BMVA News

BMVA News[1] is published every three months. Contributions on any activity related to machine vision or pattern recognition are eagerly sought. These could include reports on technical activities such as conferences, workshops or other meetings. Items of timely or topical interest are also particularly welcome; these might include details of funding initiatives, programmatic reports from ongoing projects and standards activities. Items for the next edition should reach the Editor by 10 June 2014.

Contents

Editorial: *Recharging our Batteries and a Reboot for BMVA News*

I have often noticed that December and March are lean months for BMVA News, with relatively few articles being sent in. In fact, this March the submission rate dropped to a long-time low, which can most probably be explained as a statistical fluctuation: after all, it can hardly be due to the exceptionally high rainfall in January and February. Normally, one can envisage that December is a month when

work activities are dying down, while March is the time when we recharge our batteries and start preparing submissions for the coming conferences: these are then reported in June and *a fortiori* in September, the time of our own national conference. Why should there be this particular cycle? Well, one could imagine that it arises because summer is the ideal time of the year to go abroad for holidays or conferences – or possibly both together, if the venue is right. However, the logic of this is a little shaky: where do people in good-weather countries go for their conferences and holidays? Anyway, whatever the reasons for our work habits, this issue includes three calls for papers and three calls for participation, and high levels of activity by BMVA.

Now under new leadership, BMVA is looking to maintain a strong front, and has somewhat remarkably managed not to increase its membership fee for about two decades. This reminds me of the forger being asked how he managed to make such convincing pound notes when they must have cost at least a pound to produce, and he confessed that he had to fiddle the accounts! I assure you that BMVA is not in that sort of business, though it has managed to run high-quality conferences over such a long period that they have been able to add a small boost to the fee income. Nevertheless, some economies are envisaged and in particular BMVA News is having to cut back on the expansive policy that I was encouraged to adopt ever since I became editor in 2001. Over this period I have requested authors to include many pictures in their articles; and have spared no efforts to make our conferences as well publicised as possible by showing delegates both presenting and discussing the ideas of the day *and* having a good time! I don't intend all that to end, and will do my best to provide good reading matter more economically than before.

To this end I wondered if there might be any way of making better use of space in the newsletter. In fact, by adjusting margins, inter-paragraph spaces and other gaps I have found it possible to include about 10% more material on every page. While this has meant largely eliminating the house-style that was handed down to me some 13 years ago, I feel that the results look quite reasonable and this has clearly been a worthwhile exercise. However, on its own it will not be sufficient, so I am going to have to apply more serious means for making economies.

In this context, I recently learnt a new word that maybe I should have known much earlier, though, as we know, words come into and go out of fashion faster nowadays than at any time in the past – presumably because of the Internet and electronic social media such as Twitter – all of which make it difficult to keep up with the jargon. The word in question is "redaction", which according to the dictionary appears to be a synonym for "editing". Yet on observing its practical use it seems to mean something akin to doctoring government reports to make them 'suitable' for release to the public. In our case I imagine I won't have to take on the worst excesses implied by the word, but will have to consider pruning articles more than in the past. Indeed, as editor, my main role used to be to correct grammar, spelling and particularly punctuation, and to cast each issue in a common house-style: and the less change I had to make the better. There were some complexities in ordering articles within each issue, so as to minimise the numbers of page breaks within articles, and to avoid gaps due to the positioning of pictures. In the latter respect I always found I could beat Latex, but this pushed me into using Word for layout – which helped because of the immediate visibility of the results of reordering. But one has to say that optimal ordering is intrinsically difficult and special algorithms for the purpose are solely needed. The reason for this is that it is a highly non-linear task. Interestingly, the same problem underlies that of précising any text, because shortening may initially be fairly linear and then the process suddenly freezes up until one makes the decision to eliminate a *whole* paragraph or topic. While précising is a skill that I learnt in school at the age of 15 or so, it takes time and effort to implement it, so I'm not looking forward to having to undertake it as a routine part of my editing duties. Nevertheless, authors of articles appearing in BMVA News often have to rush them off against the clock, and in any case they are very busy people (typically they are a self-selected subset who are running conferences or meetings), so there is every likelihood that they will offer me the chance to dust off and sharpen my age-old précising skills.

