BMVA News

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

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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 December 2005.

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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: *Righting Wrongs*

In my last editorial, I not only sounded the death knell for the Journal *Real-Time Imaging*, but gave several reasons why it had come about – though, presciently, I also said that it was the unfortunate result of a marketing decision "which is not the same as the contents being anachronistic". Fortunately, it seems that I jumped the gun in publishing these views, as Springer has decided to run a journal under the slightly different name *Real-Time Image Processing*, from 1 January 2006: the Editor-in-Chief will again be Nasser Kehtarnavaz. To me at least, this is very good news: not only does it mean that the need is manifest but also that at this point in time it is financially viable. There are also lessons here, because some publishers have grown very large and could dictate quite what we are allowed to read and where we can publish. In particular, Elsevier had accrued a rather large proportion of our vision journals – *Computer Vision and Image Understanding*, *Image and Vision Computing*, *Pattern Recognition*, *Pattern Recognition Letters* and *Real-Time Imaging*, not to mention *Advances in Imaging and Electron Physics*, which comes out in book form. Several of these arose from earlier, smaller publishers such as Academic Press, Butterworth and Pergamon which were gradually taken over by Elsevier. Of course, Springer is well known as a publisher of image processing books, and should be well capable of succeeding in this new venture: I certainly hope so and wish them good luck.

Oddly, I did not find any hardware papers at the recent BMVC, though a number included substantial real-time work. Another sign of the times was a paper on a visual gyroscope. In electronics it used to be the case that mechanical components and interconnections were the cause of almost all unreliability – which explains why the rise of microcircuit integration led to unbelievable

increases in reliability. Most recently, gyro-stabilised video cameras are making way for far cheaper video cameras that dynamically select which parts of much larger images are to be sent to the output. All around, it seems, data is being shuffled inside electronic or computer parts rather than relying on yesteryear's fallible components. (In this respect, I am surprised how long magnetic tape has lasted as a medium, and predict that any time now it will finally bite the dust.)

Following the first colour issue of BMVA News last summer, this issue also contains a high colour content. For human reasons this is appropriate, as the digital camera revolution has led us to expect much more colour. But in machine vision terms it is also relevant, as so much of our work is either about colour or involves it incidentally. The BMVA Committee has given me permission to use colour carefully, but I have the feeling that in a year or two there will be an expectation of having colour in every issue, while at the same time the cost of doing so will have fallen enough to permit this.

Etiquette used to be something that was part of Society and how you behaved in public. However, it does come into Science too. How does one chair a session at a conference without needlessly putting speakers down, when a 'quiet word' would do? How does one hint that time is up when it comes to refereeing a paper? How does one tell a colleague off when he has failed to do a review, and you as editor have to start all over again? What does one do with someone who don't bother even to answer requests to referee, so one doesn't know where one is? (That can be even worse than not doing a job, as that person is holding out someone else who will do it.) Necessarily (in view of promotions, RAE etc.), people are very keen to submit their work here, there and everywhere – *and* keen to be able to say that it has been peer-reviewed. Yet the system only works if an even greater number of people do the reviewing. Clearly, it is the duty of all active workers to do their fair share of reviewing. However, I for one, as an editor, often have a hard time getting things to happen, and helping authors to get good papers out. Maybe it's the Acquisitive Society that is the problem: anyway, I am hoping that if my words incite more people to think about this problem, things will proceed more smoothly in the future. If not, journals may be forced to adopt a big stick approach by allowing people to publish only if they can present a voucher showing they have already done their ration of reviewing …

Professor Roy Davies
Editor, BMVA News
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BMVA Distinguished Fellow 2004[2]

Andrew Blake FRS, BMVA Distinguished Fellow 2004

The title of 2004 BMVA Distinguished fellow was awarded to Andrew Blake, of Microsoft Research, Cambridge. Professor Blake has been a leader of UK computer vision research for many years, and is one of our most internationally renowned researchers. His many contributions span the field from psychophysics to tracking (the 'condensation' algorithm being a particular milestone) to robotics, and now include the area of machine learning applied to vision.

