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 March 2012.

Contents

Editorial: *Good News Today, Harder Work Tomorrow*

As the year ends it is salutary to look back and contemplate all that we have achieved during the past year – after all, it's cheer and compliments to all at Christmas time. However, I will take this further and contemplate all that we have achieved this past 50 years in the field of Machine Vision. (Can it already be time to take it that 50 years have passed since life was first breathed into our exciting subject? As an existence theorem it is sufficient to quote a single paper – Herbert Freeman, 1961 "On the encoding of arbitrary geometric configurations" – though I should also point out that the Hough transform was invented in 1962.)

So what have we achieved overall? Image noise suppression has been taken to staggering heights; morphological analysis has matured after a savage mathematical lesson from Haralick et al. in 1987; robust statistics have invaded every nuance of life in our whole subject; invariants have added a subtle flavour to 3D interpretation, following which the whole subject of 3D vision has solidified with constructs like the 8-point algorithm; 2D surface inspection including texture analysis is widely regarded as a fait accompli, as are statistical pattern recognition, OCR, fingerprint analysis, and many more. After all, we are now into 4D recognition, including MRI, surveillance, driver assistance systems, (varying) facial expression analysis, gait analysis, gesture control of video games, and many more achievements that would have been thought impressive or even incredible in the early days.

Now comes the depressing bit: "It's all been done", "It's all over bar the shouting", "All the principles are now known: it's only a matter of filling in the gaps …". i.e.

following all the undoubted achievements, which give a sense of euphoria, we can build on them as engineers, but our days of scientific research are over. Time to move on to more exciting pastures … But does this mean we have to leave the subject, or are there still things to be done that are really worthwhile and not merely filling in the dots?

It might be useful to contemplate what happened in Physics about a century ago, when all the laws were finally known. Some awkward facts started emerging that had to be explained by esoteric theories – general relativity, quantum mechanics and, in the end (?!), string theory. Would such new pastures open for us in the same way? Actually, I can't imagine things opening up for us in anything like the same way. Instead, it behoves us to look around for things we can't do at present, perhaps things we are hiding from – things we have swept under the carpet in our mad dash for progress (or more likely, for the next grant). I refer particularly to the 'all hours–all weathers' problem, and the human information database that no vision system can yet anything like capitalise upon. Just watch a baby in a pram learning about the world by looking at and feeling pieces of material and thereby learning about 3D connectedness, occlusion, conservation of number and other radical lessons. Clearly, a huge amount more remains to be done to emulate the brain, and to build realistic models of reality that take the all hours–all weathers problem in their stride.

Fortunately, the world has recently become simpler for us vision scientists now that the need to build special real-time hardware to implement our algorithms has ceased to be more than a momentary concern: we can now tackle the real problems unimpeded. On the other hand, now that all the straightforward things have been done in our subject, I can reasonably echo Masterchef by saying: *Vision research doesn't get tougher than this*. May you live in interesting times!

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Call for Articles for BMVA News

Deadlines are:

- 10 March
- 10 June
- 10 September
- 10 December.

Travel Bursaries for International Conferences

In order to encourage UK postgraduate students to present work at international conferences, the BMVA issues bursaries to help cover the travel and conference costs. A number of such bursaries, of up to £750 each, are issued annually. In return, the recipient is expected to write a report on the conference for inclusion in the newsletter, or do equivalent work for the BMVA website as agreed with the bursaries officer.

To be eligible, you must be: (1) a student at a UK university; (2) a BMVA member; (3) presenting work at a major conference within the BMVA's remit.

For further details including method of application, see the following BMVA website at:

> http://www.bmva.org/w/bursaries

> Dr Adrian F Clark
> University of Essex
> email: alien@essex.ac.uk

BMVA Sullivan Thesis Prize – Call for Nominations

The BMVA annually awards a Best Thesis prize (to commemorate the contribution made by the late Professor Geoff Sullivan) to the best doctoral thesis submitted to a UK University, in the field of computer or natural vision. Recommendations for the prize are considered by a Selection Panel appointed annually by the BMVA Executive Committee, and the prize is presented at the British Machine Vision Conference, held annually during September.

The BMVA Executive Committee now seeks nominations for the Sullivan Prize for theses examined during the calendar year 2011. Please send any nominations to the BMVA Secretary, Dr Neil Thacker (secretary@bmva.org) by 1 March 2012. Nominated theses should be made publically available through the BMVA thesis archive prior to nomination. For further information, see http://www.bmva.org/sullivan.

