BACN NEWS

The Newsletter of the British Association for Cognitive Neuroscience

Issue 2: Summer 2006

COVENTRY'S FINEST HOUR?

No, not the 1987 FA cup-final…

The 2006 annual scientific meeting of the BPPS is to be held in Coventry from Sept 4th – 6th. The event promises to be most stimulating with keynote speakers Dorothy Bishop (Oxford), Ian Deary (Edinburgh), Emrah Duzel (Institute of Cognitive Neuroscience) and Richard Krauzlis (The Salk Institute).

The Annual General Meeting and the Conference Dinner will both take place following the Tuesday afternoon session (Sept 5th). Please make every attempt to attend both if you can.

British Association for Cognitive Neuroscience

WELCOME

To the second newsletter of the new **British Association for Cognitive Neuroscience.** The aim of this Newsletter is to keep members informed of society matters and to encourage participation and the open exchange of ideas. Join in….

CALL FOR ABSTRACTS

In true academic style, the deadline for the submission of abstracts has been extended to July 28th. See page 13 for details or contact John Williams:

Email: john.williams@coventry.ac.uk

Full details of the preliminary conference programme can be found on page 3.

COVENTRY 2006

COVENTRY 2006

This year's conference is taking place at Coventry University on 4th-6th of September.

The costs are as follows:

£130 for members
£100 for student members
£150 for non-members
£125 for student non-members
(see page 12 for full price details).

The Poster Session and wine/food reception will held on the evening of Monday 4th Sept.

The programme will involve 3 topic related symposia and two sessions of free platform presentations. One of these sessions will be particularly aimed at encouraging post-graduate students to present.

CONFERENCE VENUE

The address for the Coventry venue is:

The Technocentre
Coventry University Technological Park
Puma Way
Coventry CV1 2TT
United Kingdom

Web: http://www.cutp.co.uk/

A useful link for directions.

CHAIR AND COMMITTEE MEMBERS WANTED

After 5 years in post, Adrian Burgess is standing down - his final address is on Page 5. Consequently, we need a new Chair. The society is also seeking fresh input from members in terms of new members of the executive committee. This is a great opportunity to make a real contribution to the future of Cognitive Neuroscience in the UK.

Posts are available for students, new researchers and established investigators and academics in the field.

Nominations, including self-nominations, for the Chair or Committee should be sent to Adrian Burgess at by the 5th August:
a.p.burgess@swansea.ac.uk

BACN MEMBERSHIP

Enquires regarding membership should be directed to Yvonne Boyle at: yvonne.boyle@man.ac.uk (see page 14)

STUDENT MEMBERSHIP IS NOW
ONLY £5

BACN Website

The Association's website is under construction but it's up and running

www.bacn.co.uk

Why not add it to your favourites and check it regularly for the latest news?

COVENTRY 2006

Conference Programme

MONDAY SEPTEMBER 4TH

12.00 **Registration**

14.00 – 16.00 **Symposium 1**: **The Neurobiology of developmental disorders**
Convenor - Dorothy Bishop *(Oxford)*
Speakers:
Kate Watkins *(Oxford)*
Tomas Paus *(Nottingham)*
Christiana Leonard *(Florida)*
Cathy Price *(UCL)*

16.30 – 17.30 **Keynote address: Dorothy Bishop**

17.45 – 19.00 **Poster Session**

TUESDAY SEPTEMBER 5TH

09.00 – 12.00 **Platform Presentations**

12.00 – 13.00 **Keynote address: Emrah Duzel** (ICN)

13.00 – 14.00 **Lunch**

14.00 – 16.30 **Symposium 2: The Neurocognitive Effects of Ageing"**
Convener: Arlene Astell *(St Andrew's)*
Speakers:
Annalena Venneri *(Hull)*
Romola Bucks *(Southampton)*
Jon Simons *(UCL)*
Nick Ward *(UCL)*

Conference Programme

TUESDAY SEPTEMBER 5TH (contd)

16.30 – 17.30 **Keynote address: Ian Deary** *(Edinburgh)*

17.30 – 18.30 **AGM**

19.30 **Conference Dinner**

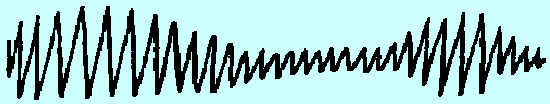
WEDNESDAY SEPTEMBER 6TH

09.00 – 12.00 **Platform presentations**
12.00 – 13.00 **Keynote address: Richard Krauzlis** *(Salk Institute California)*