He graduated from Trinity College, Cambridge in 1977 with a BA in Mathematics and Electrical Sciences. After a year as a Kennedy Scholar at MIT and two years in the defence electronics industry, he studied for a doctorate at the University of Edinburgh, and this was awarded in 1983. Until 1987 he was on the faculty of the Department of Computer Science at the University of Edinburgh and was a Royal Society Research Fellow. From 1987 to 1999 he was on the Faculty of the Department of Engineering Science in the University of Oxford, where he ran the Visual Dynamics Research Group, became a Professor in 1996, and was a Royal Society Senior Research Fellow for 1998–9. In 1999 he moved to Microsoft Research, Cambridge as Senior Research Scientist, leading the Vision Group. He was

[2]For pictures of the presentation, see the BMVC 2005 Pictorial Record on page 6 of this Issue. I should remark that there are historical reasons why the presentation has often taken place in the year following the award, though in future this anomaly may well be rectified – Ed.

elected Fellow of the Royal Academy of Engineering in 1998 and Fellow of the Royal Society in 2005.

He has published several books including *Visual Reconstruction* with A. Zisserman (MIT press), *Active Vision* with A. Yuille (MIT Press) and *Active Contours* with M. Isard (Springer-Verlag). He has twice won the prize of the European Conference on Computer Vision, with R. Cipolla in 1992 and with M. Isard in 1996, and was awarded the IEEE David Marr Prize (jointly with K. Toyama) in 2001. He has served as programme chair for the International Conference on Computer Vision in 1995 and 1999, and is on the editorial boards of the journals *Image and Vision Computing*, *International Journal of Computer Vision* and *Computer Vision and Image Understanding*.

We are honoured to add Professor Blake to the list of BMVA Distinguished Fellows.

Dr Andrew Fitzgibbon
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BMVA Prizes

The following four prizes were awarded and presented at BMVC 2005:

The 2005 Sullivan Thesis Prize has been awarded to Björn Dietmar Rafael Stenger (University of Cambridge), for his thesis entitled "Model-based hand tracking using a hierarchical Bayesian filter".

The award for the Best Science Paper at BMVC 2005 has been made to Štěpán Obdržálek and Jiří Matas (Czech Technical University, Prague). The title of the paper was "Sub-linear Indexing for Large Scale Object Recognition".

The award for the Best Industry Paper at BMVC 2005 has been made to Georg Klein and Tom Drummond (University of Cambridge). The title of the paper was "A single-frame visual gyroscope".

The award for the Best Poster at BMVC 2005 has been made to Etienne Grossmann, Amit Kale, Christopher Jaynes and Sen-ching Samson Cheung (University of Kentucky at Lexington). The title of the poster was "Offline Generation of High Quality Background Subtraction Data".

Dr Andrew Fitzgibbon
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BMVC 2005 – a Pictorial Record

It is hoped that the following pictorial record will help participants to recall a profitable and very pleasant few days spent at BMVC in early September. My thanks to Phil Torr who helped enormously by contributing a number of the pictures given below.

Conference Reception at Headington Hill Hall.

Drs Majid Mirmehdi and Andrew Calway (both of Bristol University) taking it easy after several hours travel.

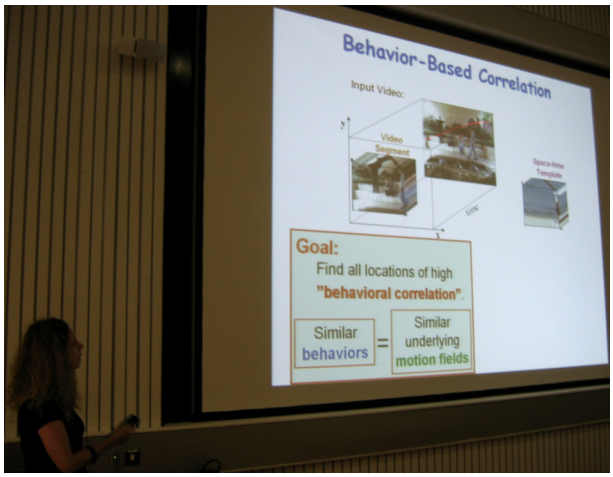
Dr Richard Harvey (UEA) catching up with distant colleagues.

