

BMVA News

The Newsletter of the British Machine Vision Association and
Society for Pattern Recognition

Volume 16 Number 3
March 2006

Editor: Professor Roy Davies
Department of Physics
Royal Holloway, University of London
Egham, Surrey, TW20 0EX
Tel: +44(0)1784 443497
Fax: +44(0)1784 472794
email: e.r.davies@rhul.ac.uk

<http://www.bmva.ac.uk/>

BMVA News¹ 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 2006.

Contents

Editorial: <i>Stability versus Chaos</i>	1
Annals of the BMVA.....	2
Computer Vision Thesis Repository.....	3
BMVA Distinguished Fellow 2006.....	3
Award to Andrew Fitzgibbon.....	3
BMVA Stand at IPOT More Popular than Ever!.....	4
BMVC 2006.....	5
Report on ICCV 2005.....	5
Report on CVMP 2005.....	6
FG 2006 to be held in Southampton.....	7
MIUA 2006: Call for Papers	7
VIE 2006: Final Call for Papers	8
IEE Conference on Crime and Security.....	9
ICDP 2006: Call for Papers.....	9
M ² VIP 2006: Call for Papers.....	10
Mechatronics Forum 2006: Call for Papers.....	11
UKIVA News.....	11
EMVA Conference.....	12

¹The 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: *Stability versus Chaos*

I have long been of the opinion that an institution must either grow or wither: stability is an elusive commodity, and any equilibrium is necessarily unstable – unlike the situation in elementary mechanics. There are many winds to blow one off course, and at the same time there are many chaotic influences, the like of which cannot easily be anticipated. As I reported last year, the worthy journal *Real-Time Imaging* suddenly hit the deck under the influence of market forces; now, alas, Sira has gone into administration at a time when it was doing maximum good for the imaging community.

Sira came into being in the early 1900s, and became strong on instrumentation, measurement and optics applications, and for the past 20 years or so has had many endeavours in the area of imaging. Many members will have heard of, and may have had the opportunity of participating in, the Imaging Faraday Partnerships, which gave rise to many interesting meetings. More recently, it had looked as if these would give way, under the sponsorship of the DTI, to Knowledge Transfer Networks (KTNs), and indeed, Sira had worked towards KTNs on Photonics and Sensors, and had almost completed one on Imaging. Whether it actually met the DTI deadline of early March is now immaterial: its excellent contribution to this KTN is now in a state of indefinite suspension, awaiting some other organisation to take it over. However, taking it over as is would be difficult, as there is currently *no*² UK institution that exactly matches Sira's pre-eminent position between universities, industry and the research councils, as a facilitator of excellent collaborative work. No doubt others can now grow to fill the gap, but this will take time. Thus, I am in no doubt that Sira's demise

²My opinion, but I hope I am proven wrong in this.

is little short of a national tragedy, and that much hard work will be needed to make up for it.

In the case of the KTNs, this does create a problem, as the DTI sees the setting up and management of a KTN not as a competition between many potential parties, but as providing a natural home that is approved by the whole community: i.e., unusually for a government initiative, the DTI wants *consensus* rather than *competition*. Well, at least there is good logic in this, as it implies zero wastage of money on battles, advertising, marketing, and on unwanted choice from customers who actually only want a good, sound deal. However, solutions can only emerge gradually in such a milieu, since it necessarily takes time for a consensus to form. And not only is our Imaging KTN at stake, but also the related KTNs already mentioned, each of which has to have its own distinct role. I can only hope that I will have good news on this before I write my next Editorial. (Actually, I would much prefer receiving a definitive article on the KTNs and their status.)

At this point my thoughts go out to those at Sira who have contributed so much to BMVA's well-being over the years, and who have now lost their positions. I am sure all members will join me in wishing them luck in their pursuit of new employment. While it may be invidious to mention names, there are some who are particularly prominent: John Gilby, who has for many years contributed to the BMVA Executive Committee and to its meetings; Noel Brahma, who organised Sira CASE studentships and took part with me on the IEE VIE Executive Committee and was a co-chair of ICDP 2005; and not least, Rebecca Simpson who was a key, energetic proponent of the KTNs. Again, it would be good to have a full article on Sira's contributions, listing roles of more of its members, but I hope my incomplete list will give the flavour of our current loss.

Rather than end on sad note, let me at least say that the new journal *Real-Time Image Processing* is now alive and kicking, under its Springer imprint. For the journal homepage and details of how to submit, see the following web address:

<http://www.springer.com/sgw/cda/frontpage/0,11855,4-40100-70-112907049-0,00.html>

The aim of the journal is essentially to provide "a seamless continuation of our previous efforts as related to the journal *Real-Time Imaging*" say the Editors-in-Chief, Nasser Kehtarnavaz and Matthias Carlsohn.

