast-start, assignment/project materials) are available from the website:

http://www.fundipbook.com/

Chris Solomon and Toby Breckon
email: toby.breckon@cranfield.ac.uk

Richard Bowden Promoted to a Personal Chair

Congratulations to Richard Bowden on his promotion to a Personal Chair at the University of Surrey!

Richard's first degree was in Computer Science at Royal Holloway University of London in the early 1990's but a final year module taught by Professor Roy Davies set him off on a career path in computer vision. After a year in industry, he gained an MSc at Leeds, working with Professor David Hogg and publishing his first two papers on visual gesture recognition. A PhD at Brunel followed, during which he accepted a lectureship, organised the UK VRSIG annual conference and became a member of the BMVA Executive Committee. In 2000 his PhD work, "Learning non-linear Models of Shape and Motion", won the BMVA Sullivan Prize for best computer vision thesis.

2001 saw him join the University of Surrey as a lecturer. In addition, he held a Visiting Fellowship at Oxford where he worked with Professors Brady and Zisserman on sign language recognition. Richard quickly developed a substantial body of work at Surrey, with projects that ranged from surveillance and HCI through to robotics and cognitive systems. His encompassing theme is the use of computer vision to locate, track and understand humans. He has published over 100 papers,

supervised over a dozen PhD students and successfully attracted major funding from EPSRC, EU and industry. His work has been cited in the media and has formed the basis for an interactive art event and a Science Museum exhibit. He is a London Technology Network Business Fellow. This is all combined with a busy family life, including two young children and an allotment. His thwarted ambitions include a career as a rock guitarist – something that he enthusiastically reprises, even before an excess of alcohol, at staff Christmas parties!

Professor John Illingworth
University of Surrey
email: j.illingworth@surrey.ac.uk

BMVA PhD Summer School

BMVA runs an annual Summer School aimed at PhD students in their first year, though it will be beneficial to other researchers at an early stage in their careers. The 2011 Summer School will take place at the University of Manchester between 27 June and 1 July. It will consist of an intensive week of lectures and lab sessions covering a wide range of topics in Computer Vision and Digital Image Computing. Lecturers are researchers from the most active Computer Vision research groups in the UK.

Some quotes from delegates who attended the 2010 Summer School at Kingston University: *"I think the variety of the topics is very good", "Most of the lectures were excellent and the quality and presentation was more than what was expected from this course", "Diverse set of requirements were handled very well. I found it extremely helpful and fun!"*

In addition to the academic content, the Summer School provides a networking opportunity for students to interact with their peers, and to make contacts among those who will be the active researchers of their own generation.

To find out more, follow the link to the Summer School pages from the BMVA website:

http://www.bmva.org/

Dr Jim Graham
University of Manchester
email: jim.graham@manchester.ac.uk

Fourth International Conference on Imaging for Crime Detection and Prevention (ICDP-11)

Call for Papers

3–4 November 2011, Kingston University, London
Arranged by IET's Vision and Imaging Network

General Chair: Sergio A. Velastin, Kingston University London

Aims and scope

Crime and anti-social behaviour have a significant cost for society and business alike. Just in the UK anti-social behaviour alone accounts annually for around £3.3 billion of taxpayers' money with incidents of graffiti and vandalism estimated to cost around £600 million/p.a. Surveillance systems of all kinds are thus being increasingly deployed in public and private locations serving as deterrence and/or for information gathering. World events have once again highlighted the vulnerability of public spaces to attacks. However, there are serious limitations to the use of conventional monitoring systems where human operators are asked to survey a large number of cameras with a wide geographical coverage or go through enormous amounts of recorded material. Computer-based technologies are increasingly becoming researched in what is becoming popularly known as video analytics, propelled by recent advances in processing power, fixed and wireless IP-networking technologies, volume storage, cheap cameras, etc. The realisation of such advances into working systems can have a major impact on society but also on individual liberty. This conference follows the successful IDSS (Intelligent Distributed Surveillance Systems) events held in 2003 and 2004 and ICDP 2005, 2006 and 2009, to bring together researchers, industry, end-users, law-enforcing agencies and citizen groups to share experiences and explore areas where additional research and development are needed, identify possible collaboration and consider the societal impact of such technologies.

Full papers are invited on all aspects of Imaging Surveillance technologies, from academia, industry, NGOs and others, to be selected for oral presentations or posters through a peer-review system (see also: http://www.icdp-conf.org). An indicative, not exclusive, list of relevant topics is:

- Surveillance systems and solutions (system architecture aspects, operational procedures, usability, scalability)
- Multi-camera systems

- Information fusion (e.g. from visible and infrared cameras, microphone arrays. etc.)
- Learning systems, cognitive systems engineering and video mining
- Robust computer vision algorithms (24/7 operation under variable conditions, object tracking, multi-camera algorithms, behaviour analysis and learning, scene segmentation)
- Human machine interfaces, human systems engineering and human factors
- Wireless communications and networks for video surveillance, video coding, compression, authentication, watermarking, location-dependent services
- Metadata generation, video database indexing, searching and browsing
- Embedded systems, surveillance middleware
- Gesture and posture analysis and recognition
- Biometrics (including face recognition)
- Forensics and crime scene reconstruction
- X-Ray and terahertz scanning
- Case studies, practical systems and testbeds
- Data protection, civil liberties and social exclusion issues.

The conference papers will be published by the IET and made available online via the IET Digital Library and the IEEE/IET Electronic Library (available on IEEE Xplore). The conference papers will also be indexed by Inspec. Authors of exceptional papers will be invited to submit extended versions to be considered for publication in the IET Computer Vision Journal. There will be delegate fee discounts for authors, students and members of the IET and sponsoring organisations.

Key dates

- Receipt of full papers (maximum of 6 pages in PDF using the prescribed format): 18 July 2011
- Notification of acceptance: 23 September 2011
- Receipt of camera-ready papers: 7 October 2011

Professor Sergio A. Velastin
Kingston University
email: sergio.velastin@iee.org

CVMP 2011 — THE 8th EUROPEAN CONFERENCE ON VISUAL MEDIA PRODUCTION

Call for Papers

November 2011
BFI, Southbank, London

CVMP 2011 is the 8th annual industry-academic conference series on media production for film, broadcast and games. Visual media production brings together expertise in video processing, computer vision, computer graphics, animation and physical simulation.

CVMP provides a forum for presentation of the latest research advances combined with keynote and invited talks on state-of-the-art industry practice in content production and post-production.

High-quality papers are invited which present novel research related to any aspect of media production. Full length submitted papers will be subject to peer review and the conference organisers are again expecting to publish papers with well respected academic publishers. (In 2010 papers were published by the CPS.) Selected authors will be invited to submit extended papers for a journal special issue on Visual Media Production.

Full paper submission deadline: 20 June 2011

Visit www.cvmp-conference.org to download the Call for Papers

email: contact@cvmp-conference.org