The BMVC hosts: William Clocksin (BMVC Chair), Michael Brady, Phil Torr and Andrew Fitzgibbon in relaxed pose after the rigours of organisation (though Phil seems needlessly worried whether I'm holding his camera the right way up!).

Professor Sir Michael Brady FRS opening the conference with some historical anecdotes.

Invited speaker William Freeman (MIT) getting into his stride. His talk "Motion magnification" included many exciting 'larger than life' videos!

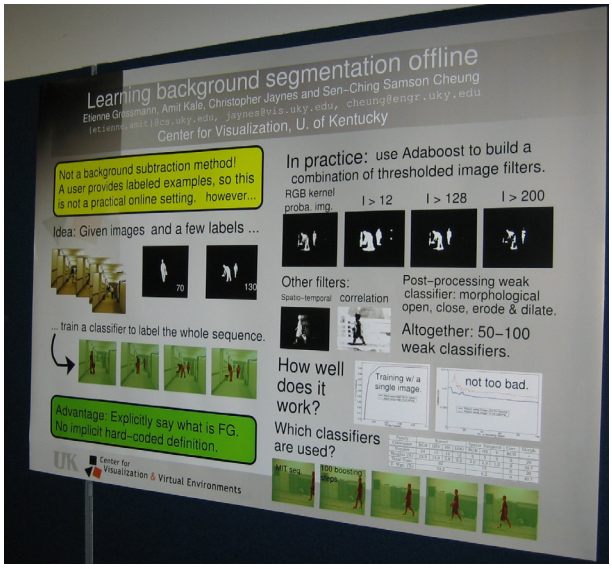
An attentive audience listens on.



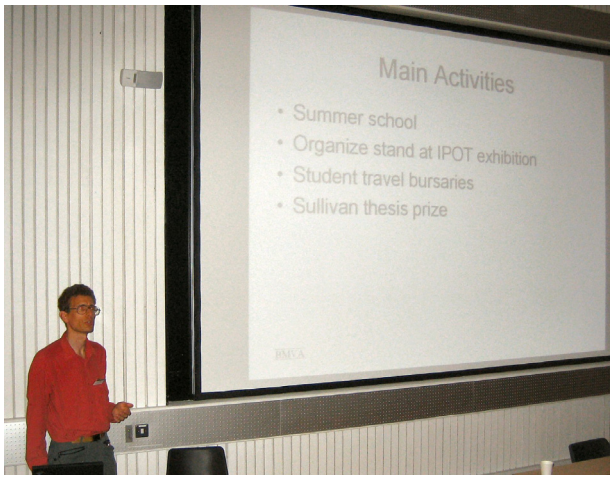
The second invited speaker, Michal Irani (Weizmann Institute) setting out her goals. Her talk was entitled "Space-time analysis and manipulation of behaviors in video".

Fredembach (UEA) illustrating his talk "Hamiltonian path based shadow removal" with a diverse set of images.

Stuart Hoggar (Glasgow) and Graham Watson (BAE) engaged in an animated technical discussion during a poster session. Extreme left: John Robinson (York); extreme right: Adrian Evans (Bath).



The winning poster, by Etienne Grossmann *et al*. (University of Kentucky). Note its high visual impact as well as its easy-to-understand technical content (these were the features that the BMVC judges were particularly looking out for).



BMVA Chair Tim Cootes outlining some of the main activities of the Association (and temporarily forgetting about BMVA News!).

Reception in New College cloisters, before the Conference Banquet. From left: Paul Rosin, Tim Ellis, Bob Fisher, Mike Chantler, John Gilby and Roy Davies.[3]

The impressive ambience in New College dining hall.