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

Annals of the BMVA

For various interrelated reasons, the BMVA has, through its Executive Committee, decided to publish selected papers from its technical meetings as printable papers, which will appear on its website in PDF format under the heading *Annals of the BMVA*. It is intended to maintain a high level of published quality, so that the Annals will be known within the machine vision community as a reliable and worthy source of information; at the same time, publication in this way – at a known level of respectability and quality – will provide some level of achievement and kudos to authors, and particularly graduate students, and will be worth including in their CVs.

To achieve this degree of quality, it will be necessary to referee papers. Refereeing will be for two specific aspects: (1) originality and technical content, (2) presentation in all its aspects. Aspect 1 will be controlled primarily by the chairs of technical meetings, who will send the submitted papers to a minimum of two referees. Aspect 2 will be controlled primarily by a designated BMVA Editor, who will insist on quality of presentation, including general scientific aspects, language and whether the paper adheres adequately to the chosen house-style. A further aspect of the quality control and refereeing process is that only a limited number of the authors from any meeting will be invited to submit papers for publication in the Annals.

Rather than going for a totally new house-style, it has been decided to use the already existing BMVC format, which is widely known, though papers will normally be expected to be around 6 (maximum 8) pages – rather shorter than for BMVC. Details of BMVC format will appear on the BMVA website for reference.

The procedure will be for Chairs to invite papers immediately after the relevant technical meeting, read through initial written up versions of the papers, get them refereed, and finally submit them to the Editor.

Once the Editor has finished vetting a paper, the authors will be informed of FORMAL ACCEPTANCE, and the paper will be sent for inclusion on the Annals website.

As happens for BMVC, copyright will rest with the authors, but acknowledgement of first publication by BMVA will be expected.

Important note: Papers will be refereed using the peer improvement practice relevant for journals rather than the accept/reject practice of most conferences.

Supplementary materials: When published on the Annals website, each paper may be accompanied by a

reasonable amount of supplementary material (e.g. videos) at the discretion of the website manager.

The roles of meeting Chairs³

Meeting Chairs will have the following important roles:

1. Immediately after the relevant technical meeting, they will invite/encourage submission of papers for the Annals, from selected presenters.
2. They get the papers refereed by a minimum of two referees.
3. They recommend some for acceptance, and send the papers to the BMVA Editor together with the referee reports.
4. Overall, they take care to eliminate trivial or incremental publications.
5. In the Annals, the Chairs will be cited as *Guest Editors* for the papers resulting from a particular technical meeting.
6. Guest editors may include an editorial covering the submissions they invite.

Professor E.R. Davies
Editor, Annals of the BMVA
email: e.r.davies@rhul.ac.uk

Computer Vision Thesis Repository

In order to promote and improve accessibility to the huge base of high quality PhD research undertaken in the field of Computer Vision in the UK, the BMVA has launched a new online repository. This will act as a single-source archive of all past, current and future PhD work undertaken in this area in UK academic institutions.

The service allows students to quickly and easily share the results of their work with the Computer Vision community, nationally and internationally, and it will be a tremendously useful database for searching and reviewing previous PhD research work undertaken in the UK.

The real value of this service can only be realised if the UK community supports the effort and so the BMVA would like to encourage all members to use and, where possible, contribute material to the repository. Contributions are required to be in PDF format and supplementary material such as videos and images are welcome.

³These roles will naturally have to vary between meetings and also adapt over time to varying circumstances, but this is the Executive Committee's current view of the situation – Ed.

The PhD repository can be accessed through the main BMVA website (www.bmva.ac.uk). If you have a thesis that you would like add to the repository please contact Dr Aphrodite Galata (a.galata@cs.man.ac.uk).

Dr Aphrodite Galata
The University of Manchester
a.galata@cs.man.ac.uk

BMVA Distinguished Fellow 2006

The BMVA Executive Committee seeks nominations for the Distinguished Fellow 2006 award. This prestigious award is given to one person only each year in recognition to his/her services to the British Machine Vision community. The nominees must be distinguished researchers, based in the UK, who have contributed significantly to the field of research and the reputation of the British Machine Vision Community both nationally and internationally. Nominations, with a few lines of rationale, should be sent to Dr Majid Mirmehdi by 30 April 2006.

Dr Majid Mirmehdi
BMVA Chairman
email: chair@bmva.ac.uk

Award to Andrew Fitzgibbon

Andrew Fitzgibbon will be awarded the 2006 BCS Roger Needham Award. "The third Roger Needham Award, sponsored by Microsoft Research, and established in memory of the late Roger Needham, is for a distinguished research contribution in computer science by a UK based researcher within ten years of their PhD."