Clearly, the other way of keeping BMVA News down to an economical size is to reject articles. However, I have never done this, and am loath to start. People wouldn't send in material if it had no useful content, so a far better plan is to ensure that the length matches the *useful* content, and that readers are never denied news or information. Of course nowadays, another widely used approach is to arrange for 'supplementary' material to be relegated to the Internet, in much the same way that I have often insisted on PhD theses being cut down to size by transferring excess material to appendices, where the candidate may feel that the weight of paper still counts towards his achievements – and the examiners are not placed in the position of having to read all (or do I mean *any*?) of it.

Professor Roy Davies
Editor, BMVA News
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London, UK, 13–14 November 2014.

Call for Papers

For over a decade CVMP has built a reputation as the prime venue for European researchers to meet with practitioners in the Creative Industries: Film, Broadcast and Games. It provides a forum for presentation of the latest research and application advances, combined with keynote and invited talks on state-of-the-art industry practice.

CVMP 2014, the 11th European Conference on Visual Media Production, is published by ACM in cooperation with Eurographics, and as well as having the support of the BMVA it is sponsored by The Foundry, Google, Disney Research, and the Centre for Digital Entertainment.

- Computer Vision and Graphics for the Creative Industries: Film, Broadcast and Games
- Strong attendance from both Industry, VFX R&D, and Academia
- 6 July 2014 regular papers deadline
- ACM published proceedings
- Special issue of journal Elsevier *Computers and Graphics* featuring best papers
- Keynote speakers for 2014 include Damien Fagnou from the Moving Picture Company and Professor Elmar Eisemann from TU Delft
- Vibrant demo and short papers programme (in a following call).

We invite submissions of regular, technical papers presenting novel research or applications related to any aspect of media production. We particularly encourage submission of early stage doctoral work, and there is a Google/Youtube sponsored prize of 2000 USD for the best graduate student paper. Full-length submitted papers should be no more than 10 pages and will be subject to peer review. Accepted papers will be presented in either oral or poster form. Conference proceedings will be published by ACM.

Further details of topics, online submission and paper formats are available at: www.cvmp-conference.org

Chairs

- John Collomosse (University of Surrey)
- Darren Cosker (University of Bath)
- Peter Hall (University of Bath).

Dr Helen Cooper
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BMVA Computer Vision Summer School 2014

Call for Participation

The BMVA runs an annual Computer Vision Summer School aimed at PhD students in their first year: it will also be beneficial to other researchers at an early stage in their careers. Students from non-UK universities are welcome to attend as well as students from UK universities, but places are limited to ensure good interaction in lab classes.

The 2014 Summer School will take place at Swansea University on 30 June – 4 July. It will consist of an intensive week of lectures and lab sessions covering a wide range of topics in Computer Vision and Digital Image Computing. Lecturers are researchers from the most active Computer Vision research groups in the UK. The full programme is listed on the summer-school website:
http://bmva2014.swan.ac.uk/index.php?n=Site.Programme

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

Some quotes from delegates who attended previous Summer Schools at Manchester University and Kingston University: "I think the variety of the topics is very good". "Diverse set of requirements were handled very well. I found it extremely helpful and fun!" "Nice overall atmosphere to get in touch with people working in a similar/related field". "Lecturers did a very good job in bringing the topics across". "Thanks for organizing! I've met cool people and learnt a lot".

Important Dates

Early registration: 5 May 2014
Late registration: 23 June 2014
Summer School: Monday 30 June – Friday 4 July 2014.

Confirmed Speakers

- Lourdes Agapito – University College London
- Toby Breckon – Durham University
- Gabriel Brostow – University College London
- Adrian Clark – University of Essex
- Tim Cootes – Manchester University
- Roy Davies – Royal Holloway, University of London
- Graham Finlayson – University of East Anglia
- Andrew Fitzgibbon – Microsoft Research, Cambridge
- Tae-Kyun Kim – Imperial College London
- Krystian Mikolajczyk – University of Surrey
- Eng-Jon Ong – University of Surrey
- Nicolas Puqeault – University of Surrey
- Daniel Rueckert – Imperial College London
- Neil Thacker – Manchester University
- Barry Theobald – University of East Anglia
- Tomos Williams – Image Metrics, UK.