[3]For those who might be interested, quite serious tan α distortions have been eliminated from this picture by using ad hoc pincushion correction, with barely detectable error – Ed.

Dr Andrew Fitzgibbon making a prize announcement: the Industry Prize certificate is displayed on the table in front of him. Just behind him are Phil Torr and Andrew Zisserman.

Tim Cootes (at rear) making the Distinguished Fellow presentation to Andrew Blake. Also visible are (from left) Jan-Olaf Eklundh (Sweden), Mike Brady, and Michal Irani.

Professor Maria Petrou

On 1 September 2005 Maria Petrou moved from the University of Surrey to Imperial College. Her new contact details are:

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Andrew Blake proudly holding his presentation glassware high for all to see. A few minutes later, he made a very memorable speech, drawing on his wide experience of vision, plus some ready wit – highly befitting of the occasion.

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Roundup of CVPR 2005, San Diego

CVPR was held in San Diego this year and the Californian weather did not disappoint, with glorious views over Mission Bay. This year, there were slightly more than a thousand attendees. Because of the number of papers, there were two concurrent tracks for oral papers. Fortunately, poster sessions were not held concurrently, so it was possible to get a good overview of the latest research anyway. The poster sessions were held in two river ferries – an unusual venue. At times, the large number of people in an enclosed space made it difficult to hear the presenters.

Only a brief tour of a few of the papers can be given here. Sufficient detail is provided to cover the main developments and raise interest in some of the more outstanding presentations – all of which were high quality. Apologies in advance for the bias towards personal research interests.

The three main conference days were sandwiched between three days of tutorials and workshops covering a diverse array of specialised areas (18 in all), such as discrete optimisation methods, embedded computer vision, face recognition, and bio-informatics.

In addition, this year saw the introduction of the video proceedings to the conference. Sadly, I do not think these are publicly available, but they should be on the IEEExplore site soon.

Of the tutorials, that of Zabih, Boykov and Felzenszwalb on discrete optimisation methods in computer vision was particularly good. Following an introduction to optimisation in continuous systems and a discussion of the Metropolis algorithm, a parallel with self-looping Markov models was drawn. After showing that such systems converge to stationary points, these concepts were tied to simulated annealing algorithms. A demonstration of these ideas in a constellation matching application was given, followed by a discussion of graph cuts as an *N*-dimensional generalisation of dynamic programming.

There has been much interest recently in the use of constellation models for object class recognition. These entail modelling of objects using appearance and structure, but have strong limits on what types of structures may be used. Felzenszwalb introduced a trade-off between the constellation (fully connected) and star (one fully connected root) structures called fan structures. Fan structures have more than one fully connected root part, each with partly connected children parts. Malik discussed an algorithm for generating dense point correspondences. Much improved results were obtained by using blurred descriptors and, using dynamic programming, warping a model and testing an image using a thin plate spline.

In tracking, Shechtman presented a space-time gradient template to compare motion fields. Fast computation was achieved by using the rank of a 3×3 cross-correlation matrix to score matches. Roy-Chowdbury examined a deformability index for shapes, which relied on estimating the number of 3D basis shapes from 2D feature positions.

Pilet presented a method for detecting and modelling deformable surfaces in real time. This required the detection of interest points in the scene and matching to an *a priori* model. A 60-DoF deformable mesh was fitted to the surface, with impressive results.

In video recognition and analysis, Lee presented a method for tracking and learning particular instances of classes. The general class was learned offline, with online updates to make it more specific. Arandjelovic demonstrated an automatic face recognition system for retrieving characters from films. Superior results were achieved by initially locating the eyes and mouth using a pre-trained model. The test image was warped to a normalised pose and the background suppressed, this being followed by a registration refinement. Thresholded SSD was used on gradient images for scoring.

