

BMVA News

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

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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 September 2006.

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Editorial: *Successes, present and future?*

All in all, BMVA has been having a very good year. First, I should mention the five technical meetings that have been held so far during 2006:

- 1 March 2006 *Visual Recognition*
- 5 April 2006 *Robotics and Vision*
- 31 May 2006 *Ambient Intelligence*
- 14 June 2006 *Colour in Vision Analysis*²
- 5 July 2006 *Detection vs. Tracking*²

These have all been highly successful – the last so much so that a new venue (UCL) had to be found at the last minute to take in excess of 80 delegates! Even the Joint BMVA/CGGB meeting attracted nearly 40 interested people and 10 speakers (I say “even” because colour is something of a backwater for BMVA, to the extent that it is there but is not of such intrinsic interest to our members in comparison with 3D, motion studies, tracking techniques and the like). In this context I should also credit BMVA in its role as co-sponsor of the IET *Imaging for Crime Detection and Prevention* meeting on 13–14 June 2006.

But the BMVA's biggest accolade yet is the huge increase in the number of papers submitted to BMVC, which were virtually doubled from the usual 270 or so to 447 (though only 427 of these were validated). Clearly we are on a high, with our rating amongst the world's vision conferences being at least in the top 4 or 5. I think we already knew we had such a high ranking, but direct evidence of it was perhaps lacking.

²See the pictorial records of these meetings on pp. 6–7 – Ed.

It would be interesting to know quite why the increase in submissions has this year been so high – and well above obvious statistical fluctuations. Could there be a trend? Well, on these pages I have repeatedly remarked that vision is experiencing approximately exponential growth. Perhaps more to the point, the IET VIE Conference has also shown greatly increased numbers of submissions this year, though in that case one can argue that taking the venue to India could well be expected to produce such an effect. Alternatively, perhaps we have gained on the back of other conferences failing, or raising standards (that high?) or proving too expensive or inconvenient to get to, or being at the wrong time, with the result that there would be a lot of papers looking for outlets. However, there are no such instances that I know about. Putting my other editorial ‘Beware the Ides of March’ hat on for a minute, I could say that this year’s welcome increases in undergraduate student numbers actually stemmed from the imminent onset of higher fees, so there will naturally be a drop in numbers next year. On the other hand, there is no such mechanism that I can see for any decrease in BMVC submissions next year.

Actually, I think that the answer does lie in statistical fluctuations, and that we should look not only for reasons why this year’s figure is high, but also why the trend was not visible in the previous two years: i.e. the huge jump should be spread over several years. Of course, the great attraction of Edinburgh may be quite substantial, with many of us remembering the last occasion it was there (1996), with the conference dinner in the very elegant Playfair Library.

Once one has earned a role, keeping it is all the more important – there’s further to fall! Competition is a vital matter: adaptation to new and changing circumstances is another. If one doesn’t adapt, the competition will get you. Potentially, there is a lot of competition. However, there is also healthy symbiosis: notice that we cosponsor meetings (cf. the ICDP meeting already mentioned), and we run joint meetings – as with the Colour meeting of 14 June. In fact, I don’t see the CGGB (for example) either taking us over or supplanting us: we each have roles and a good few mutual members. And it’s healthy swapping ideas and talking to the right people. Hence, overall, the only risk is not adapting to circumstances, and not seeing in time that changes are happening in the outside world. One could say that this is obvious, and is not specific to BMVA: indeed it is a normal life skill to consider such things. The problem is that disentangling the signals from the outside world and knowing what is globally significant and important is not the easiest thing to do. What might appear to be a passing phase can become a crucial issue. Like when I went to a networking meeting recently and remarked on the future importance of cameras for safety in the home, and was

somewhat rebutted on the basis that this would be unacceptably intrusive to the populace. No doubt similar remarks were made about surveillance 10 years ago, though look what happened there!

Professor Roy Davies
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BMVC’06 – Message from the Organisers

Organisation of the British Machine Vision Conference 2006 in Edinburgh is well under way. The Area Chair meeting finalised decisions on 12 June, and the conference programme is due to appear soon.

We are delighted to welcome Brian Curless and David Kriegman as invited speakers.

BMVC’06 will be remembered for several reasons:

- The volume of submissions: we received an astounding 447 submissions, of which 427 were validated. This is many more than the previous maximum (about 270).
- BMVC returns to Edinburgh after exactly 10 years, with two thirds of the organising committee staying the same (ET, RBF) – though hopefully wiser!
- The conference was extended in order to try and accommodate a reasonable percentage of the many good-quality papers received. BMVC’06 will include an extra afternoon and an extra poster session. In spite of this, the acceptance rate remains at a very selective 30% (126 accepted papers over 427 submissions).
- The area chair meeting completed its work well ahead of time!