After his PhD at Edinburgh University (1997), Andrew spent eight years as a post-doctoral researcher at Oxford University. In 2005 he moved to Microsoft Research in Cambridge.

His research has crossed the boundary of computer graphics and vision; in particular, he has made contributions in 3D vision, image-based rendering, and in the psychophysics of human vision. Some of his research ended up in 2d3's camera tracking product (boujou) which won an Emmy award in 2002. Most recently, he was also the program co-chair of BMVC 2005 and CVPR 2006.

Professor Robert B. Fisher
University of Edinburgh
email: rbf@inf.ed.ac.uk

BMVA Stand at IPOT 2006 More Popular than Ever!

The annual Imaging, Photonics and Optical Technology (IPOT), the Machine Vision and Displays Technology exhibition, was held this year at the NEC in Birmingham on 15 and 16 February. This year's show was more popular than ever with nearly 320 exhibitors and over 5500 attendees over the two days, up more than a third on last year.

For the first time in 2006, the IPOT and Machine Vision event was complemented by the addition of the new Displays Technology exhibitors creating one complete Vision, Photonics and Displays resource.

As in previous years, the BMVA was a major sponsor of the event and the organisers of the show kindly provided a complimentary stand in the main exhibition hall in order to promote the Association and the internationally leading research work of its members. The stand attracted a huge number of visitors and everyone involved was kept very busy throughout the two days: in some cases there were queues of attendees waiting to ask questions and talk to the staff on the stand.

The stand was organised and managed by the BMVA publicity officer, Dr Aphrodite Galata, and this year it featured a number of exciting research demonstrations from Imperial College and the Universities of London and Manchester. The use of a large screen projector for some of the demonstrations enabled us to address a larger audience and contributed to the popularity of the stand.



Professor Roy Davies of Royal Holloway, University of London, presented two demonstrations of work undertaken on the EPSRC Basic Technology project "Reverse Engineering the Human Visual System". The demonstrations included videos showing the location of tools in robot-assisted laparoscopic surgery (work undertaken in collaboration with Professor Guang-Zhong Yang of Imperial College); and the location of moving objects (pedestrians) using an efficient dual form-motion channel technique devised by one of Roy's PhD students, Mark Sugrue.

Dr Christos Bouganis and Yang Liu, from Imperial College, presented a number of demonstrations of their latest research work on the EPSRC "Reverse Engineering the Human Visual System" project in collaboration with Suhaib Fahmy, Peter Cheung and Wayne Luk. The demonstrations included real-time face recognition using an efficient parallel Trace Transform engine (a novel image transform technique that is scale and rotation invariant and robust against occlusion) and a system that can automatically focus on objects of interest (salient regions) in dynamic environments using a spatiotemporal saliency framework that emulates the pre-attentive analysis function of the human visual system.

Dr Aphrodite Galata also provided demonstrations of real-time markerless human body tracking from multiple cameras and real-time hand tracking and gesture recognition from a single camera. This is work undertaken in collaboration with Fabrice Caillete and Nikolay Stefanov of the Advanced Interfaces Group at the School of Computer Science, University of Manchester.

The BMVA Executive Committee would like to thank each of these members and the Institutions they represent for their contributions and for their support in promoting the activities of the BMVA.

We are currently looking for members who would like to present a demonstration on the BMVA stand at IPOT 2007. This is a great opportunity to disseminate and promote your work to both an academic and commercial audience. We will be able to accommodate up to four demonstrations on the stand during the course of the event next year and BMVA will reimburse reasonable travel expenses to and from the NEC. If you are interested in contributing please contact the BMVA Publicity Officer, Dr Aphrodite Galata.

Dr Aphrodite Galata
The University of Manchester
a.galata@cs.man.ac.uk

BMVC 2006

British Machine Vision Conference 2006, Edinburgh FINAL CALL FOR PAPERS

The British Machine Vision Conference (BMVC) is the main UK conference on machine vision and related areas. Organised by the British Machine Vision Association, the 17th BMVC will be held during 4–7 September 2006 in Edinburgh, organised jointly by Heriot-Watt University and Edinburgh University.

Papers will be refereed on their originality, presentation, empirical results, and quality of evaluation. All papers will be blind-refereed, normally by three members of the International Programme Committee. The submissions web site is:

<http://www2.wiau.man.ac.uk/bmvc2006/>

Conference topics cover both theory and applications and include, but are not limited to:

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

BMVC 2006 will be a single-track meeting with oral and poster presentations. The proceedings will be available to delegates at the conference in hard copy and on CD and a selection of the best papers will be invited to be published separately in a special issue of the journal *Image and Vision Computing*.