> Dr Andrew Fitzgibbon
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16th Annual MIUA Conference

The 16th annual MIUA Conference will be held in Swansea on 9–11 July 2012.

MIUA is the principal UK forum for communicating research progress within the community interested in image analysis applied to medicine and related biological science. The meetings are designed for the dissemination and discussion of research in the expanding area of *medical image understanding and analysis*. This area is notable for its range of research communities, and the meeting aims to encourage the growth and raise the profile of this multi-disciplinary field by bringing together the various communities.

MIUA 2012 is a 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. It is intended to publish selected papers in the Annals of the BMVA.

This 2012 edition adopts a new format with a half-day **conference tutorial**, which should be particularly beneficial to research students and early career researchers. More details will be available shortly on the conference website.

Paper submission

Technical contributions (6 pages) are sought in relevant areas including, but not limited to, the following:

- Analysis of Cellular Images
- Analysis of Functional Images
- Analysis of Time Series
- Artificial Intelligence in Imaging
- Cardiac Imaging
- Computer-Aided Pathology/Radiology/Surgery
- Data Fusion
- Decision Support
- Human Computer Interaction
- Image Guided Intervention
- Image Interpretation
- Image Perception
- Image Registration
- Intelligent Imaging Systems
- Motion Analysis
- Multi Modality
- Novel Imaging Methods
- Quantitative Image Analysis
- Segmentation/Classification
- Shape Analysis
- Statistical Methods in Imaging
- Systematic Testing & Validation
- Texture Analysis
- Tissue Perfusion
- Virtual Reality
- Visualisation.

Each paper will be evaluated by three reviewers. MIUA operates a double-blind review process. Submissions must not identify the author(s). MIUA allows for dual submission of manuscript contents, e.g. with conferences such as IPMI, MICCAI and ISBI. Authors should indicate in their summary statements where else the work has been submitted and to what extent the MIUA paper overlaps the dual submission.

Challenge Abstracts (1 page) are also welcome. These should outline a challenge to the image analysis community from a clinical or end-user perspective.

Paper submission instructions and submission website are available at the conference website:

   http://miua2012.swansea.ac.uk

Keynote speakers

- Professor Alison Noble (Oxford University, UK)
- Professor Ge Wang (Virginia Tech, USA)
- Professor Daniel Alexander (UCL, UK).

Conference tutorial

There will be a half-day tutorial on 9 July 2012. This will be particularly beneficial to research students and early career researchers. More details will be available shortly on conference website.

Important dates

Technical paper submission:	**12 March 2012**
Challenge abstract submission:	12 March 2012
Notification of acceptance:	7 May 2012
Camera ready paper submission:	21 May 2012
Conference tutorial:	9 July 2012
Main conference:	10–11 July 2012

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Travel Report on MICCAI 2011

The 14th International Conference on Medical Imaging Computing and Computer Assisted Intervention (MICCAI) was held in Westin Harbor Castle, Toronto, on 18–22 September 2011. The objective of MICCAI is to bring together the world's scientists, engineers, clinicians and researchers from different disciplines under one roof to discuss the current issues in medical imaging and the approaches to tackle them with the aid of computer technologies. This year MICCAI have received a record of 819 paper submissions from all around the world, and the 53-member Program Committee conducted a multi-stage review of them all as part of the process of upholding high standards for the conference. In all, MICCAI 2011 accepted 251 papers, which represents a 30 per cent success rate. This year, all the accepted papers were assigned a poster, and a select few were nominated for oral presentation, organized in themes that were clinical- (organ or disease) based rather than methodology-orientated as in earlier years. Poster sessions were organized in their traditional technical themes as in the past.

Westin Harbor Castle, venue of the MICCAI2011

The main conference lasted for three days, and included a total of 7 oral sessions covering 34 papers and 35 poster sessions covering 251 papers. These papers provide a wide span of topics relating to medical imaging: robotics and localisation, physical modelling and simulation, motion modelling and compensation, segmentation and tracking in biological images, diffusion-weighted imaging, statistical analysis and shape modelling, registration, as well as computer-aided diagnosis and machine learning.