13.00 – 14.00 **Lunch**

14.00 – 16.30 **Symposium 3: Cognitive aspects of oculomotor control**
(Convenor – Graham Barnes)
Speakers:
Roger Carpenter *(Cambridge)*
Ian Gilchrist *(Bristol)*
Marcus Misall *(Université catholique de Louvain, Belgium)*
Graham Barnes *(Manchester)*

16.30 Closing Remarks. End.



For a riveting review of last year's conference held at Aston see "Methods in Mind" by Gina Rippon starting on page page 9

COVENTRY 2006

CONFERENCE VENUE

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SUGGESTIONS

If you have any suggestions for things to include in forthcoming editions of the BPPS newsletter, or if you have any comments, criticisms or messages, please feel free to contact:

Nick Cooper (Newsletter Editor)
n.cooper@alfred.org.au

I look forward to hearing from you.

SCIENTIFIC COMMITTEE

For information about the Scientific Committee, contact Adrian Burgess
Department of Psychology
University of Wales Swansea
Singleton Park
Swansea

Email: a.p.burgess@swan.ac.uk

COVENTRY 2006

A Parthian Shot from BACN's Chair: Oranges are not the only fruit

by Adrian Burgess,
Chair of the British Association for Cognitive Neuroscience

At the conference in September, after 5 years in the job, I shall finally be standing down as Chair of the British Association of Cognitive Neuroscience. It is customary on such occasions to review the ups and downs of one's time in office but frankly, I couldn't be less interested in doing that and I'm sure you wouldn't want to read it. Instead, I'm going to beg your indulgence and tell you about a few scientific things that are interesting me at the moment.

When it comes to EEG research, event-related potentials (ERPs) reign supreme and more than 95% of all cognitive neuroscience research in the field uses this approach. Undoubtedly, ERPs have been phenomenally successful in fractionating the psyche. The method is exquisitely sensitive at discriminating between psychological states or processes. The method is robust and reproducible; it is both intuitive and easy to use. Despite these many virtues, ERP methodology has attracted a steady flow of criticism over the years. I don't want to chew over all the old arguments here because for me, ERPs have one major failing that trumps all others: they treat the brain as a black box. ERPs have told us very little, if anything, about how the brain generates the mind and for all we've learnt about neuropsychology from this approach, we might as well have been measuring reaction times. There is hardly an ERP peak whose source or function has been unambiguously identified. As a psychophysiologist, I see this as a major failing and I think we could do a lot better. In fact, we must do a lot better.

So, if ERPs aren't the answer, what is? To answer that question it is worth considering what the EEG is. The EEG that we record at the scalp surface is a complex combination of neuronal activity from many different interacting sources oscillating across a wide range of frequencies and varying over time. What we really want to be able to do is to disentangle this complex mix and get access to the deep structure of the EEG but, what we actually do most of the time, is to content ourselves with looking at the surface features only. Frankly, we don't yet know how to access this deep structure but here are some methods that have been developed or adapted in recent years for use with the EEG that I think are worth pursuing. So, here are my top 10 tips for methods of analysing EEG that I think will be important in the future.

1. **The Hilbert-Huang Transform**
   We are all used to decomposing the EEG by frequency or by time and recently, with wavelet analysis, we have learned how to do both at the same time. The main problem with all these methods is that we have to assume a template (a sine wave in the case of Fourier transform, a wavelet family in the case of wavelet analysis) and then we force the structure of this template onto the underlying EEG. The Hilbert-Huang Transform (HHT) takes a different approach. Using a method called empirical mode decomposition, the HHT allows the data to speak for itself. It lets the data reveal how it is structured and avoids the Procrustean approach of other methods. As well as providing estimates of instantaneous time and amplitude, it also provides estimates of instantaneous frequency. I have recently used this method with some EEG data recorded during a recognition memory experiment and what it showed me was both surprising and enlightening. I certainly intend to use it in the future.
   See: http://www.fuentek.com/technologies/hht.htm
2. **Partial Least Squares analysis**
   Latent variable methods have attracted a lot of attention recently and with the relative demise of Principal Components Analysis, Independent Components Analysis (ICA) has come to the fore. ICA has many admirers and is a wonderful technique for signal analysis but it also has some frustrating characteristics, not least of which is the difficulty in identifying the relevant independent components. Partial Least Squares