In tracking, Freedman discussed a reformulation of the traditional optical flow algorithm to consider pairs of pairs of pixels. This used the idea that pairs of pixels close to each other ought to change in a similar manner in consecutive frames. Jin dealt with tracking in blurred sequences. Unlike traditional approaches which de-blur and then track, they tracked by optimising not only for a warp parameter but for two blur parameters as well.

In stereo, Veksler examined the stereo correspondence problem, using an elegant reformulation of dynamic programming that wasn't done along scanlines, but rather along the branches of a tree (with leaves representing pixels). Vogiatzis gave a talk on building 3D surfaces of objects, using visual hulls to constrain a graph cuts algorithm.

The best paper award was received by Kolmogorov *et al.*, who presented two algorithms for segmenting foreground and background. These relied on fusing colour, contrast and stereo matching. The respective algorithms used layered dynamic programming and layered graph cuts.

In motion segmentation and tracking, Rittscher introduced a method for the simultaneous segmentation and shape extraction of people in crowd scenes. Real-time performance was possible with no knowledge of the number of people.

In the area of 3D reconstruction, Prados showed how to repose the shape-from-shading problem so that it becomes well-posed, by considering the intensity of light as inverse square of distance. This was demonstrated on a number of faces using only single images. Liang presented a way for reconstructing 3D objects using silhouettes. The method took advantage of the link between surface points and their tangent planes, using an epipolar parameterisation to overcome singularities. A surface extraction method based on slicing planes was required for triangulation.

The combination of a good crop of high quality presentations, a beach in close proximity and copious amounts of sun, all made for a very enjoyable conference.

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Report on Siggraph 2005 – the 32nd Conference on Computer Graphics and Interactive Techniques

After a 10+ hour flight from London Heathrow to Los Angeles, I stepped inside the convention centre for what would be my first Siggraph. My colleagues promised me my first Siggraph would be an impressive experience. And they were right.

The first noticeable difference between Siggraph and other conferences I had attended previously was its size. Siggraph is big. Really big. Approximately 30,000 people from more than 81 different countries visited the convention centre throughout the five conference days.

Secondly, Siggraph is not just a meeting for researchers to listen and present papers. Siggraph is very commercial. Companies are recruiting on the spot and showing off their latest products in the exhibition area.

Furthermore events like the electronic theatre, the animation theatre, the art gallery, and even a cyber fashion show, keep you busy if interests fade during the paper; and technical sketches sessions, BOFs, courses or the many other special sessions were programmed each day.

It should be clear that it is simply impossible to see or visit everything being shown at Siggraph. And to avoid having a stressed and hectic stay, you are forced to select the most interesting sessions available in advance, while trying not to over-schedule.

For instance, there was the must-attend keynote speaker session, this year featuring George Lucas, one of the most successful and creative film directors of our time.

Next stop were the emerging technologies, at which, for instance, researchers at the University of Electro-communication showed off their straw-like interface: a user can virtually experience the sensation of drinking through a vibrating straw-like device without actually drinking liquid.

The electronic theatre showed a series of some beautiful, some bizarre, short animations. My personal favourites were the opening live act performance 'Autocosm: Gardens of Thuban' and the short animation 'Cubic Tragedy'. In 'Autocosm', J. Walt combined animation, dancing, painting and sculpturing, music and interactive art – with only two hands. In 'Cubic tragedy', a production from the National Taiwan University of Science and Technology, a polygonal woman experiments with a DIY beauty kit, resulting in a very funny, creative geometric animation.

When I stepped into the exhibition hall, I was impressed by the creativity of most companies to attract the attention of the visitor amid the +250 companies present at this edition of Siggraph. Just to name a few, there was the Sony Imageworks IPAX life drawing session, which caught a lot of attention with their life models; then there was Brightside showing their very realistic high dynamic range image display; my eyes really hurt when I looked at a videoclip showing sunrays falling through a window. The main FX houses were present (Dreamworks, Disney, Pixar, etc.). Motion Analysis Corporation showed the latest advances in MoCap. Elumens' VisionDome gave a different meaning to a 'surround' movie theatre. And finally, I even had my face scanned at 3Q/3dMD's booth.