Two of the highlights of the conference were the keynote lectures by two Canadian scientists. On Monday morning, the invited speaker Dr. Dafydd Rhys Williams (physician, astronaut, medical robotics researcher and recently Hospital CEO) opened the conference with a presentation entitled "From Earth orbit to operating room", which looked at the lessons that the health-care system, and medical researchers could learn from the challenges of space travel. On Tuesday, another keynote – "Genes into geometry: imaging and image analysis from mouse phenotyping" – was given by Mark Henkleman (Director of the Mouse Imaging Centre, Toronto Centre for Phenogenomics), who talked about high-throughput small-animal imaging techniques and quantitative statistical analysis methods for mapping phenotypic changes associated with genetic disease models in mice.

Sponsors displayed in front of the main conference hall

Each day of the main conference was packed with single-track events, so everyone had an opportunity to see every oral and poster. The poster sessions were around three hours long after lunch and were located between morning and afternoon oral sessions. This arrangement is fairly pleasant as participators could relax and network over lunch and then stroll back for the poster session.

The main hall of Westin Harbor Castle conference center

Among the oral presentations, a number stood out. One of my most interesting papers, entitled "Non-local shape descriptor: A new similarity metric for deformable multi-modal registration", was given by P. Mattias from

Oxford University. This paper aimed to extract the shape of anatomical features in a non-local region using a similarity metric to address the challenge of deformable registration of images obtained from different modalities. The proposed non-local shape descriptor tried to bridge the gap between intensity-based and geometric feature-based similarity. Another interesting oral was for the paper "Point-to-volume registration of prostate implants to ultrasound" from Johns Hopkins University. The paper made a number of contributions, e.g. the proposed registration algorithm obviates the need for seed segmentation, and seed-to-seed registration is computationally efficient.

Poster and Demo Sessions

In addition to the main conference, the annual MICCAI event hosted an increased number of satellite tutorials and workshops, taking place the day before and the day after the main conference. This year's call for submission for tutorials and workshops led to a record 21 workshops and 8 tutorials accepted by a committee headed by Randy Ellis (Queen's University) and Purang Abolmaesumi (University of British Columbia). The workshops, highlighted topics that were not fully covered in the main conference, provided an opportunity to present research to peer groups in a relaxed environment that allowed valuable discussion and feedback. The tutorials provided a comprehensive overview of many areas in both the MIC and CAI domains, offering a unique educational forum for graduate students and postdoctoral fellows.

On Thursday, I attended one of the tutorials on "Manifold Learning and Its Application on Medical Imaging", in which researchers working in this area first explained the principal theory of manifold learning; then several applications based on it, e.g. segmentation, registration and classification, were presented. The computation and memory problems associated with this technique were also discussed.

I thoroughly enjoyed the conference – especially the opportunity to meet other international researchers and exchange ideas with them. It was an extremely well organised conference and everybody who attended enjoyed every part of it. The next MICCAI will be the fifteenth and will be hosted in Nice, France in 2012. Finally, I would like to take this opportunity to thank the BMVA for providing a generous travel bursary which made my trip possible.

For more conference information, please refer to www.miccai2011.org.

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Report on 19th Color and Imaging Conference 2011

The 19th Color and Imaging Conference, organised by the Society for Imaging Science and Technology, was held on 7–11 November 2011 in San Jose, California. San Jose, touted as the "Capital of Silicon Valley", serves as an excellent venue for conferences in this and most other technical fields. Many major companies involved with colour science, such as Apple Computer and Hewlett-Packard Company, have headquarters very close to the conference venue, and representatives from those as well as many other major companies were in attendance. The conference this year had an objective to strengthen bonds between communities involved with colour science, imaging technologies, human vision and perception, and the technical melting pot of silicon valley served as a perfect venue for doing so.

I have attended a few enthusiast and industrial conferences in the past, but this was my first experience of an academic conference. I was pleasantly surprised by the community atmosphere and friendliness of the event, which perhaps owes something to the relatively small scale of CIC in comparison to such behemoths as ICCV for example. The networking and discussion over coffee was an excellent opportunity to get to know one's peers and, while the obligation to 'talk shop' was prevalent, there were also good opportunities to talk to people on a more social level.