In addition to the contributed papers, BMVC 2006 will include presentations by invited speakers (to be announced) and a pre-conference tutorial (to be announced). Delegates will be able to view poster presentations and see demonstrations by both industrial exhibitors and researchers.

IMPORTANT DATES

Deadline for paper submission: 12 April 2006

Notification of acceptance: 12 June 2006

Deadline for camera-ready electronic copy: 3 July 2006

For further details please see the conference website at:

<http://www.macs.hw.ac.uk/bmvc2006/>

You can obtain a PDF flyer of the CFP at:

http://homepages.inf.ed.ac.uk/rbf/cfp1_BMVC2006_v4.pdf

Professor Bob Fisher
Edinburgh University
email: rbf@inf.ed.ac.uk

Report on ICCV 2005, Beijing

ICCV 2005 was held in Beijing, the capital city of China, which will soon play host to the 2008 Olympic games. The conference venue was the Beijing hotel, situated at one end of the Wangfujing Street, Beijing's oldest shopping centre, and at walking distance from many tourist attractions such as Tiananmen square and the Temple of Heaven. ICCV 2005 was a single track conference with 40 oral presentations and 240 posters selected from over 1400 submissions. The impressive ballroom of the Beijing hotel was an excellent location for the oral sessions and the long poster sessions, lasting for a minimum 2.5 hours, and allowed researchers the chance to see most of the posters on display.

Although all presentations were of very high quality, only a brief review of a few papers can be given here. My aim is to point out the new developments discussed in selected papers which were of interest to me, and hopefully also to a large fraction of vision researchers.

The conference began with the session entitled 'Motion Segmentation'. Tuzel presented a method for estimating multiple rigid motions from 3D correspondences in the presence of noise. The approach relied on extending the mean shift algorithm to Lie groups. Sarel solved the problem of separating two transparent layers in the video by assuming repetitive behaviour in one layer. The repetitive behaviour was aligned using a global-to-local space-time approach and then detected by a median operator. I presented the last paper of the session which addresses the problem of obtaining layered motion segmentation of complex scenes by dividing the scene into rigidly moving components, each with its own shape and appearance.

In feature extraction, Hazan extended non-negative matrix factorisation techniques to 3D tensors for establishing a local parts feature decomposition from an object class of images. By avoiding vectorisation of

images, much improved results were obtained. Davison presented a method for efficient image processing by using mutual information scores to look at the overwhelming cases where uncertainty can be characterised by Gaussian probability distributions.

In 3D reconstruction, Narasimhan examined the effects of structured light in scattering media by presenting an analysis of two representative structured light methods – light stripe range scanning and photometric stereo. Results were obtained on the condition for object detectability in light striping and the number of sources required for photometric stereo. Meltzer obtained globally optimum solutions for standard benchmark stereo pairs by extending the tree reweighted belief propagation algorithm. Theoretical results were discussed on breaking ties in the beliefs and obtaining easily checkable conditions for global optima.

The papers presented by Kahl and Ke addressed the issue of 3D reconstruction by minimising the L_∞ norm. Both papers showed that the global minimum of the resulting quasi-convex function can be obtained by solving a series of convex optimisation problems. Ke further addressed the issue of robustness towards outliers by discarding large errors.

In pattern detection, Lan introduced common-factor models which augment the tree structure model, used for human pose inference, with latent variables in order to account for limb coordination. The model is learnt using factor analysis and efficient inference techniques are made possible due to the underlying tree structure. In tracking, Rosten proposed an approach for combining point-based and edge-based tracking systems. A method was presented to integrate the two systems by robustly combining the pose estimates produced by them. The resultant tracker was able to track under rapid camera motion of 6 Hz in real time.

Kohli presented a method for efficiently solving Markov random fields using dynamic graph cuts in the session entitled ‘Segmentation’. The main idea was to reuse the solution previously obtained for a similar graph to solve a new graph cut problem. In the same session, Wang proposed a framework for combining the segmentation and matting problem together, which can then be optimised using Belief Propagation.

The ICCV 2005 Marr prize was awarded to Kahl and Henron for their paper entitled ‘Globally Optimal Estimates for Geometric Reconstruction Problems’ which presents a method for achieving global solutions of the statistically optimal cost function for reconstruction problems. There were three honourable mention awards: Kutulakos and Steger for refractive and specular shape by light-path triangulation; Boiman

and Irani for their work on detecting irregularities in images and videos; and Roth and Black for spatial statistics of optical flow using their recently proposed Fields of Experts model. The best short course award was won by Fei-Fei, Fergus and Torralba for the course ‘Learning and Recognising Object Categories’.

In summary, ICCV lived up to its reputation as the premier Computer Vision conference. High quality presentations and excellent local arrangements made it a very pleasant and inspiring experience. I would like to thank the British Machine Vision Association, and the PASCAL Network of Excellence for their generous funding during my attendance at ICCV 2005.