As I was myself a presenter of a technical sketch at Siggraph, I also spent some time at the paper sessions, mainly to learn about the latest advances made in high dynamic range imaging, image-based relighting and relighting in general. I was lucky, as this year there were quite a few sessions planned on these topics. However, I wasn't really impressed by the papers presented and my main impression was that re-inventing is 'the way to go'.

A paper I find worth mentioning was presented by Michael F. Deering: 'A photon accurate model of the human eye.' In this paper a system is presented that simulates an accurate model of individual cones in the human eye which can be used in studies for understanding how changes in computer graphics algorithms and image display devices are related to artefacts visible to human viewers.

As a summary, I found my Siggraph experience a very inspiring experience. I can't wait to go to Boston, Siggraph's host city in 2006.

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Report on Eurographics 2005

The 26th annual conference of the European Association for Computer Graphics was held at Trinity College Dublin, from 29 August to 2 September. The conference itself is large and multitracked, bringing together computer graphics researchers and artists from many different disciplines. The theme this year was 'The evolution of graphics: where to next?', which was

particularly appropriate given current celebration of the 25th year of the Eurographics Association.

The first two days of the conference were dedicated to tutorial sessions, in particular visualization, augmented reality, collision handling, and garment rendering. From the parts that I saw, these were fairly introductory; however, in the second day more advanced topics were addressed. 'Simulation of light interaction with human skin' by Gladimir Baranoski and Aravind Krishnaswamy (University of Waterloo) provided a good discussion of current empirical skin rendering methods, along with detailing a new biologically motivated skin rendering method. I also enjoyed the tutorial on high dynamic range imaging organized by Karol Myszkowski (MPI Informatik) and Wolfgang Heidrich (University of British Columbia), which showcased new HDR cameras and video techniques. In addition, the 'Sketch Based Modelling' workshop ran in conjunction with EG05 on 28 and 29 August, focusing on (typically interactive) techniques for 3D shape modelling from 2D input. This appears to be a growing 'niche' area in computer graphics, and one which could particularly benefit from experience in the field of computer vision.

The main conference itself opened on 31 August after a welcome reception in the City Hall on the previous evening. Eurographics adopts the popular 'fast forward' approach to paper summaries; many thanks are due to my supervisor Dr Andrew Fitzgibbon of Microsoft Research for providing an eloquent summary of our paper. A highly entertaining opening invited talk was given by Rob Cook of Pixar, which provided an overview of the digital movie-making process from concept to screen.

EG05 featured a wide variety of papers across the spectrum of computer graphics: in particular geometry and rendering were very well represented this year. Personally, I enjoyed 'Support vector machines for 3D shape processing' by Steinke and Blanz, which may be of interest to other researchers in the field of 3D linear object models. The best paper this year was 'Re-coloring images for gamuts of lower dimension' by Rasche *et al*. – a paper on tonal mapping for e.g. greyscale images. From the short papers section, I was most impressed by 'A scalable hardware and software system for the holographic display of interactive graphics applications' by Balogh *et al*. Here the contribution is a novel approach to providing a 'holographic' style display capable of viewer motion parallax and stereo disparity, for example.

Other highlights included the industry talk on next generation hardware; in particular Michael Doggett from ATI gave a discussion of the XBox 360 GPU, and Kevin O'Brien from IBM Research provided details on the Cell architecture. It appeared clear that a shift in coding paradigm will be necessary for programmers targeting this inexpensive and powerful platform, which will, I believe, be significant for many researchers as Linux extensions are available. Steven Collins from Havok provided a very entertaining second invited talk on the application of physical modelling to game characters, and the conference itself was concluded by Pat Hanaran of Stanford. Following on from the theme of EG05, Pat raised the question 'Realistic or Abstract Imagery: The Future of Computer Graphics?'. I found it interesting to note that many of the points raised in terms of using computer graphics as an aid to abstraction and cognition are already under exploration in the field of computer vision.