The three-day technical timetable of the conference followed two days of short courses. These short courses were dominated by a special two-day class: "Color Science and Imaging", however I attended three of the shorter sessions. On the Monday I attended "The Role

of Color in Human Vision", led by Kathy Mullen of McGill University, which examined some features of the human visual system, including topics such as color contrast sensitivity, contour extraction, global form extraction, and both single and double cone opponency. This was not an in-depth analysis of each of these subjects, but served as a brief introduction to what they are and how they have been learned about through psychophysical experimentation and, in some cases, anatomical investigation. On the Tuesday morning I attended "Human Color Perception: Measuring Aesthetic Preference and Emotional Response" by Stephen Palmer of the University of California at Berkeley, which covered human preferences for individual colours and for colour pairs. As well as investigating cultural impacts, the effects of conditioning were examined by exposing subjects to emotionally-loaded imagery before participating in the preference experiment. The studies also covered what degree preference of colour pairs correlates with perceived colour harmony. There was also a brief introduction to a study concerning colour and music, whereby emotional associations were gathered for both colours and pieces of music, and then observers were asked to associate colour with the music. Observers tended to pair pieces of music with colours for which they had ascribed the same emotional response, suggesting that colour and music (among many other stimuli) can be grouped into classes mediated by a global emotional response. Later that day was the course "Psychophysics Lab: In Depth and Step-by-Step" by J.A. Stephen Viggiano of the Rochester Institute of Technology, in which class members carried out two simple psychophysics experiments as a group. The course focussed on the method of ranks and the graphical rating method, and covered practical aspects of carrying out a study (such as removing sources of bias and careful planning of instructions and cues) as well as the statistical analysis and dissemination of results.

The technical sessions were started with a keynote by Kathy Mullen – "Color Responses of the Human Brain Explored with fMRI" which explored the specialisation in primate brains of the regions concerned with vision. This keynote was followed by sessions on the topics of *Color and Perception,* and *Image Quality*, in which I presented my own work "Comparing a Pair of Paired Comparison Experiments: Examining the Validity of Web-based Psychophysics". Before the lunch break was the first of a series of short paper sessions, which were presented in an experimental format whereby each presenter prepared a short talk to run in parallel with other discussions, and attendees could choose which talks to attend. This format unfortunately did not lend itself well to the venue; with multiple talks occurring in parallel in the same room it was challenging to hear the

speaker above other commotion. Thankfully for the later short paper sessions other rooms were used and the distractions were more manageable. That afternoon featured the *Color Rendering Index Special Session,* which was later followed by a panel discussion on the same subject. In the evening was a presentation by David Gallo of the Woods Hole Oceanographic Institute, entitled "Exploring the Fascinating World of Color Beneath the Sea", in which wonderful imagery of deep sea exploration projects was shared with the audience, along with entertaining accounts from the author on the experiences in acquiring those images.

The second day of technical sessions started with a keynote entitled "The Human Demosaicing Algorithm" by David Brainard of the University of Pennsylvania, in which a Bayesian approach was suggested as a possible method employed by the human visual system to demosaic cone classes. Also introduced was an unsupervised learning method by which the human system could learn which cones belong to which class. After this, the morning sessions covered *Computational Imaging* and *Color in Displays*. During the first of the sessions, Michal Mackiewicz presented work carried out with Graham Finlayson (both of the University of East Anglia) and Anya Hurlbert (Newcastle University) entitled "Root-Polynomial Colour Correction" in which polynomial regression is employed to improve colour correction. As a student of Professor Finlayson I may be somewhat biased, but this paper did seem to be the talk of the conference, with many murmurings overheard in the corridors and a group from Hollywood exhibiting quite profound excitement at the idea. The afternoon consisted of more short paper sessions as well as a *High Dynamic Range Imaging Special Session* and a *Colour Printing* session. That evening saw the main conference reception at the Gordon Biersch Restaurant in San Jose, where wine and locally-brewed beer flowed freely.

The final day of the conference opened with Robert Hunt giving the latest in his series of annual keynotes, "The Challenge of our Known Knowns", in which he reviewed the challenges of what we have yet to explain

in the topics of successive contrast, simultaneous contrast, assimilation, translucency and surface texture. Following the keynote were two sessions, *Aesthetics of Color* and *Miscellaneous Color Curiosities*. The afternoon featured sessions from the co-located 13th International Symposium on Multispectral Color Science, covering *Spectral Acquisition* and *Spectral Illumination and Visualization*.

The next IS&T Colour and Imaging Conference is scheduled to take place on 12–16 November 2012 in Los Angeles, California.

I would like to express huge gratitude to the BMVA for funding my trip to CIC19.