M. Pawan Kumar
Oxford Brookes University
email: pkmudigonda@brookes.ac.uk

Report on CVMP 2005

The 2nd European Conference on Visual Media Production (CVMP) was held as part of the IEE’s multimedia week in conjunction with ‘From IT to HD’ and the ‘European Workshop on the Integration of Knowledge, Semantic and Digital Media Technologies’ (EWIMT). CVMP took place over 30 November to 1 December at IEE headquarters in London, UK. The conference aimed to bring together practitioners in media production with researchers in imaging and graphics, and thereby bridge the gap between two types of conference which tend to get separated.

Following the chairman’s opening comments, the first day got off to a good start with an entertaining keynote address from Richard Szeliski of Microsoft Research. In his presentation, he described and demonstrated a wide range of techniques in the upcoming area of video-based rendering. The underlying principle is to extend ideas from image-based rendering, where multiple images are combined in place of an explicit 3D model. Examples include never-ending video textures which are generated from short sequences. These can then be used to bring still pictures to life, or to add realism to a 3D environment walkthrough.

The first morning session focussed on production, starting with a talk on re-colouring by the first of several presenters from Trinity College, Dublin. The second presentation considered some work on reverse storyboarding, which I had contributed to. It presented new work on the generation of iconic motion cues, and considered how these compare with naturalistic cues, in various scenarios. The final talk of the session was a

very informative look at the history and future of HDTV in Europe.

Lunch preceded the poster session, which featured 14 posters on a variety of topics such as matting, facial feature extraction, viewpoint synthesis, and many others. The poster that I was presenting described a system for automatic generation of a compositional shot summary, by means of face detection and pose estimation. Throughout the lunch period and during the refreshment breaks, there were augmented reality demonstrations from the Matris project and BBC Research and Development.

The afternoon session took a production industry slant with some impressive presentations from 2d3 Ltd, NaturalMotion Ltd and Artem Digital. In particular, NaturalMotion's demonstration of their dynamic motion synthesis software was stunning. It opens up new possibilities for replacing actors with highly realistic animated characters, and also allows easy exploration of the animation in real time, all on a generic PC. The first day ended with a discussion forum, in which the afternoon's speakers sat on the panel.

On the second day, the afternoon began with a keynote address from Ian Williams, Senior Applied Engineer at NVIDIA. Ian reviewed the evolution of the GPU, compared growth and current capabilities with that of the CPU, and considered the impact the technology was having. The final session, comprising four presentations, was focussed on hardware-accelerated processing, and primarily the use of GPUs in media production. It proved interesting to learn how GPUs have recently been used for more general purpose image and video processing, often with significant speed advantages over CPU implementations. In the final talk, Anil Kokaram of Trinity College, Dublin, gave a review of such applications and speculated on how the development of high-power programmable GPUs will continue to affect the media production chain: this was a very apt end to an interesting session.

Overall, the quality of presentations was high, both from academic and industrial speakers. The schedule was adhered to very well, with only one presentation over-running significantly. CVMP is a unique kind of conference, and this can make it all the more interesting, particularly where academic and industrial presentations complement each other. I would like to thank the BMVA for making it possible for me to attend.

Matt Day
University of York
email: mgd104@ohm.york.ac.uk

7th International Conference on Automatic Face and Gesture Recognition, FG2006

This will take place at Southampton, UK, 10–12 April 2006.

We welcome you to attend the 7th International Conference on Automatic Face and Gesture Recognition. This is the premier international forum for research in image- and video-based biometric recognition, and hand gesture and body movement analysis. The conference program will be single track with posters and will be complemented an additional workshop on the Psychology of Face and Gesture Recognition; there will also be the CHIL/NIST CLEAR evaluation workshop.

The conference series is arranged by the IEEE Computer Society TC PAMI and FG2006 will be hosted by the BMVA in conjunction with the University of Southampton, UK. FG 2006 will be held in Southampton which is in central south UK – near Heathrow and many top tourist sites.

Professor Mark Nixon
University of Southampton
email: m.s.nixon@ecs.soton.ac.uk

MIUA 2006: Call for Papers

Medical Image Understanding and Analysis 2006 (MIUA 2006), University of Manchester, 4–5 July 2006.

<http://www.miua.org.uk>

This will be the tenth in a series of annual meetings that provide a UK forum for the dissemination and discussion of research in medical image understanding and analysis. While this is the principal UK conference in this field, contributions from outside the UK are welcome and encouraged. The scope of the meeting extends from analysis of medical and biological images to imaging physics and clinical studies. Papers up to FIVE pages long (a change from previous meetings) on any topic within the scope of the meeting are requested, and will be reviewed by the programme committee.