Registration

Online registration is now open at:
http://bmva2014.swan.ac.uk/index.php?n=Site.Registration

Residential rates include all sessions, accommodation (4 nights, 30 June – 3 July), refreshments, breakfast and lunch (30 June – 4 July), Summer School Reception on 30 June, and Summer School Dinner on 2 July. Non-residential rates include all sessions, lunches and refreshments, Summer School Reception on 30 June, and Summer School Dinner on 2 July.

Early Registration applies on or before 5 May, and Late Registration applies on or before 23 June. The respective rates are listed below:

UK	£400.00	£440.00
UK non-residential	£240.00	£280.00
Non-UK	£650.00	£700.00
Non-UK non-residential	£490.00	£540.00

UK rates apply for anyone who is currently studying or working in a UK institution that is physically based in the UK.

Dr Xianghua Xie
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Vision for Language and Manipulation

This one-day BMVA symposium will take place in London on Friday 11 July 2014.

- Chairs: Nick Hockings (Bath) and Dr Walterio Mayol-Cuevas (Bristol)
- Keynote speakers: Professors Jan Peters, Angelo Cangelosi, Sinan Kalkan, and Dr Marco Davare.

Human dextrous manipulation remains unmatched in robotics. The fusion of visual, tactile and proprioceptive perception plays a central role in planning and control of manipulation. Many of the same percepts that are useful for manipulation have also been shown to be useful in the robotic grounding of natural language.

The aim of this meeting is to bring together researchers and practitioners, from both industry and academia, who are interested in any aspects of vision for manipulation or natural language grounding. Areas including percepts of objects, affordances, forces, actions, anticipated effects; visual-tactile-proprioceptive fusion; active vision for planning and control of palpation, grasping, and manipulation; SLAM for deformable, breakable objects, fluids and occlusions in a dynamic world; hand–eye coordination, self-tracking, visual control of manipulation; recognition of other agents; vision for imitation, interaction, cooperation and communication with other agents; percepts leading to the emergence of syntax in language and motion

planning; learning methods for visual grasping, and control methods for visual grasping.

Registration

For more details and Registration, book online at www.bmva.org/meetings: £10 for BMVA Members, £30 for non-Members, including lunch.

Dr Andrew Gilbert
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Surgical Vision and Biophotonics – Call for Papers

This one-day BMVA technical meeting will be held in London on Wednesday 15 October 2014.

Chairs: Danail Stoyanov (UCL), Dan Elson (Imperial)

Imaging is a critical element of modern surgical practice for both diagnosis and interventional treatment. With the increasing prevalence of minimally invasive surgical techniques, a wide spectrum of imaging methods is used to look at the internal anatomy and interrogate the interaction between light, sound, radiation and tissue. The acquired information presents diverse computational challenges for modelling, processing, fusing and understanding surgical images.

To promote this emerging synergy between biophotonics, optical imaging and computer vision within the context of surgery, we invite abstracts in the following areas:

- quantitative endoscopy and surgical vision
- non-rigid structure from motion
- reconstruction, inference and signal enhancement
- image-based tissue characterization for diagnosis and function
- biophotonic imaging techniques
- multimodal image-registration for intra-operative guidance
- robot-assisted imaging and image-guided robotics
- advanced intra-operative surgical visualisation.

We wish to promote an active discussion between multi-disciplinary researchers with short presentations and ample time for questions. This is an emerging field and the interaction of computer science, physics and medicine will be exciting for all participants.

Call for Participation

Please submit an extended summary or abstract of work. Contributions should be sent via the website http://www0.cs.ucl.ac.uk/staff/Dan.Stoyanov/bmva2014/index.html before 15 July.

Dr Andrew Gilbert
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Review: BMVA Student Symposium

This one-day BMVA Symposium took place at the British Computer Society on 5 February 2014.