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Report on ICCV 2011

The International Conference on Computer Vision, ICCV 2011, took place on 6–13 November. It was organised by the Universitat Autonoma de Barcelona, Universitat Politecnica de Catalunya and the Centre de Visio per Computador. The conference was held in Barcelona, one of the most visited places in Europe, centre of culture, science, fashion, art, and has a vast culture heritage such as Antoni Gaudí's renowned architectural work. Barcelona's location on the Mediterranean makes it a very attractive tourist destination, and it is also a very popular location to host national and international fairs and exhibitions. Visiting Barcelona early in November is perhaps not the ideal plan for many dreaming of Barcelona's warm and sunny weather, but it was the perfect time for the rest of us that prefer a colder temperature still with clear skies and not so short days.

ICCV is one of the most well known conferences in computer vision and is sponsored by IEEE. The conference started with a day dedicated to tutorials on Sunday, followed by workshops on Monday and the main conference from Tuesday to Friday, and finishing with two more days of workshops on Saturday and Sunday. Considering that computer vision is an extremely wide discipline, the talks, tutorials and workshops covered the most relevant topics in the area: pattern/activity recognition, machine learning, colour, scene understanding, image restoration, optimisation methods, and image processing. This year the conference gathered more than 1500 participants, 294

posters were presented, 10 tutorials, 24 workshops, 16 demos, and 45 oral presentations.

On the first day of the conference, Sunday, I attended two tutorials. The first one, "Computer vision fundamentals: robust non-linear least squares and their applications", presented the theory of least squares, non-linear problems and the addition of constraints, and also practical applications in the areas of object recognition, real-time 2D surface detection, and definition of deformable models, to mention some examples. Later in the day I attended the tutorial "Decision Forest for classification, clustering and density estimation", presented by Antonio Criminisi. This session included an introduction to the basis and principles of forest classification. Furthermore, the speaker presented his current work at the Microsoft Research centre: it consists of applying forest classification to analysis of medical images. In this work, from MRI scans of a patient, a system was developed to automatically determine a specific organ location within the scanned region to analyse it more in detail. This analysis can be done either by looking at different perspective views of the selected organ or by obtaining a written report of the features of the organ. The system not only uses 6 descriptors to describe an organ, but also it manages some information about its surrounding area in the body, providing further automatic description such as determining if a specified organ is missing (e.g., because of a previous operation).
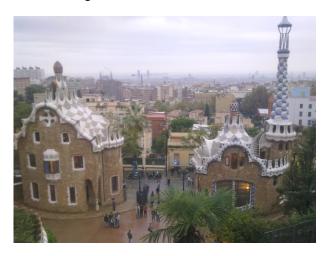
Wednesday session was focused on "Attributes and Classification". Particularly interesting was the talk of the Marr Prize winning paper "Relative Attributes" presented by Devi Parikh. In this work the authors proposed a framework to define relative attributes instead of previous binary or continuous attributes. This framework is inspired by the fact that for humans it is more natural to use relative attributes to describe objects, persons or situations. Furthermore, they incorporate this framework into an automatic search to relate images and categories to each other, and automatically generate relative image descriptors. Their results showed enhancement in human–machine communication and a more informative description.

On Thursday, invited speaker James DiCarlo presented the talk "How the brain solves visual object recognition". In this talk he addressed the problem of object recognition from the perspective of different disciplines: neuroscience, cognitive science and computer vision. Inspired by the complexity of different

approaches, the author's research is focused on finding a more robust and complete solution that hopefully will take into account the principles of these three disciplines.

At the end of Thursday's session a social event was organised. The venue for the event was *Llotja de Mar*, an iconic and historical building in the city, seat for many years of the camera of commerce of Catalonia. The building dates back to the 18th century and lies above an earlier medieval building: it is considered the most important piece of neoclassic art in Barcelona. The event included a light banquet, live music, and a demonstration of *castell*, a tradition from Catalonia in which a team (traditionally called *colle*) builds and dismantles a human tower. The *castell* is built in two phases, first the base of the tower is formed, and once it is determined if the base is solid, a band begins to play the traditional *Toc de Castells* music while the upper layers of the tower are built. *Castells* are an important local tradition and have also been declared UNESCO World Heritage.

The last day of the conference, Friday, started with the invited speaker Larry Matthies presenting the talk "Vision Applications in Autonomous Applications" which showed some applications in space and some robots that operated on Earth.