Our sincere thanks go to all the referees who had to face an exceptionally large number of reviews, and to the area chairs who contributed to an efficient and fair meeting to finalise acceptance decisions.

Registration is now open. See below for important registration details.

We look forward to seeing you in Edinburgh in September!

Emanuele Trucco
Mike Chantler
Bob Fisher



Edinburgh skyline

BMVC'06 – Conference Information

The British Machine Vision Conference (BMVC) is the main UK conference on machine vision and related areas. Organised jointly by Heriot-Watt University and Edinburgh University under the auspices of the BMVA, the 17th BMVC will be held during 4–7 September 2006 in Edinburgh. Because of the number of high quality papers, the conference has been extended to a full three days (instead of the previous 2.5 days); the conference ends in time for delegates to catch trains to London.

The papers to be presented at this year's conference have been selected (46 orals and 81 posters). BMVC'06 will have single-track oral and poster presentations. The paper titles can be seen at:

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

Registration is now open and can be accessed from the main conference web page or directly from:

<http://homepages.inf.ed.ac.uk/rbf/BMVC06/bmvc06reg.htm>

This registration is for the conference and accommodation (residential) or only the conference (non-residential). We have a maximum of 190 dorm rooms, to be allocated on a first-registered, first-reserved basis. Altogether, the maximum number of delegates will be 210. *Please note:* Edinburgh is a popular tourist venue and the Festival will just have finished, but there might still be difficulty finding hotel accommodation in the city centre. Please register early to avoid hotel problems.

In addition to the contributed papers, BMVC'06 will include:

- A tutorial by Maria Petrou on *Human Vision System and Data Processing* (Monday 4 September)
- Invited talks by David J. Kriegman and Brian Curless
- A workshop on *Image Registration in Deformable Environments* (Friday 8 September).

The main web site has links to maps and travel details, plus some tourist information.

Important dates

Deadline for early registration: 31 July
 Tutorial: 4 September
 Main conference: 5–7 September
 Workshop: 8 September.

For further details please see the conference website at:

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

Dr R. Bowden
 University of Surrey
 email: r.bowden@surrey.ac.uk

Nominations for BMVA Executive Committee

Nominations are requested for the forthcoming election of members to the BMVA Executive Committee.

Nominees must be paid-up members of the Association and agree to serve for a period of two years. A member of the Committee is expected to participate in the bimonthly committee meetings taking place in a location deemed mutually most convenient to committee members. Regrettably, the BMVA does not cover the travel expenses of members participating in its committee meetings. Completed nomination forms should be sent to the BMVA Secretary at the address below and must be received by 31 July 2006.

This request for nomination must be signed by the individual standing and by one other member. The nomination should also include a brief biographical statement for distribution to BMVA members.

The Committee consists of ten elected members, about half of whom are elected each year. Details of current members may be found at:

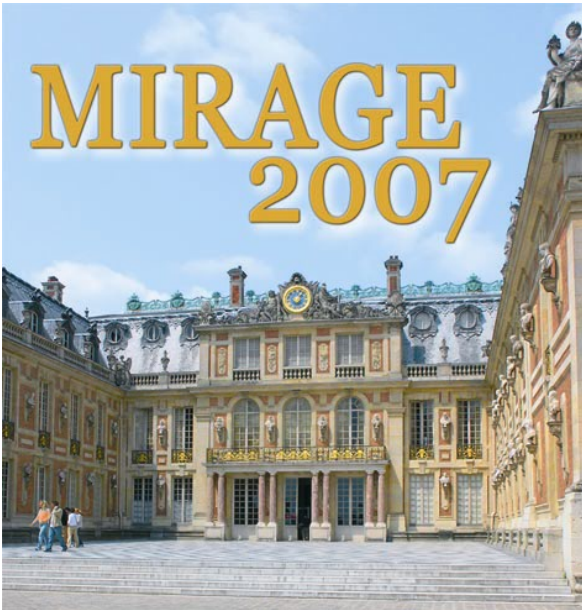
<http://www.bmva.ac.uk/admin/exco.html>

The members elected in 2004 who will stand down this year are:

- Dr Mike Chantler
- Dr Adrian Clark
- Dr Tim Cootes
- Professor Tim Ellis
- Professor John Illingworth
- Dr Dave Marshall.