For more detailed information about the meeting visit the conference website at <http://www.miua.org.uk>.

Register with the website to obtain further information concerning conference registration and paper submission. If you have previously registered on an

MIUA site (or another site administered by CAWS), your details will have been retained. Use your email address to log in. If you are a newcomer, you can browse the site without registering. Registration is painless and will ensure you are kept up to date with conference information.

Key dates

Submission deadline: 24 April 2006
 Notification of acceptance: 23 May 2006
 Meeting: 4–5 July 2006

Chair

Jim Graham, University of Manchester

Local Organisation

Sue Astley
 Tim Cootes
 Neil Thacker

Steering Committee

E Claridge, University of Birmingham
 J Graham, University of Manchester
 D Hill, University College London
 M Mirmehdi, University of Bristol
 A Noble, University of Oxford
 D Rueckert, Imperial College London
 N Thacker, University of Manchester

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

Final Call for Papers: VIE 2006⁴

The 3rd IEE International Conference on Visual Information Engineering will take place over 26–28 September 2006 at Leela Palace, Bangalore, India.⁵

Topics of interest include, but are not limited to:

1. Image and video communication, coding and compression.
2. Image and video interpretation, classification and motion tracking.

⁴Note the very significant deadline extension on this conference – Ed.

⁵I understand that the local costs in Bangalore will be kept very low, so it should be a good opportunity for BMVA members to visit India! For details of travel and hotels, keep your eye on the entry marked VENUE/HOTELS on the VIE2006 website:
<http://conferences.iee.org/vie2006/venue.htm>

3. Image and video analysis, segmentation, event-based surveillance, video indexing and retrieval.
4. Graphics, visualisation, synthetic image generation and manipulation, animation, rendering, image and video-based model synthesis.
5. Architectures and implementation, image acquisition, and hardware.
6. Applications of VIE e.g. TV and video, mobile communications, robotics, medical, forensic, security and surveillance, industrial inspection, handwriting analysis/recognition, biometrics, virtual and augmented reality, advanced and immersive videoconferencing, and computer/video games.
7. Tools for the content value chain, e.g. repurposing (e.g. transcoding), delivery mechanisms (networking), and consumer devices for visual media consumption.
8. Visual media standards e.g. JPSearch, JPIP, MPEG-21, UMA (Universal multimedia access) and scalable video coding.
9. Visual media management, multimedia database management, watermarking, privacy, and digital rights management.

Paper Submission and Publication

Prospective authors are invited to submit full papers (<http://iee-pn.conference-services.net/directory.asp>) of up to 6 pages using the on-line system. Accepted papers will be published in the Conference Proceedings published by the IEE. Exceptional papers will be invited for consideration for a Special Issue of the IEE Proceedings on Vision and Image Processing.

Important Dates

24 April 2006 – Submission of full papers
 26 May 2006 – Notification of acceptance
 26 June 2006 – Submission of camera-ready paper

VIE 2006 is Organised by the Visual Information Engineering Professional Network.

The Tutorials Programme includes the following:⁶

- The semantic gap in image retrieval – Professor Ebroul Izquierdo, Queen Mary, University of London
- Cognitive Vision techniques for Video Analysis and Understanding – Dr Monique Thonnat, Director, ORION Team, INRIA, France
- Level Set Function Inspired Curve Evolution and Related PDEs – Professor Dipti Prasad Mukherjee,

⁶The tutorial programme looks pretty impressive: for full details see the webpage at: <http://conferences.iee.org/vie2006/tutorials.htm> – Ed.

Computer and Communication Division, Indian Statistical Institute, Kolkata

- Scalable Image Coding with JPEG2000 – Shailesh Ramamurthy, Motorola India Electronics Bangalore

For further details of the conference and related activities, registration, etc, see:

<http://conferences.iee.org/vie2006/index.htm>

The IEE
Event Services
email: eventsal@iee.org

The IEE Conference on Crime and Security: The Technical Fight⁷

The IEE, Savoy Place, London, UK, 13–15 June 2006.

<http://conferences.iee.org/crime>

The conference brings together three existing successful events on IT Security, Imaging for Crime Detection and Prevention and Secure Mobile Communications, as well as a new stream on Digital Rights Management. It will bring together all technical areas of the crime and security technology environment to network and discuss issues relevant to the market and add to the interoperability of the community.

Perhaps the main stream of interest to BMVA members is the ICDP conference, described next.

Imaging for Crime Detection and Prevention (ICDP 2006)

The IEE, Savoy Place, London, UK, 13–14 June 2006.