(PLS) analysis, by contrast, has been relatively neglected but for people doing experimental work, it has much to offer. Essentially the method takes a dataset, such as a multi-channel ERP recording, and seeks those components of the data that maximally co-vary with the experimental design. In the case of an ERP study, PLS makes it possible to identify not only whether your experiment was having an effect on the ERP but also where and when the critical differences were. All too often, EEG researchers seem overwhelmed by the mass of data they collect and, worried by the problem of multiple comparisons, they group and average their data to an absurd extent. What we should remember is that having lots of data is a good thing: it's not a problem. It only appears to be a problem because we want to use familiar but inappropriate statistics such as ANOVA. If we adopt a more sensible approach, this mass of data, far from being a problem, becomes a bonus. PLS is just such an approach and provides a simple and elegant method for analysing multi-channel time series. I have found PLS to be a very valuable tool. The only drawback is that sometimes the results are difficult to interpret although the recent development of orthogonal-PLS has gone a long way to overcoming this problem.
See: http://www.psych.utoronto.ca/~mcintosh/ and (Lobaugh et al 2001)

3. **The renaissance of non-linear dynamic measures**

I suppose that anyone who has ever thought about the matter for more than a few minutes will have come to the conclusion that there are non-linearities in the EEG. Despite this, most of us carry on regardless using tried and tested linear methods because these are the tools that we have. Those of you who have tried nonlinear methods (the so-called 'Chaos' measures such as the Correlation Dimension and Lyapunov exponents) are likely to have been frustrated both by the time it takes to calculate them, their sensitivity to noise and the relatively barren harvest that results after all your effort. The excitement that was generated when ideas from Chaos theory were first introduced into EEG research has long since declined but I see signs that it is resurrecting. In the physics literature there has been a rapid growth of non-linear methods designed to be used with real-life data sets of the type that we record and I'm optimistic that in the near future a number of these methods will be sufficiently developed to be useful in our work. One particularly interesting concept is that of Generalised Synchronization which, as its name suggests is a generalisation of the concept of synchronization. Generalised Synchronization is said to occur whenever one time series provides information about the state of another: the two time series may be very different and there is no need for there to be a consistent phase relationship between the two. Given the importance of synchronization to the EEG, generalised synchronization could prove to be a very valuable tool and its relevance is just beginning to be recognised (see Top-tip No 4). See: (Stam 2005).

4. **Synchronisation Likelihood**

Coherence analysis has been around in EEG research for more than a quarter of a century but I think most of us would feel challenged to identify a single area of study where coherence has proved to be truly valuable. With the current interest in functional connectivity, coherence is experiencing something of a renaissance but the old problems still remain. Two of these (and these are by no means the only ones) are its insensitivity to non-linear dependency and its poor temporal resolution. These two problems have been overcome by the introduction of the Synchronisation Likelihood (SL) which as well as being able to detect Generalised Synchronization has the enormous advantage of being extremely flexible in the way in which it can be used. The old problems of volume conduction and reference still remain but SL has already proved its usefulness in Alzheimer's disease and elsewhere. See: (Stam and van Dijk 2002)

5. **Bispectral analysis**

In addition to looking at functional connectivity between different EEG channels, we should also consider the relationship between EEG activity in different frequencies within the same channel. The primary method for doing this is bispectral analysis, a non-linear generalisation of the Fourier transform. Over the last 15 years bispectral

analysis has been extensive studied by, of all people, anaesthetists who have found that the bispectrum of the EEG varies with level of consciousness. Despite this, the method has been largely neglected in mainstream EEG research. This is a shame, as the method has recently proved its usefulness by showing that the nesting of theta and gamma oscillations, a phenomenon well known from hippocampal recordings in rodents, can also be found scalp-recorded human EEG. Bispectral analysis opens up a whole new vista on the deep structure of the EEG that was previously obscure to us and deserves our attention. See: (Schack et al 2002)