Hence six elected places will be available this year. If more than six nominations are received for the six elected places, a postal ballot will be held. Voting papers will be sent out in early August and should be returned by 5 September. Each member will be able to vote for up to six candidates. The results will be announced at BMVC'06 at the University of Warwick and in BMVA News.

Andrew Fitzgibbon
Microsoft Research Ltd
email: secretary@bmva.ac.uk



MIRAGE 2007 – Call for Papers

28–30 March 2007
INRIA, Rocquencourt

Mirage 2007 is an international conference with focus on Computer Vision/Computer Graphics collaboration techniques.

Mirage 2007 will be held in the new Jacques-Louis Lions conference room of the INRIA Rocquencourt Research Centre during 28–30 March 2007. The research centre is located only a short drive from the historic Versailles castle.

Invited presentations

- Paul Debevec, USC, USA (tbc)
- Andrew Glassner, Coyote Wind, Seattle, USA (tbc)

Topics

High-quality papers are solicited on, but not limited to, the following topics:

- Model-based imaging and analysis
- Image-based modelling and 3D reconstruction
- Data driven animation
- Image and video-based lighting and rendering
- Model-based vision approaches
- Model-based indexing and database retrieval
- Model-based object tracking in image sequences
- Model-based image and shape analysis
- Model-based video compression techniques

with applications in the fields of:

- Human/Computer interfaces
- Video-games and entertainment industry
- Media productions for films, broadcasts and games
- Post-production, computer animation, virtual special effects
- Realistic 3D simulation, virtual prototyping
- Multimedia applications, multimedia database classification
- Virtual and augmented reality
- Medical and biomedical applications.

Important deadlines

Full paper submission: 1 November 2006
Notification of acceptance: 15 December 2006
Camera-ready papers due: 15 January 2007
Registration deadline for authors of accepted papers:
1 February 2007
Early registration deadline: 1 March 2007
Late registration deadline: 15 March 2007
Mirage Conference: 28–30 March 2007

For further details please see the conference website at:
<http://acivs.org/mirage2007/>

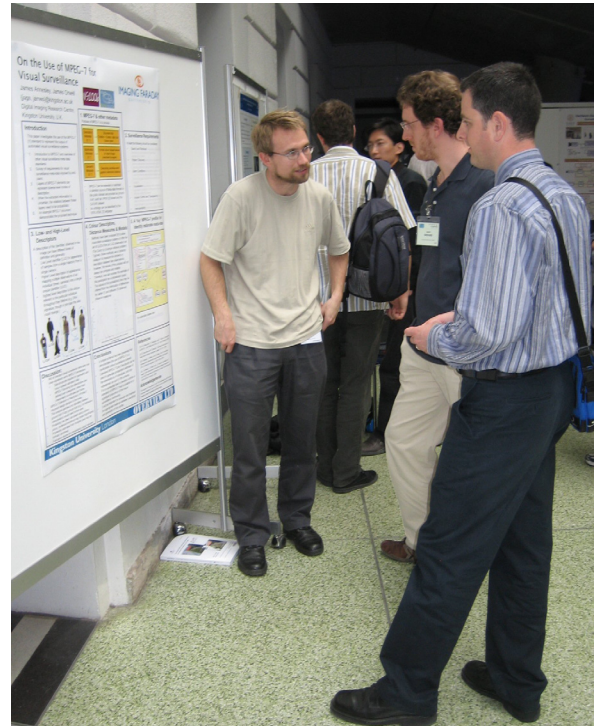
Emanuele Trucco
Heriot-Watt University
email: e.trucco@hw.ac.uk

Action at VS 2006

Video Surveillance 2006 was held on 13 May (just after ECCV) at the historic and very scenic town of Graz in South-East Austria. Graeme Jones (Kingston University) was the organiser, and appears in the first of this selection of photographs below.