<http://conferences.iee.org/crime>

Crime and anti-social behaviour have a significant cost for society and business alike. 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. Recent world events have once again highlighted the vulnerability of public spaces to terrorist

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 are becoming known as intelligent imaging systems, propelled by recent advances in fixed and wireless IP networking technologies, volume storage, cheap cameras, fast computing facilities, etc. The realisation of such advances into working systems can have a major impact on society. This symposium follows the successful IDSS (Intelligent Distributed Surveillance Systems) events held in 2003 and 2004 and ICDP 2005, to bring together researchers, industry, end-users and law-enforcing agencies to share experiences and explore areas where additional research and development are needed and identify possible collaboration.

Call for Papers

Full papers are invited on all aspects of Imaging Surveillance technologies, from academia and industry, to be selected for oral presentations or posters through a peer-review system. An indicative, not exclusive, list of the most 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 and surveillance video mining
- Robust computer vision algorithms (24/7 operation under variable conditions, object tracking, multicamera algorithms, behaviour analysis and learning, scene segmentation)
- Compression, authentication, watermarking
- Metadata generation, video database indexing, searching and browsing
- DSP-based embedded system, surveillance middleware
- Gesture and posture analysis and recognition
- Biometrics (including face recognition)
- Forensics and crime scene reconstruction
- Wireless and location-dependent services
- 3D X-Ray scanning
- Nano technologies
- Case studies (shopping malls, railway stations, airport lounges, bank branches, etc)
- Data protection, civil liberties and social exclusion issues

⁷Note that BMVA members can attend this conference at IEE membership rates.

There will be a significant delegate fee discount for authors.

Submission of Papers

Authors should send their full papers of 6 A4 pages in length to the organisers, email events1@iee.org, by Friday, 21 April 2006.

Papers should be sent as a Microsoft Word or PDF file attachment and must follow the standard IEE Formatting Guidelines. These are available from the web site: <http://conferences.iee.org/crime>. Papers that do not adhere to the guidelines will not be considered.

All papers will be peer-reviewed and authors will be advised of the result by Friday, 12 May 2006. Authors will have the opportunity to make amendments to their papers, with final camera-ready versions required for publication by Friday, 19 May 2006.

Key Deadlines for your diary

Submission deadline 21 April 2006
 Notification of acceptance 12 May 2006
 Final Camera-ready submission 19 May 2006
 Date of Conference 13–14 June 2006

Organising Committee

Sergio Velastin (Chair) Kingston University, UK
 Graeme Jones (Vice-Chair) Kingston University, UK
 Antonis Argyros FORTH, Greece
 George Bebis University of Nevada, USA
 François Bremond INRIA, France
 Rita Cucchiara Università degli Studi di Modena, Italy
 Anthony TS Ho University of Surrey, UK
 Louahdi Khoudour INRETS, France
 Nic Olby University College London, UK
 Li-Qun Xu BT, UK

This conference is supported by the EPSRC.

The IEE
 Event Services
 email: events1@iee.org
 web: <http://conferences.iee.org/crime>

NOTE: On 31 March the IEE and the IIE merged to form the Institution of Engineering and Technology (IET), and all the IEE conferences mentioned in this newsletter will be branded under the new name.



The 13th Annual Conference on Mechatronics and Machine Vision in Practice will be held over 5–7 December 2006 in Toowoomba, close to Brisbane, Australia. At that time of year, Toowoomba will be enjoying early summer, with much less humidity than Brisbane. It will make an enjoyable getaway for freezing Europeans! The conference is co-sponsored by IEEE Queensland section and IEE Queensland.

Call for papers

Please send two-page (equivalent) extended abstracts by plain-text email to johnbill@usq.edu.au, with subject heading “M²VIP abstract” to arrive before 1 May 2006 – the earlier the better.

The topics of the conference are defined in its title, Mechatronics and Machine Vision in Practice – and the emphasis is on practical applications. A fuller description is given at the foot of this page. Special encouragement is given to applications of robotics and machine vision in agriculture. The international panel of referees will select the abstracts they wish to review from a list of titles. They will be sent email abstracts that have been edited to make them anonymous.

They are asked to make a judgment based on:

- Originality or Novelty
- Interest for delegates
- Language/presentation
- Evidence of practical application
- Relevance to M²VIP

Successful authors will be invited to submit full papers, which will be reviewed again. Amendments may be requested.

All presented papers will be written on a CD-ROM, given to delegates as the conference proceedings.

Social programme

In keeping with earlier conferences in the series, there will be a full programme of activities. On the evening of Monday 4 December there will be a ‘Welcome buffet’ for pre-registration. On Tuesday there will be an informal dinner. On Wednesday there will be a conference banquet. On Thursday there will be a

farewell dinner – a casual event that involves a barbecue. There will also be a lively partners' programme for the daytime.