6. **Bayesian classifiers**

   Oftentimes we are interested in finding an EEG marker that discriminates between groups of patients or psychological conditions. The classical way to do this is to use Discriminant Function Analysis. Aside from being a linear classifier, it's also very sensitive to irrelevance and redundancy in the dataset and the discriminant functions produced are notoriously poor at generalising. As an alternative, it is possible to use nonlinear methods such as Neural Networks or Support Vector Machines but although they often discriminate well, it is not always easy to see how they work. Quite recently a number of Bayesian classifiers have been developed that have the advantages of all the existing methods: they are robust to irrelevance and redundancy in the dataset, they are nonlinear, they can be used with very large data sets and they typically outperform any of the competing methods. Most importantly of all, they show good generalisation. Recently using these methods I was able to discriminate between patients with schizophrenia and healthy controls on the basis of their EEG and show that the same algorithm worked on an independently collected dataset. See: http://www.cs.duke.edu/~amink/ (Krishnapuram et al 2005)

7. **Physiologically Plausible Mathematical Models of the generation of the EEG**

   Work on small-scale neural networks has resulted in a dramatic increase in our understanding of how oscillations are generated in the hippocampus and elsewhere. However there remains an enormous gap between how oscillations are generated at this scale and how they are generated at the scale of the whole head. With a few exceptions (e.g. Walter Freeman), scales intermediate between these two extremes, the so-called mesoscopic scale, have been largely neglected. One way in which this gap can be bridged is by generating mathematical models of the EEG. One elegant, albeit highly simplified model, has been developed by the Brain Dynamic Centre in Sydney. This model, using realistic physiological parameters, generates many features that are seen in the EEG and can be used in an interesting two-way process. First, the model can produce life-like EEG which, through the judicious tweaking of the relevant physiological parameters, can mimic different mental states (e.g. sleeping, awake, epileptic seizure etc). Second, the model can be used in reverse. That is, we can take real human EEG and use the model to infer the state of the physiological parameters that would have been needed to generate it. The model is in its early stages but has already shown some promising results and this approach has the potential to allow us to get a real handle on the physiological processes that generate the EEG and how they change in different psychological states.
   See: http://www.brain-dynamics.net/ (Robinson et al 2004)

8. **Graph Theory Measures (small world networks)**

   One of my personal research interests over recent years has been to look at the pattern of connectivity that is seen in the EEG. I've been interested in this because I believe that the large scale-organisation of oscillatory activity in the brain provides a potentially informative measure of a person's psychological state. For some time I used Tononi et al's Neural Complexity, which is essentially an index of the degree of clustering within the network connections but, this is problematic not least because it is computationally time-consuming. It also provides a single index that arguably obscures as much as it enlightens. It turns out that Neural Complexity is related to the so-called 'Small World' phenomenon. A Small World network is one in which there is a high degree of clustering with sparse connections between the clusters. Human social interactions follow this pattern and this is the basis of the well-known idea that

everyone is connected to everyone else on the planet via as few as six intermediary contacts. It turns out that the neuroanatomy of the brain shows some aspects of a small world network as does the pattern of functional connectivity measured in the EEG. These measures are very easy to compute even with very large data sets and they do tell us something about the qualitative organisation of connectivity in the system are examining. As such I think they may have very useful role in helping us understand the clustering of connectivity in the human brain.
See: http://mypage.iu.edu/%7Eosporns/ (Stam 2004)

9. Long-term temporal correlations

The EEG seems to show hidden structure wherever you look and this is true of long-term temporal correlations. That is, the EEG is history dependent and its current state depends critically upon its state seconds, minutes and maybe even hours beforehand. Such a feature is characteristic of many complex systems, especially those that teeter on the edge of chaos such as self-organised criticality. Measuring this historical self-dependence has not been straightforward, but the method of Detrended Fluctuation Analysis has proved useful in evaluating long-term temporal correlations in non-stationary signals and has recently been applied to the EEG. I'm not sure where this is going to take us yet, but my hunch is it's going to be of interest. See: (Stam and De Bruin 2004).