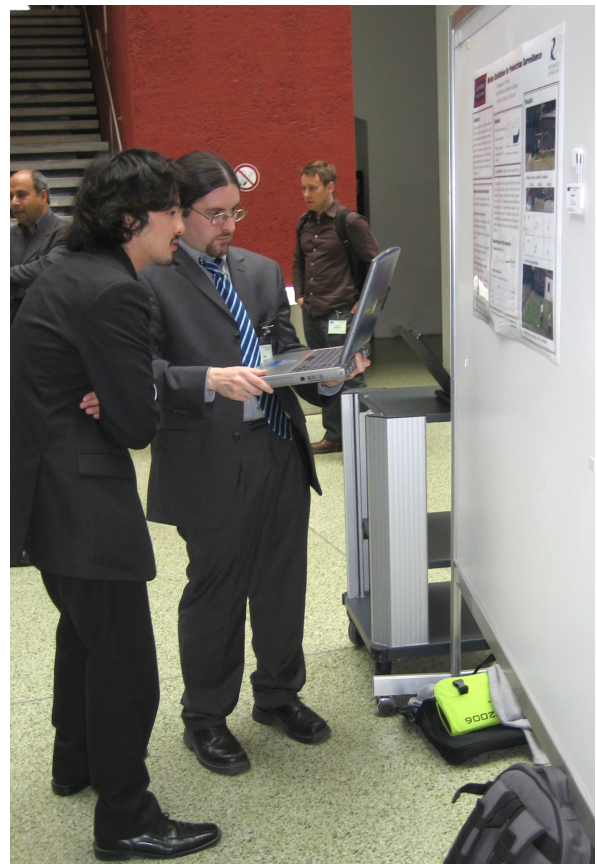
VS2006 Organiser Graeme Jones with invited speaker Pascal Fua (EPFL, Switzerland).



James Orwell (Kingston University) listening intently to a question about his poster on use of MPEG-7.



Intense discussion between David Hogg (University of Leeds), Mubarak Shah (University of Central Florida), and James Ferryman (Reading University).

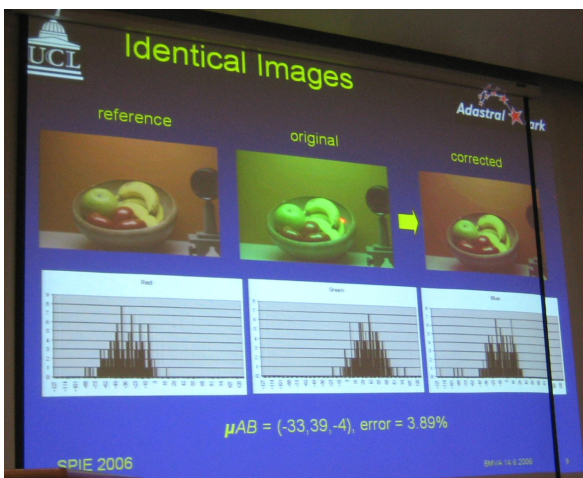


Mark Sugrue (Royal Holloway, University of London) gives a practical demonstration of motion distillation to an enthusiastic delegate.

BMVA/CGGB Colour Meeting



Speaker Adrian Evans (Bath University) heading the lunch queue amid the very pleasant surroundings of the London College of Communication.



Fred Stentiford's (UCL) approach to colour correction on the basis of a reference image.



Lindsay MacDonald (London College of Communication) leads us deep into a murder investigation, for which painstaking colour analysis was crucial.

This joint meeting of the BMVA and the Colour Group Great Britain was held at the London College of

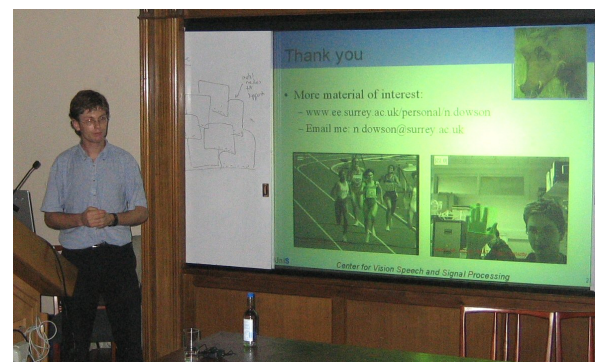
Communication on 14 June, and attracted about 36 delegates. It was evident that they had high dedication to this specialised subject, and many were still involved in discussions well after the official close at 5.15 p.m.

BMVA Detection vs. Tracking Meeting

This meeting was organised by Richard Bowden and held at UCL on 5 July. It was a very lively meeting, triggered off in no uncertain fashion by Andrew Blake who proved not only that Tracking = Detection + Adaptation, as per his title, but went on to show (with good justification) that really Tracking = Detection + Adaptation + Estimation!