Finally there were two more days of workshops on Saturday and Sunday. I attended the workshop on "Color and Photometry in Computer Vision". Keynote speaker Ramesh Raskar presented the talk "camera culture" regarding current research for both capture and share visual information. A vision of the "cameras of the future" was discussed, concluding that researchers in the field have to take into account not only sensor information or illumination change, but also modern optical principles. Furthermore the speaker also presented current research at the MIT Media Lab where a new camera has been built to capture the propagation of photons to capture light, by using new primitives

such as photons, time, space, wavelengths and diffraction. At the end of the workshop I presented our paper and had the opportunity to discuss not only mine but also other participant's research in the area of computational colour.

The invited speakers and oral presentations, as well as spotlights of the posters, were recorded and will appear in http://www.iccv2011.org/. The next conference, ICCV 2013, will be held in Sydney, Australia, and ICCV 2015 in Santiago, Chile.

I would like to thank BMVA for funding my attendance to this conference.

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EPSRC: A Response and Reviewing

As you are no doubt aware, EPSRC – the main funding agency for Computer Vision – is implementing many changes that have and will affect our community. New rules regarding project studentships, resubmissions, and rates of failure are already in place. The "Shaping Capabilities" review is in progress at the time of writing, and its outcome is as yet uncertain. Other changes are yet to come: the situation is in flux.

Whatever the motivation for these changes might be, and whether they are good or bad is not the debate here, although it is understandable that many find this an anxious time. The Shaping Capabilities programme is causing particular concern amongst all EPSRC's communities because it directly impacts on the funding level that a defined subject area will receive.

There is no doubt that Computer Vision in the UK will continue to survive. We boast several world leading research groups both in academia and industry which are backed by a constellation of internationally strong groups. The reputation of the British Machine Vision Conference reflects an international respect. However, the Computer Vision community must act a whole to maximise the likelihood that it will remain as healthy as it is today. This means behaving in a cooperative manner rather than competing.

It is well known that success at attracting EPSRC funding is strongly dependent on previous success at attracting the same funding. Seen in these terms, the success of Computer Vision over the last few years is chequered. For a recent period of just over one year

EPSRC made no responsive mode awards to any Computer Vision group in the UK. Happily, that situation has changed recently, but given the shifting priorities of EPSRC we may wish to avoid falling back into drought conditions.

Given a proposal of sufficient quality, the referees are the most important determining factor in whether funding is awarded or not. The feedback we have from EPSRC is that the Computer Vision community is particularly hard on itself when it comes to reviewing grant proposals. This is one area where we can act to help ourselves.

Let us immediately be clear: this article is in no way an argument for supporting weak grant proposals—a move which would certainly damage our community. This article is about fair and accurate reviewing, and about ensuring that the outcome of the process is what the reviewer intends. Remember: funding a bad proposal is bad, but not funding a good proposal is also bad. We hope this article makes clear how to avoid both.

The first observation is that grant proposals are not scientific papers; they are not written as a paper nor should they be reviewed as a paper. Yet the temptation is to review a grant as a paper, and it is here we can become our own worst enemies; it is not uncommon to criticise a proposal for failings it does not exhibit.

The question when reviewing a paper is "Does the implemented technique T provide new insight into problem P?" When reviewing a grant proposal, the question is "Is the proposed technique T likely to provide insight to problem P?" When critiquing a paper, reviewers know that they need to provide sound arguments for any claim they make, but when reviewing grants, the same rigour is often not applied. Let us examine a few staples of the proposal critic's art:

- "If I were solving P, I would use technique T′."

Unless evidence is at hand that method T will fail or is worse than T′, this is not a valid criticism. One reason that experiment is strongly emphasised in our subject is that one does not know a priori whether T or T′ will work better.

- "The proposal does not provide enough detail."

It's certainly important that the proposal has enough detail to define the problem, to specify the initial line of attack, and to argue why that line of attack is likely to succeed. However, it is impossible to pack several years of work leading to top-level papers (say 80 pages of dense two-column text) into six sides of A4. Thus one may reject a proposal for lack of detail in setting up the

approach, but not for failing to define the contents of papers to be written three years hence.

- "The proposed solution may exhibit failure mode F."