I would like to thank the British Machine Vision Association, Eurographics Association, and Microsoft Research for their generous funding during my attendance to EG05.

James Paterson
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Call for papers – VIE 2006

IEE International Conference on *Visual Information Engineering 2006: Innovation and Creativity in Visual Media Processing and Graphics*.
26–28 September 2006, Bangalore, India

Chair

Dr P. Anandan
Microsoft Research, India

Organising committee

Farzin Deravi, University of Kent, UK
Paola Hobson, Motorola, UK
Shrikant Naidu, Motorola, India
Professor K. R. Ramakrishnan, IISC, India
P. J. Narayanan, IIIT Hyderabad, India
Santosh Singh, Read-Ink Technologies, India
Yiannis Kompatsiaris, Informatics and Telematics Institute, Greece
Sergio Velastin, Kingston University, UK

Conference theme

The IEE Visual Information Engineering conference 2006 (VIE 2006) addresses the fundamental elements of

image, video and graphics research and development. Key technical areas include the growing convergence of computer graphics and computer vision/image processing which is an increasingly important area in commercial multimedia applications development.

The conference provides an ideal opportunity for researchers, practitioners and educators in the VIE community to share results and advancements in a high quality, peer reviewed environment, and creates an important networking forum in which academic and industrial participants can discuss the future of VIE technologies and convergence of multimedia technologies with other domains.

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.
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, including 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 games.
7. Tools for the content value chain, including repurposing and transcoding, networking, and consumer devices for visual media consumption.
8. Visual media standards, including JPSearch, JPIP, MPEG-21, 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 of up to 6 pages using the on-line system at:

http://www.iee.org/Events/VIE2006.cfm

Accepted papers will be published by the IEE in the Conference Proceedings. Exceptional papers will be invited for consideration for a Special Issue of the IEE Proceedings on *Vision, Image and Signal Processing*.

Important Dates

3 April 2006 Submission of full papers
26 May 2006 Notification of acceptance
26 June 2006 Submission of camera-ready papers

Call for workshops and special sessions

Proposals for tutorials of 1 hour duration on emerging fundamental topics of Visual Information Engineering are welcomed. A tutorial proposal of 4–6 pages describing the topic, expected benefits of the tutorial, and a short biography of the proposed tutor may be submitted using the on-line system at the conference website (see above). Prospective tutorial proposers may discuss their proposal in advance with Sergio Velastin (email: sergio.velastin@iee.org).

Proposals for conference special sessions and workshops of half-day duration on new research areas related to Visual Information Engineering are also welcomed. A special session proposal of 4–6 pages describing the topic, objectives of the session, list of proposed contributors and past workshops organised by the proposer may be submitted using the on-line system at the conference website. Prospective workshop or special session proposers may discuss their proposal in advance with Yiannis Kompatsiaris (email: ikom@iti.gr).

Dr Paola Hobson
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UKIVA September Newsletter

The latest issue of UKIVA News has just been published by the UK Industrial Vision Association on its website as a downloadable PDF file. This full colour newsletter can be found at:

www.ukiva.org/newssep05.html

It contains a complete programme of the free seminars to be held at the Photonex05 show at Stoneleigh Park Exhibition Centre, Warwick, UK on 5–6 October 2005. An up-to-date 2-page printable members' directory can also be found at the same location.

The newsletter contains all the latest news from the Association, including details of new members 3D X-Ray, FS Systems, and V-Viz, as well as the welcome return of Data Translation. The latest news items from more than 10 Association members are also included.

With the theme 'Imaging for Industry', the free seminar sessions at Photonex will cover many new aspects of vision technology with contributions from UKIVA members Alrad Imaging, Firstsight Vision, FLIR Systems, Framos Electronics, Multipix Imaging and Lambda Photometrics. In addition to the full programme, the newsletter also contains full booking details. Booking in advance secures a CD containing all the presentations. Advance booking for these seminars is becoming more and more popular as the demand for places increases with successive exhibitions.