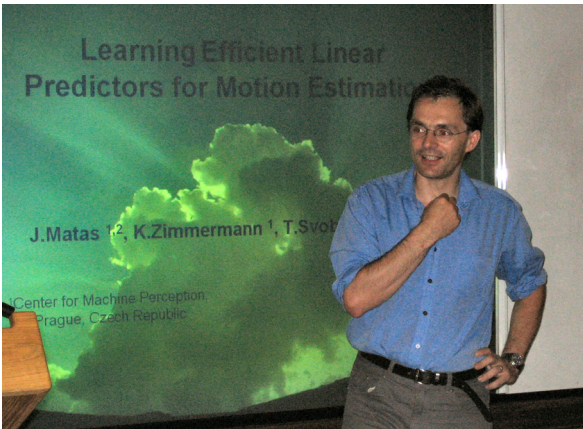
Andrew Blake (Microsoft) using a traffic guidance illustration to start his talk on tracking and detection.



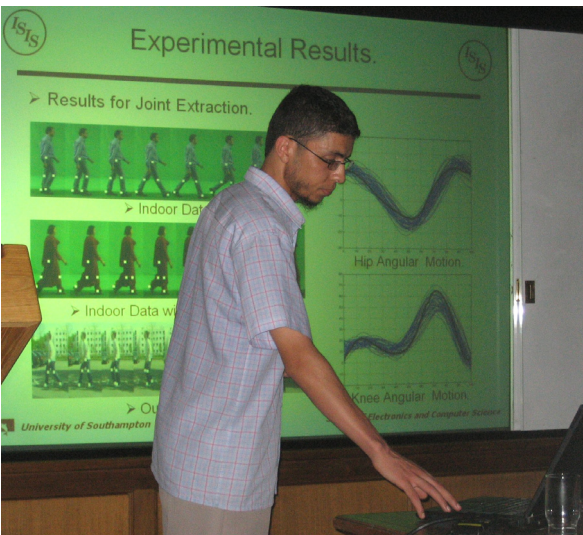
Nicholas Dowson (Surrey University) explaining how mutual information can be useful for a variety of tracking applications, in sport and elsewhere.



Meeting Chair Richard Bowden (Surrey) introducing Andrew Davison's (IC) talk on saving computation using probabilistic analysis.



Jiri Matas (Czech Technical University, Prague) in his usual enthusiastic mode, as he prepares to show how linear matching methods can lead to significant computational advantages.



Imed Bouchrika (Southampton University) reaching for his next slide, even though his point is already abundantly clear from the coherence of the graphs visible on the right of the screen!

Message from the Meetings Officer

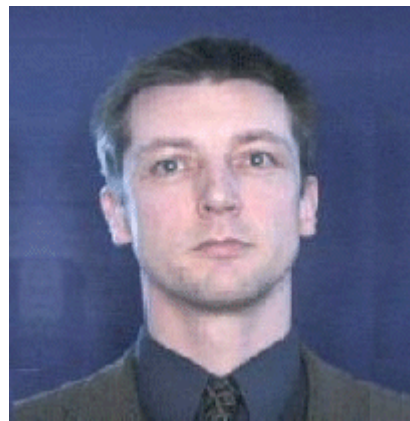
The BMVA wishes to invite potential chairs to submit bids for future technical meetings. We aim to have interesting well-attended meetings and this requires planning plus a preliminary call for papers. Over time, we have evolved a fairly standard format and procedure for arranging our meetings. To make the process less intimidating, we have recently put together a document with outline instructions and examples of what has been done on previous occasions. This can be obtained from the Meetings Officer at the address below.

For examples of meeting topics and programmes, see the BMVA website:

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

Simon Prince
University College London
email: s.prince@cs.ucl.ac.uk

Promotion to Chair!



Dr Graeme Jones has just been promoted to a personal chair at Kingston University, where he is Director of the Digital Imaging Research Centre.

Graeme's interests are marked on his website as "Graphics and Visualisation, Visual Surveillance, Feature Extraction, Image Analysis, Optical Flow, Real-Time Systems, Sports Analysis, Statistical Learning and Modelling, Tracking and Correspondence Processes". I would say this summary is still up-to-date. I'm sure many of you know Graeme and will join me in passing him our warm congratulations!

Professor Roy Davies
Editor, BMVA News
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New Optomechatronics Journal

A new Journal, the *International Journal of Optomechatronics*, is to be published by the Taylor & Francis Group. The Journal will focus on practical applications in the combined area of optics and mechatronics – and also on fundamental phenomena arising from the interaction between the two fields.

The Journal will start publishing in March 2007. Submission is already possible – as yet only through the email system: a PDF file is required for the purpose of review. The publisher (Taylor & Francis) will soon construct the web-based submission and review system.