Chair: Simon Hadfield (University of Surrey)

The day started with a welcome by the chair, Simon Hadfield, which highlighted the scale of the meeting. There were more than 70 attendees including a record 20 presenters, who set high expectations for the day. Vittorio Ferrari from Edinburgh gave the first keynote – an energetic talk about his work on ImageNet. He started off with the demand that people most commonly make of him – "We want annotations!" Starting with only a measly 7% of ImageNet with bounding boxes, he explained how transfer learning and self-assessment are used to give the users what they want. Continuing on the knowledge transfer theme, Nazli Farajidavar gave a talk on her work on "Transductive Transfer Machines" which she uses for moving knowledge from one dataset to another. The last oral before lunch was by Michael Burke discussing how he used Kinect to generate a model which let him perform 3D upper-body pose estimation using only a monocular camera. Michael hopes to use this for quadcopters where Kinect is too bulky to be suitable.

After a rapidly disappearing lunch came the first of the day's two poster sessions. Medical imaging was a very popular topic with posters presented by Mohammad Maraci, Fatemeh Tahavori, Maryam Hajiesmaeli, Violet Snell and Anna Molder. Karel Lebeda presented his work on tracking featureless objects over very long sequences which was recently placed 5th out of 27 in the VOT challenge. Work on synthesising new views for more personal video conferencing was presented by Brooks Paige. Tayyaba Azim presented using Fisher kernels extracted from RBMs. Guosheng Hu's poster talked about facial recognition using 3D morphable models. Philip Krejov showed his work on performing fingertip tracking using Kinect while Stewart Forshaw presented his work using "array-of-histograms" for various vision tasks.

Andrew Fitzgibbon from Microsoft Cambridge started off the second half of the day by condensing "everything he's learned about computer vision research" into 4 slides. These slides gave some useful tips and insights, after which he moved on to the rest of his talk on dolphins and dolphin-ness. After Andrew, Claudia Lidner gave an interesting talk on fully automatic bone segmentation, using statistical shape models with random forest regression-voting.

In the afternoon we were treated to more tea and biscuits and the second set of poster presentations. The penultimate oral presentation was delivered by Anestis Papazoglou, who used optical flow to segment moving objects in video clips. The final presentation of the day was by Barathy Mayurathan on improving codebook design by sequentially

carving the input space using hyperspheres. This allowed a more compact codebook to be created than with k-means.

Before the final discussion panel, Paul Tar gave a quick talk about the BMVA's efforts to expand its social media presence and encouraged everyone to participate. Finishing off the day was a discussion panel with Simon Hadfield, Vittorio Ferrari and Andrew Fitzgibbon. The big talking points were that FLANN is great and that deep learning is a big upcoming movement in machine learning that we should all be aware of. Overall, the symposium certainly delivered on the high expectations Simon set up at the start of the day: future events have a lot to live up to!

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BMVA Annual Election

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

We are looking for new members with the ideas and time needed to help enhance our research community. Nominees must be paid-up members of the Association and agree to serve for a period of two years. Members of the Committee are expected to take an active role in BMVA activities. They must also participate in the bimonthly committee meetings taking place in a location deemed mutually most convenient to committee members.

Completed nomination forms should be sent to the BMVA Secretary at the address below and must be received by 20 June. For further details, see the full nomination form accompanying this issue of BMVA News.

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BMVA Now Accepts PayPal

As announced in the previous issue of BMVA News, we've brought the membership records in-house and they're now held at the University of Surrey and maintained by Dr Helen Cooper. We also have the facility to accept card and PayPal payments for renewals and new members who wish to join. The renewals page is at www.bmva.org/renewals and the online joining form can be found at www.bmva.org/joining. We hope this will make life easier and save people hunting for their cheque books each year when the renewals notice comes round. If you wish to update any of your details, please inform Helen at: membership@bmva.org

Dr Helen Cooper
University of Surrey
email: membership@bmva.org

BMVC 2014 – Call for Papers

The British Machine Vision Conference (BMVC) is one of the major international conferences on machine vision and related areas. Organized by the BMVA, the 25th BMVC will be held at the University of Nottingham, UK, 1–5 September 2014. Professors Luc van Gool (ETH Zürich, CH) and Fei-Fei Li (Stanford University, US) will be giving keynote speeches on 2 and 3 September respectively.

Authors are invited to submit full-length, high-quality papers on topics in image processing and machine vision. Papers covering theoretical and/or applied work on computer vision are invited. All papers will be reviewed double blind, normally by three members of our international programme committee. Reviews will judge submissions on originality, empirical results, quality of evaluation, and presentation.