Yes, and do existing solutions not exhibit F? Do we lose on F but win on getting closer to a solution of P? We all know that all contributions are circumscribed, the question is whether the limits are interesting. Ideally, the proposal will mention the possibility of F, but it is also the reviewer's responsibility to decide whether F is even worth mentioning: there are many potential failure modes, and even the best reviewer may suspect one where none exists.

- "I gave them a 4/5 for management, because you can't give 5/5 on everything."

If you give a low mark for *anything*, you need to back it up with evidence – and there is no 'killer' management technique, or indeed killer algorithm for Computer Vision.

- "The literature review is incomplete."

This is grounds for rejection, but only if the omitted citations undermine the argument in the proposal—for example, if technique T has already been used on problem P, and the proposal does not cite that previous work. It is of course otherwise irrelevant whether the proposal cites the reviewer's work: we all like to see ourselves and our colleagues cited, but not being cited is no reason to lower our objective assessment.

Competition at responsive mode panels is tough. Slight or chance remarks are often enough to see a bid slide down the ranking scale, away from the funding zone. If a reviewer wants a bid to be funded, a careless phrase may frustrate their wish even if a maximum numeric score is given. Giving less than maximum will significantly lower the chances of funding. When reviewing a grant, remember that a lukewarm review implies reject, while a fulsome review with high scores means no more than "probably accept". Thus, you should first read the grant, then decide whether the proposed research is worth doing, and then fill the form accordingly.

Andrew Fitzgibbon
BMVA Chair
email: chair@bmva.org
On behalf of, and with considerable input from, the members of the BMVA Executive Committee

BMVA Meeting on Visual Features in Medical Image Retrieval

This one-day BMVA technical meeting will be held in London on 25 April 2012.

Call for Participation

http://www.bmva.org/meetings

Chair: Dr. Xiaohong (Sharon) Gao, Middlesex University

Visual features have long played a vital role in image understanding and interpretation – especially in the medical domain – and have increasingly been used for the tasks of indexing and retrieval. However, because of the gaps between low-level features, such as colour, shape and texture that computers are able to extract, and high-level semantics from human interpretation, such as tumours or bleeding, visual feature- (or content-) based image retrieval still remains in the realm of research. On the other hand, the methods that are employed to extract and subsequently to interpret visual features vary appreciably, leading to very different groups of retrieved results. In particular, the higher the dimension of an image (e.g., 2D, 3D, or 4D), the more complexity there is in the extraction of visual features. In general, the approaches that work perfectly on a set of 2D images will usually not function well for a 3D dataset, due in part to the ways that 2D algorithms operate and in part to the processing speed for increasing numbers of dimensions. In addition, due to the exponential increases in the numbers of medical images, finding relevant data proves to be extremely difficult, like finding a needle in a haystack. Hence, visual feature-based retrieval can help to a great extent by being complementary to the current text-based search.

This one-day meeting aims at exchanging ideas on the extraction of visual features, with a focus on cementing the gap between low-level visual features and high-level semantics, to ensure that visual feature-based retrieval is on course for application in the clinical sector. The meeting will consist of tutorials, keynote speeches and presentations with application areas including (but not limited to) medical images of 2D (e.g. X-ray, retinal), 3D or higher (e.g. CT, MR), and video images (e.g. ultrasound). Submission is encouraged on the following and related topics:

- Computational approaches to extraction of visual features
- Image semantics
- Visual feature interpretation and representation
- Image ontology

- Content-based image/video retrieval
- Segmentation of salient visual features
- Image interpretation
- Medical image systems
- Medical data mining
- Image repository/databases.

Please submit an extended summary of about one (max two) pages A4 (PDF preferred) by email attachment to Xiaohong (Sharon) Gao (x.gao@mdx.ac.uk) by Friday 17 February 2012.

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BMVC 2012

BMVC 2012 will take place at the University of Surrey on 3–7 Sept 2012.

Call For Participation

http://bmvc2012.surrey.ac.uk/

The British Machine Vision Conference (BMVC) is one of the major international conferences on machine vision and related areas. Organized by the British Machine Vision Association, the 23rd BMVC will be held in Guildford, UK, at the University of Surrey.

Authors are invited to submit full-length high-quality papers on image processing and machine vision. Papers covering theory and/or application areas of computer vision are invited for submission. Submitted papers will be refereed on their originality, presentation, empirical results, and quality of evaluation. Topics include, but are not limited to:

- Document processing and recognition
- Image processing techniques and methods
- Model-based vision
- Motion, flow and tracking
- Object and activity recognition
- Person, face and gesture tracking
- Segmentation and feature extraction
- Statistics and machine learning for vision
- Stereo, calibration, geometric modelling and processing
- Texture, shape and colour
- Video analysis
- Vision for quality assurance, medical diagnosis, etc.
- Vision for visualization, interaction, and graphics.