Potential authors should consult *Instructions for Authors*, available from the website, for help in preparing papers in electronic form. The journal website is:

<http://www.tandf.co.uk/journals/titles/15599612.asp>

Hyungsuck Cho, Editor-in-Chief
International Journal of Optomechatronics
email: opto@lca.kaist.ac.kr

VIE 2006 – Call for Participants

IET Visual Information Engineering Conference
26 - 28 September 2006
Leela Palace, Bangalore India

VIE 2006 is the third in a series of conferences addressing the converging areas that together make the field of Visual Information Engineering. The conference features papers from internationally leading researchers, developers, and practitioners in vision and image processing, visual communications, and multimedia analysis who will share their latest achievements and explore future directions and synergies in these exciting areas.

The VIE 2006 Keynote Speakers are:

- John R. Smith, Senior Manager, IBM, USA who will discuss “Promises and Challenges of Machine Tagging of Large Multimedia Repositories”
- Sankar Pal, Director of the Indian Statistical Institute, Kolkata, India who will present “Rough-fuzzy Granulation, Rough Entropy and Image Segmentation”

Tutorial topics include:

- “The semantic gap in image retrieval”, Prof. Ebroul Izquierdo, Queen Mary College London, UK
- “Cognitive Vision techniques for Video Analysis and Understanding” Dr Monique Thonnat, INRIA, Sophia Antipolis, France
- “Level Set Function Inspired Curve Evolution and Related PDEs”, Prof. Dipti Prasad Mukherjee, Indian Statistical Institute, Kolkata, India
- “Scalable Image Coding with JPEG2000”, Shailesh Ramamurthy, Motorola, Bangalore, India

To register, visit the VIE website:

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

Dr Paola Hobson
Motorola Labs, UK
email: paola.hobson@motorola.com

Books for Review

This time we are fortunate in having two books for review – one a major book on texture analysis, and another a topical book on gait-based human identification.

As always, they will be sent out on a first come–first served basis, so contact me immediately if you would like to do a review. (If you are doubtful, go for the *quick view* option, and then return the book to me if you feel you really can’t do the review.)

Image Processing: Dealing with Texture
Maria Petrou and Pedro Garcia Sevilla
Wiley, Chichester, UK
2006
Pp. xvi+618
ISBN 0-470-02628-6
£45-00

Human Identification Based on Gait
Mark S. Nixon, Tieniu Tan, Rama Chellappa
Springer (International Series on Biometrics)
August 2005
Pp. 144
ISBN 0-387-24424-7
\$89.00

Professor Roy Davies
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Book on Photogrammetry

A major new book, *Close Range Photogrammetry, Principles, Methods and Applications*, has been published by Whittles Publishing of Caithness, Scotland. The authors, who have strong international reputations, are Professor Thomas Luhmann, Dr. Stuart Robson, Dr. Stephen Kyle and Professor Ian Harley.

This is the first comprehensive English language text that deals with close range photogrammetry in such depth and at around 530 pp. is a very substantial book, complemented by many two-colour illustrations.

Sue Steven, Promotions Coordinator
Whittles Publishing
www.whittlespublishing.com
email: sue@whittlespublishing.com

Future Technical Meetings

We currently have some ideas for future technical meetings. These include the following:

- Psychophysics and vision
- Biometrics at a distance
- Topics in Vision (a student papers meeting)

I emphasise that as yet these are only tentative, and definite dates have not been fixed (but keep your eye on the BMVA website for details). Reactions to these and suggestions for any other meeting topics should be sent to the Meetings Officer, as indicated on p.7.

Professor Roy Davies
Editor, BMVA News
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Summer Magazine Section – Graz

Having recently attended VS 2006 in Graz, Austria, I was very impressed by the location: why go to exotic resorts on holiday when there are such interesting places on our very doorstep? In this space filler I include a selection of pictures my daughter Marion and I took soon after the workshop. Judge for yourselves the scenic value!

Professor Roy Davies
Editor, BMVA News
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Typical views in Graz





Views of Eggenberg Schloss



STOP PRESS: Another Success for Chris Taylor!

Chris Taylor has achieved yet another success: he has just (4 July) been elected Fellow of the Royal Academy of Engineering. He was awarded an OBE in 2000, and the award of BMVA Distinguished Fellow followed in 2003. There can be little doubt that the electing committee of the RAE were particularly impressed by the wide practical value and application of Chris's work.

Professor Roy Davies
Editor, BMVA News