Scope of the conference

'Mechatronics' has become accepted for what it is – the blending of mechanics, electronics and computer control into an integrated design. Degree courses in mechatronics are now widespread. That does not mean that mechatronics has lost its 'art'. It continues to be the basis of an ever growing list of products and techniques of great technical and commercial value. Mechatronic design can result in products which are much simpler than their intricate and costly predecessors and can make commonplace the miracles of yesterday.

Machine vision has emerged from the laboratory to find real applications in areas which include vehicle guidance, robot control and agriculture. Low-cost cameras have been developed for multimedia applications – but with their ease of interfacing they offer a whole new field of low-cost vision-based control.

Like its twelve predecessors, M²VIP 2006 will provide a forum for international experts and researchers to present and review advances in mechatronics and machine vision which have culminated in practical applications, or which promise practical implementation in the very near future.

Presentations are encouraged to include video material of experimental systems.

Professor John Billingsley
University of Southern Queensland, Australia
email: billings@usq.edu.au

Mechatronics Forum 2006

The 10th Mechatronics Forum Biennial International Conference will take place over 19–21 June 2006 at Penn State Great Valley (near Philadelphia), Malvern, PA 19355, USA. See www.gv.psu.edu/mx2006

High quality papers are sought from the international community. Industrial contributions, particularly case studies describing state-of-the-art technology, are especially welcome.

Deadline for submission of abstracts: 28 April 2006

Keynote addresses:

- Autonomous underwater vehicles in collaborative networks – Professor Tony Healey, Distinguished Professor and Chairman, Naval Postgraduate School, Monterey, CA
- Development, testing and validation of complex automotive systems – Dr Alex Mouzakatis from the Jaguar Engineering Center, UK.
- Revolutionizing prosthetics: the next generation of neurally controlled prosthetic limbs – Dr Gregory Clark from the Bioengineering Department at the University of Utah, USA.

All presented papers will be reviewed by the International Program Committee for submission to regular and special editions of several international journals including The International Journal of Advanced Manufacturing Technology, Engineering Applications of Artificial Intelligence, Meccanica, and the IMechE Control and Systems Journal: Part I.

Professor David Russell
Penn State Great Valley, USA
email: drussell@psu.edu

UKIVA News

The January 2006 issue of UKIVA News, the newsletter from the UK Industrial Vision Association, has now been published on the UKIVA web site. This 6-page newsletter can be downloaded as a PDF file from the following webpage:

<http://www.ukiva.org/newsjan06.html>

The newsletter contains a full programme and details of the Association's forthcoming seminars and attendance at the Machine Vision exhibition in Hall 12 at the NEC, Birmingham, 15–16 February 2006, where for the first time, the Association also delivered a seminar in addition to those of its members.

The newsletter also features its regular news column from Members, together with an article on how the Association was able to respond to a plea for help from a factory urgently needing a replacement illumination source.

A full 2-page printable members' directory can be downloaded from:

<http://www.ukiva.org/pages/latestnews.html>

UKIVA
Royston, Herts
email: info@ukiva.org

EMVA Conference in Tampere, Finland

The European Machine Vision Association (EMVA) welcomes you to the 4th EMVA Business Conference at Tampere, 30 June – 1 July 2005.

- Special Deal for Members 425,00 Euro.
- Special Deal for Non-Members 525,00 Euro.

Have a look at our programme at the following website and register online:

<http://www.emva.org/tampere>

In case you have queries about the Business Conference or the EMVA itself, please contact:

Patrick Schwarzkopf/Dorothee Lüttmann
EMVA
email: info@emva.org

Always check conference information

As always, while every care has been made to provide correct, up-to-date information in this issue, members intending to submit papers to a conference, or to attend it, should check the published data for themselves on the conference website. Note, for example, that at least one conference mentioned in this issue has recently had its submission deadline extended significantly, and I just caught this in time – Ed.

Bursaries

The BMVA provides a limited number of bursaries to support students travelling to international conferences. For information on bursaries see the link marked [Bursaries & prizes](#) on the BMVA website:

<http://www.bmva.ac.uk/>

STOP PRESS

BMVA/EPSRC Summer School on Computer Vision

It seems that this course is to run this year after all: the BMVA apologises for the late announcement. The dates are:

Sunday 9 July – Friday 14 July 2006

For details and applications forms, refer *urgently* to the following website:

<http://dirweb.king.ac.uk/summerschool/>

Upcoming BMVA Technical meetings

- 22 May *Ambient Intelligence*
- 14 June *Colour in Vision Analysis*
- 5 July *Detection v. Tracking*

and more during 2006–7!

For details, see the BMVA meetings website:

<http://www.bmva.ac.uk/meetings/index.html>