10. Source Localisation

If we want to understand the deep structure of the EEG, then one natural approach to take is to think in terms of source localisation. However, I'm moderately pessimistic about this approach and although with the increased use of MEG and improved algorithms, I'm sure some progress will be made, I'm not excited about it. Its not just that the field is divided into camps of advocates of specific methods who seem to spurn their competitors with a contempt more appropriate to rival football supporters, nor is it that Maxwell's equations forever rule it out (although, of course they do, but with sufficient restraints, the problem is soluble). No, the main source of my pessimism is that I'm not sure how far it gets us. Localisation does not, of itself, answer the question that I'm really interested in (I want to know 'how?' not 'where?') and at the back of my mind I wonder how much this research is motivated by fMRI envy. The EEG and MEG are powerful tools in their own right and turning them into a poor mockery of functional imaging seems to me to be missing the point.

Conclusion

I hope that at least some of you have found my top-tips of interest. Much of what I've said is contentious and some of it, no doubt, is just plain wrong. However, if you take nothing else from my musings I hope you will take away this one point; there exists a vast toolbox of alternatives to ERPs out there and I urge you to have a go with at least some of them. After all, oranges are not the only fruit.

Krishnapuram B, Carin L, Figueiredo MA, Hartemink AJ (2005): Sparse multinomial logistic regression: fast algorithms and generalization bounds. *IEEE Trans Pattern Anal Mach Intell* 27:957-968.

Lobaugh NJ, West R, McIntosh AR (2001): Spatiotemporal analysis of experimental differences in event-related potential data with partial least squares. *Psychophysiology* 38:517-530.

Robinson PA, Rennie CJ, Rowe DL, O'Connor SC (2004): Estimation of multiscale neurophysiologic parameters by electroencephalographic means. *Hum Brain Mapp* 23:53-72.

Schack B, Vath N, Petsche H, Geissler HG, Moller E (2002): Phase-coupling of theta-gamma EEG rhythms during short-term memory processing. *Int J Psychophysiol* 44:143-163.

Stam CJ (2004): Functional connectivity patterns of human magnetoencephalographic recordings: a 'small-world' network? *Neurosci Lett* 355:25-28.

Stam CJ (2005): Nonlinear dynamical analysis of EEG and MEG: review of an emerging field. *Clin Neurophysiol* 116:2266-2301.

Stam CJ, De Bruin EA (2004): Scale-free dynamics of global functional connectivity in the human brain. *Hum Brain Mapp* 22:97-109.

Stam CJ, van Dijk BW (2002): Synchronization likelihood: an unbiased measure of generalized synchronization in multivariate data sets. *Physica D: Nonlinear Phenomena* 163:236-251.

METHODS IN MIND - SEPTEMBER 12th -16th, 2005,

Aston University (Gina Rippon).

It seemed like a good idea at the time. In May 2004 I learned that the international brain imaging conference, the fMRI experience, was coming to Aston in September 2005. Why not combine forces with the British Psychophysiology Society (as it then was) and have a joint conference? 15 months later the list of reasons why **not** far outweighed those in favour but the bandwagon was rolling and, willy nilly, 300+ delegates descended on Aston for a 5 day 'extravaganza'.

En route, the British Psychophysiology Society decided to re-launch itself as the British Association for Cognitive Neuroscience, after much soul searching and heated email exchanges on the etymology of the term 'Psychophysiology', discussions of the Cartesian distinctions between cognition and emotion – in fact, more activity than had been engendered for some time in the Society's history. So the conference could incorporate a re-launch party as well!!

I had obviously led a sheltered life in my previous experiences of conference organisation and was somewhat taken aback by the 'media hungry' attitude of my co-organiser Carl Senior. Suddenly the conference group were front page news in 'Aston Aspects' and we were being interviewed by the local press and television. (I feel that the subtleties of fMRI vs. TMS, EEG vs. MEG, probably ranked second to the Ed Doolan show with the good folks of Birmingham but we gave it our best shot).

Once September arrived a strange kind of 'bird flu' effect infected our high-ranking performers and our email boxes filled up with apologies for non-attendance due to back problems/bowel problems/rapid onset Alzheimer's (Oh, was it **this** September I promised to give a keynote address at your conference) which, combined with the decision to close all on-site accommodation from July to December made the final countdown rather more tense than had been anticipated.