Topics include, but are not limited to:

- Statistics and machine learning for vision
- Stereo, calibration, geometric modelling and processing
- Face and gesture recognition
- Early and biologically inspired vision
- Motion, flow and tracking
- Segmentation and grouping
- Model-based vision
- Image processing techniques and methods
- Texture, shape and colour
- Video analysis
- Document processing and recognition
- Vision for quality assurance, medical diagnosis, etc.
- Vision for visualization, interaction, and graphics
- Object detection and recognition
- Shape-from-X
- Video analysis and event recognition
- Illumination and reflectance.

Please note that BMVC is a single-track meeting with oral and poster presentations and will include two keynote presentations and two tutorials.

Workshops

Two workshops will be organised during BMVC 2014 – the Doctoral Consortium and the second Large Scale Visual Commerce workshop. For full details of these, see the BMVC 2014 website.

Key dates

2 May	Submission of full papers
30 June	Notification of Acceptance
14 July	Deadline for camera-ready versions of papers
1–4 Sept	Conference
5 Sept	Workshops

Organisation Committee

BMVC 2014 is hosted by the Computer Vision Laboratory (CVL) at the University of Nottingham.

- General chairs: Dr Michel Valstar, Dr Andrew French, Professor Tony Pridmore
- Conference Management Chair: Dr Susannah Lydon
- Student Workshop Chair: Dr Peter Blanchfield
- Web Chair: Dr Michael Pound.

Further details of all aspects of the conference can be found on the BMVC 2014 website: http://bmvc2014.cs.nott.ac.uk/

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MIUA 2014 – Call for Participation

MIUA 2014 will be organised by City University London and hosted within the premises of Royal Holloway, University of London on 9–11 July 2014.

MIUA 2014 is the 18th in the series of annual meetings dedicated to communicating research progress in image analysis applied in the medical and biomedical sciences. It is a friendly, single-track conference with oral and poster presentations. All accepted contributions will be published and the full proceedings will be available to delegates at the conference.

Paper submission

Technical papers (6 pages) and review papers (8 pages) are invited on topics from across the spectrum of medical image analysis – from theory and technical advances to novel practical applications. Communications outlining challenging image-analysis applications and/or unsolved problems from a clinical perspective are invited in the form of challenge abstracts (2 pages).

MIUA operates a double-blind peer review system with three reviewers evaluating each paper. All accepted contributions will be published and the full proceedings will be available at the conference and on-line.

Chairs

- Constantino Carlos Reyes-Aldasoro, City University London
- Gregory Slabaugh, City University London.

Invited speakers

MIUA 2014 will include several keynote speeches from the following world-leading researchers:

- Professor Dave Hawkes, University College London
- Professor Jean-Christophe Olivo-Marin, Institut Pasteur
- Professor Roger Gunn, Imperial College London.

Tutorial

The conference will be preceded by a half-day workshop on Decision Forests in Medical Image Analysis. This tutorial will be presented by Dr Antonio Criminisi, who is a Research Scientist at Microsoft Research Cambridge.

Awards and Bursaries

MIUA provides several bursaries to encourage student participation and awards for the best work. This year, in addition to the traditional Best Poster Presentation, Best Oral Presentation and Best Paper, we will be presenting an award for the Best Cancer-related Paper. This award is funded by the British Association for Cancer Research.

Publication of the best papers

Authors of selected papers will be invited to submit extended versions of the papers to the journals *Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization* and *Annals of the BMVA*.

Important dates

Paper submission deadline (extended)	31 March
Notification of acceptance	5 May
Camera-ready paper due	23 May
Early-bird registration deadline	30 May
MIUA Conference	9–11 July

Registration

Early-bird student registration fee is £130; the full fee is £300, which includes access to all the conference sessions, conference proceedings, the workshop (9 July), lunch (10/11 July) and the traditional conference dinner (10 July).

Further details of the conference, paper submission, scope and venue can be found at: http://www.miua.org.uk

For questions about registration, visas and payments, please contact: events@city.ac.uk

For questions about paper submission, academic content and all technical enquiries, please contact: miua2014@city.ac.uk

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