Jennie Harris
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Elections to the BMVA Executive Committee

Having been elected in 2003, and thus serving for two years, Professor Davies, Dr Ferryman Dr Fitzgibbon and Dr Hall stood down from the Committee. We would like to thank them for their contributions to date.

The numbers of votes cast in the election for the four vacant places were as follows:

Professor Roy Davies: 44
Dr Andrew Fitzgibbon: 36
Dr Majid Mirmehdi: 36
Dr Peter Hall: 27
Dr Neil Thacker: 25

The first four were duly elected to the Committee, the elected members of which now consist of:

Dr Mike Chantler
Dr Adrian Clark
Dr Tim Cootes
Professor Roy Davies
Professor Tim Ellis
Dr Andrew Fitzgibbon
Dr Peter Hall
Professor John Illingworth
Dr Dave Marshall
Dr Majid Mirmehdi

Dr Tim Cootes
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M^{2}VIP 2005

The 12th Annual IEEE Conference on Mechatronics and Machine Vision in Practice
De La Salle University, Manila, Philippines:
29 November – 2 December 2005

Mechatronics is the blending of mechanics, electronics and computer control into an integrated design. 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.

In particular, 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 eleven predecessors, M^{2}VIP 2005 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.

The conference programme will shortly be available. To obtain further details or to register for the conference, visit the conference website:

http://www.ccs.dlsu.edu.ph/m2vip/

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

Book Review – Dictionary of Computer Vision and Image Processing

R. B. Fisher, K. Dawson-Howe, A. Fitzgibbon, C. Robertson and E. Trucco
Wiley 2005, £39.95[4]

To place a Dictionary of Computer Vision and Image Processing in context, I have a lot of dictionaries on my shelf. I have the usual English dictionaries, complemented by a copy of Johnson's first English dictionary (for checking history), a Brewer's for miscellanea and Ambrose Bierce, just for laughs. This new dictionary sits amongst that stock, along with a tranche of computer vision texts.

In principle I need dictionaries to be informative, easy to search, reliable, wide yet focussed, and sometimes just fun to read. This new dictionary scores well in most respects. Its five authors were complemented by an international panel of experts and this together with a range of textbooks ensures wide coverage here. It is doubtless tempting to search a new dictionary for one's favourite and most obscure peccadillo, but I have resisted this. The book defines terms as concisely as possible and links them with some rather small images (the book itself is perhaps rather smaller than one would anticipate). On the whole it is quite readable and it is easy to find material. As ever, there is a question of balance which could perhaps be improved: affine invariant moments are given in detail whereas I could not find a definition of the Laplacian of Gaussian operator; the Fourier transform is set in text (the DFT is defined only as applied to sampled imagery) whereas the cosine transform is given in detail.

Some of the definitions will give cause for debate and some of the images lack clarity (readers are invited to contribute errata to a web site), but mostly, the standard of presentation and exposition is high. Certainly, the authors could have made the text lighter, especially with the eponymous nature of many vision operators, though they would naturally avoid the scatological heights of Bierce (unless of course that is an image of Andrew processed several times). Johnson famously achieved this with his occasional humour; interestingly, Johnson also includes 'ontology' which has not made it here. But in research someone needs to take the first step and that has been well taken in this volume. If I were to look for any major problems, they would concern citations to the established literature (such as a source and a survey) for which there are none. This would likely prejudice the book's format but they could of course be added to the web site which is at present (July 2005) largely a list of the terms without their definitions.

Clearly, this book is not suited as a recommended text for an undergraduate course, but I'll be ordering a copy for my research team's library and I'll keep this copy on my shelf for new postgrads. Given its accuracy, content, presentation and coverage, I recommend you to consider the book likewise.

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[4]As ever, cheaper prices may be obtained from notable web vendors – Ed.

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BMVC 2006

At BMVC 2005, it was announced that BMVC 2006 will be held in Edinburgh. Further details and a call for papers will appear in the next issue of BMVA News.

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