But we got through. And all our delegates, workshop convenors, equipment exhibitors did us proud (I'll draw a veil over the catering!). There were some stunning symposia and real value for money workshops, although paramedics had to be called to several of the delegates who hadn't realised the 3-day AFNI workshop meant 3 x24 days!

A review from Aston's University Newsletter (see page 11) included some very flattering comments by eminent neuroscientists (possibly hoping that this would suffice to keep the less flattering pictures of their karaoke performance out of the public gaze. But see below!!)

The BACN launch party went off without that many hitches and the local reporters from the Birmingham Post were remarkably restrained in the numbers of puns they extracted from our new acronym. In addition, we were voted one of the most significant scientific events in the Midlands areas in 2005 (and I won't dignify any sarcastic comments about the opposition with a response!)

And only a media savvy person like Carl could have known that combining a karaoke night with a Chinese banquet could have produced such a memorable event as the conference dinner (well, memorable to some although possibly a blur to others!!)

In true Aston tradition, a certain amount of time passed in our local 'think tank' (Indeed as the opening of the conference coincided with the day we won the Ashes (England, that is, not the conference) delegates passed into local history by managing to drink the Sacks dry.

It was certainly the best attended conference I have organised in the name of the BPPS/BACN. I enjoyed it hugely but, PLEASE, if any of you hear me offering to organise another one for at least a decade just whisper 'Methods in Mind' in my ear and get them to up my medication!!

Methods in Mind conference

THE School of Life & Health Sciences hosted the international Methods in Mind Conference in September. It was a five day meeting aimed at beginners to the cognitive neurosciences and, thanks to the generosity of several main sponsors, no registration fee was charged.

This event was a fusion of two smaller conferences, the seventh fMRI Experience conference (www.fmriexp.com/7) and the annual meeting of the British Psychophysiological Society. The event was convened by Drs Gina Rippon and Carl Senior and organised by Aston postdoctoral students, with lectures and posters presented by Aston neuroscience academics.

Alongside the five days of expert speaker sessions, four parallel workshops on the analysis of fMRI data using ANI (sponsored by The National Institutes of Health, USA), MEG (sponsored by VSM MEdtech), EEG (sponsored by Electrical Geodesic Inc) and simultaneous EEG and fMRI recordings (sponsored by Compumedics) were delivered.

350 international delegates came to Aston to attend the conference, from countries including Australia, Slovenia, Italy, Norway, Denmark, Israel, Chile and Switzerland, as well as from all the major universities in the UK.

Support was provided to fund four studentships for Krucsina Szilvia (Hungary), Hue Ling Yen (Taiwan), Inna Khaidarova (Georgia) and Jasmin Cloutier (USA) to attend the meeting.

The first ever UK based workshop and training event for MEG (Magnetoencephalography) took place at the conference. It consisted of a series of lectures provided by some of the world's leading scientists in this field. There were also practical sessions presented by research postdocs and PhDs at Aston's MEG labs.

Dr Peyman Adjamian, who was the main organiser of the MEG workshop said: 'We have received very positive feedback from both the delegates and the speakers about the organisation and the scientific content of the MEG workshop, which is an ever more popular technique in brain imaging. Aston is one of the oldest MEG centres in the world and we have some of the most experienced experts in the field. As MEG is becoming more and more popular in the UK as a brain imaging technique, we are more than happy to take a leading role and pass on some of our expertise.'

The conference as a whole was extremely well received by delegates. Dr Vaughan Bell from Cardiff University said: 'It was great to be invited to such a prestigious event and I was really impressed with the quality of the talks.'

Dr Hanife Hakli, a Research Scientist at the Centre for Brain and Cognitive Development at Birbeck College thought the conference was 'an excellent academically and socially well organised meeting'. Professor Karl Friston from the Institute of Neurology at UCL said: 'I enjoyed it immensely and I look forward to seeing the fMRI Experience grow and grow.'

Dr Carl Senior from Aston commented: 'Functional magnetic resonance imaging (fMRI) is one of the most exciting areas of contemporary psychophysiology, with far-reaching and decisive possibilities. Coupled together with other techniques such as MEG we can really start to explore human cognition at a previously unreachable level. Aston is one of a few centres on the planet where such approaches can be carried out at the moment – this makes Aston an ideal venue for the conference.'