All papers will be reviewed **doubly blind**, normally by three members of our international programme committee. Please note that BMVC is a single track meeting with oral and poster presentations and will include two keynote presentations and two tutorials.

Conference Chairs: Dr John Collomosse, Dr Krystian Mikolajczyk, Prof Richard Bowden

Important Dates

Abstracts due:	26 April 2012
Full paper submissions due:	3 May 2012
Deadline for return of reviews:	14 June 2012
Area chair recommendations due:	2 July 2012
Author notifications:	6 July 2012
Camera ready papers due:	1 August 2012
Conference:	3–7 September 2012

See http://bmvc2012.surrey.ac.uk/ for more details.

Professor Richard Bowden
University of Surrey
email: r.bowden@surrey.ac.uk

British Machine Vision Conference 2011 – Video Proceedings Online

The Proceedings of BMVC 2011 are available at:

www.bmva.org/bmvc/2011/bmvcproceedings.html

Proceedings of the British Machine Vision Conference, Jesse Hoey, Stephen McKenna and Emanuele Trucco, editors, BMVA Press, 2011. doi:10.5244/C.25 isbn:1-901725-43-X

Now included in the online proceedings are videos of all 35 podium paper presentations as well as Matthew Blaschko's tutorial on "Structured Learning and Inference in Computer Vision", David Fleet's keynote on "Tracking and Understanding Human Motion", and Nikos Paragios' keynote on "Shape Grammars and Procedural Modeling towards Large Scale 3D Modeling and Reconstruction".

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

New Head of Centre for *Vision, Speech and Signal Processing* at the University of Surrey

After 23 years as founder and Head of CVSSP, Professor Josef Kittler is handing over the reins so as to concentrate on his personal research. Professor Kittler took the centre from a group consisting of a handful of academics and students to an enterprise that currently has over 100 researchers and enjoys an international reputation across the wide range of its interest areas. Professor Kittler will remain as a full staff member in the Centre and will continue to make a major contribution to its many activities. The new Head of Centre is Professor Adrian Hilton.

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

Professor Mirmehdi appointed EiC of IET Computer Vision

IET Computer Vision started life with Volume 1, Issue 1 in March 2007, following the merger between the IEE (Institution of Electrical Engineers) and the IIE (The Institution of Incorporated Engineers) to form the Institution of Engineering and Technology. At the time, the long-standing journal 'IEE Proceedings Vision, Image and Signal Processing' was split into 3 new titles: IET Computer Vision, IET Image Processing and IET Signal Processing to better serve the corresponding research communities. Professor Mirmehdi will be the IET–CV's second Editor-in-Chief, starting 1 January 2012, when Professor Edwin Hancock of York University will conclude his term.

Professor Mirmehdi's principal aim while managing the journal will be to increase its impact factor and visibility to attract original and high quality research papers in Computer Vision.

The journal's web page is http://scitation.aip.org/IET-CVI.

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

IET Image Processing Conference 2012

This conference will be held in Westminster University, London, UK on 3–4 July 2012.

Call for papers

Technical scope

The Organising Committee welcomes contributions on any topic related to the generation, processing, analysis and communication of visual information including, but not limited to:

- analysis and recognition
- applications
- coding and transmission
- generation and display
- implementations and architectures
- industrial case studies
- processing
- retrieval and multimedia.

Conference organisation

IPR 2012 is fully supported and papers will be reviewed by leading academic and industry experts from the global image processing community including:

- Professor Sergio A. Velastin, Director, Digital Imaging Research Centre, Kingston University: *Conference Chair*
- Professor Mike Fairhurst, Professor of Computer Vision, University of Kent and Editor-in-Chief, IET Biometrics Journal: *Technical Chair*
- Dr Farzin Deravi, University of Kent and Editor-in-Chief, IET Image Processing Journal.

The (online) paper submission deadline is 7 February 2012.

For further details of the conference and how to submit a paper, see the conference website at:

> http://www.theiet.org/ipr

> Sebastian Ives
> IET Event Producer
> email: sives@theiet.org