Author Rita Carter has remarked that, even if one includes genetics, this area of research has unprecedented potential to affect personal lives,

change lifestyles and impact on social patterns.

Allowing repeated measurement of brain activity related to cognitive and pharmacological challenges, neuroimaging has allowed unimagined insights into how the brain functions and what goes awry in mental disorders. However, working in this area has built-in challenges. The neuroscientist needs a basic grasp of physics, psychology, statistics, computing, neurophysiology, neuropsychology and neuroanatomy in order to fully utilise the huge amount of complex data collected. Short of acquiring degrees in all the relevant areas, there are limited opportunities for the novice researcher to gain an understanding of these diverse areas. The fMRI Experience specifically benefits newly qualified specialists and scientists by giving them a platform to approach and consult with academic peers on this huge range of disciplines.

'The fMRI Experience started in spring 1999 as a small meeting of neuroimaging experts and students at the Institute of Psychiatry, Kings College, London. It grew after this and the next meetings will be held in Australia and Cardiff.'

The week also saw the relaunch of the British Psychophysiological Society at the Lakeside Conference Centre, which was attended by conference delegates.

Words by Sally Hobus
Photos By Edward Morris and Huw Meredith

British Association of Cognitive Neuroscience

Coventry University, 4-6 September, 2006

REGISTRATION & ACCOMMODATION BOOKING FORM

Please complete this form by hand (in block capitals) (to be returned by 1st June 2006)

Surname……....First name(s)…….……Title…..

Institution address…….

Town ……Postcode ……..Country……

Tel. ……Fax. ……e-mail……

REGISTRATION FEE (includes lunch & refreshments each day, and cheese & wine during posters)

Whole conference (3 days) (please tick box):

☐ BCN member £130
☐ Non-member £150
☐ Student member £100
☐ Student non-member £125

Half Day		Single day		Single day	
Mon. 4th		**Tues. 5th**		**Wed. 6th**	
☐ BCN member	£40	☐ BCN member	£65	☐ BCN member	£65
☐ Non-member	£45	☐ Non-member	£75	☐ Non-member	£75
☐ Student member	£30	☐ Student member	£50	☐ Student member	£50
☐ Student non-member	£35	☐ Student non-member	£60	☐ Student non-member	£60

Registration total:

CONFERENCE DINNER

Special dietary requirements (e.g. vegetarian): …….
Dinner for conference participant (£25) £……..
Dinner for accompanying person (£25) £……..

LATE PAYMENT surcharge (after 1st June) **£25**

TOTAL COST: £ _____

I would like a receipt for my registration payments Yes / No

Please return this form with a **CHEQUE FOR THE TOTAL AMOUNT,** made payable to "BCN 2006", to:
Dr John Williams
Department of Psychology
Coventry University
Coventry
CV1 5FB

CALL FOR ABSTRACTS

Annual Scientific Meeting of the British Association for Cognitive Neuroscience

(formerly **The British Psychophysiology Society**)

4th – 6th September 2006
Coventry University

Abstract deadline: 28th July 2006.

Abstracts (max. 200 words in Word format)
should be sent by e-mail to:

Dr John Williams: john.williams@coventry.ac.uk

Department of Psychology
Coventry University,
Priory Street,
Coventry
CV1 5FB.
Phone: 0247 6887642

Please indicate if you wish to give a poster or oral (platform) presentation.

In due course you will receive confirmation that your abstract has been received and whether it has been accepted for presentation at the meeting.

After finalising the programme details, the time and date of your presentation will be forwarded to you.

BACN MEMBERSHIP

Please encourage your students and colleagues to join this society and to participate in its friendly, scientific and (dare I say) fun activities; most notably of course, the annual conference – which this year is in Coventry.

The journal is no longer a compulsory adjunct to membership and the association membership fees are as follows:

Membership category	Including journal subscription	Excluding journal subscription
Ordinary	£41	**£10**
Retired	£36	**£5**
Student	£36	**£5**
Affiliate	N/A	**£10**
Subscriber	N/A	**£10**

Membership enquiries should be forwarded to

Yvonne Boyle
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University of Manchester Rheumatic Disease Centre
Hope Hospital
Eccles Old Road
Salford
M6 8HD
United Kingdom

Tel: 0161 206 4528
E-mail: Yvonne.Boyle@manchester.ac.uk