

BPPS NEWS

The Newsletter of the British Psychophysiological Society

Issue 1: Spring 2003

CONTENTS

A word from the President	.....	2
The 2003 conference	.....	2
Conference details	.....	3
Conference reports 2002	.....	5
Bursary information	.....	6
Membership information	.....	7
Members' notice board	.....	8
Biofeedback conference	.....	9



This year's conference is scheduled to take place in **Portsmouth** from July 10-12th:

- Deadline for submission of abstracts is May 16th
- Reduced registration rate deadline is May 25th
- Full details – pages 2 – 4

Check out the conference web site at:
<http://www.port.ac.uk/departments/psychology/bpps/>

THE NAME ISSUE



Many of our members may be aware that the society is presently considering a change of name. On page 2, the president of the BPPS Dr Adrian Burgess informs us of the arguments for and against change and calls for membership input on the debate.

WHAT IS YOUR VIEW?

The committee welcomes your views and initiatives on the name changing debate and on any other topic of interest to the members.

To contact the president, email to a.burgess@imperial.ac.uk

To contact the newsletter, email to n.cooper@imperial.ac.uk
(Nick Cooper, newsletter editor).

Or write to
The BPPS Committee c/o
Dept of Cognitive Neuroscience & Behaviour, Imperial College
Charing Cross Hospital
St Dunstan's Road
London W6 8RP

ARE YOU A MEMBER YET?

Did you wake up one morning and found you were a psychophysiologicalist? Are you not sure what one is? Are you worried it sounds old fashioned and passé? Fear not, read the membership section on page 7 & find out why - **The BPPS is the place for you!**

A WORD FROM THE PRESIDENT....

In my Introduction to last year's Conference Programme, I raised the issue of the name of the Society and suggested that the time had come for us to rethink how we present ourselves to the outside world. The idea of re-branding the Society is one that has cropped up intermittently over the last few years among activists (yes, there are some) and I felt the time had come to open up this issue to the wider membership.



So, in October, I sent an e-mail to all members outlining the arguments for and against re-branding. I had modest expectations about the response. After all the name of the BPPS is hardly the most fascinating or pressing topic even to me, but I was surprised by the quantity of the correspondence that poured forth. Fear not! No web servers were overloaded, no switchboards were jammed, no postal workers suffered hernias carrying the mailbags. No, I'm afraid to say that the sum correspondence I have had on the topic amounted to a single e-mail. In the face of such overwhelming apathy, a wise man might give up, but not me! In the coming conference, I want to hear your views. Should we change name? What to? Or is this just pointless window-dressing?

I know that many of you are concerned that the term 'Psychophysiology' has poor recognition in the wider scientific community but the problem that always comes up is what to replace it with. In the same way that Australia is saddled with a monarchy that few like, simply because they can't agree on what to replace it with, perhaps we will remain the 'British Psychophysiology Society' forever – we could perhaps do a lot worse.

Adrian Burgess (Imperial College London)

THE 2003 CONFERENCE

There is a change to the timing of this year's conference. It has been scheduled for earlier in the year – July in fact and is also due to take place at the end of the week as opposed to the traditional 'start the week' format. This of course affords the opportunity for conference delegates to top-off an enjoyable yet hard working few days with a week-end of leisure in glorious sunny Southsea.

This year's main conference themes are:

New developments in MEG

Brain regulation

Multi-modal imaging of language

We are also very pleased to be able to announce the following key-note speakers:

Jiri Vbra

Herta Flor

Cathy Price

Tony Gale

Jaap Panksepp

There will also be two sessions for free platform presentations. These along with the (always well attended) poster session will hopefully provide ample opportunity for us all to learn the exciting new developments in each other's fields. The friendly and supportive atmosphere in these sessions make it an ideal time for post-grads and others to dip their toes into the waters of conference presentation.

CONFERENCE DETAILS

Wednesday 9th July

10.00 – 12.00

Registration

Coffee/Tea available

Time for poster preparation

12.15 – 12.30

Welcome

12.30 – 14.30

Symposium:

“New developments in MEG Research”

Convenor Gina Rippon, Neurosciences Research Institute, University of Aston, Birmingham.

Niels Birbaumer TBA

Friedemann Pulvermüller TBA

S. Swithenby TBA

Arjan Hillebrand “What can we measure with MEG?”

14.30 – 15.00

Coffee/Tea

15.00 – 16.00

Keynote speaker: Jiri Vbra

Chief Technology Officer CTF/VSM

16.00 – 17.00

Annual General Meeting

17.30 – 19.30

Poster session with wine and snacks

20.00

Committee dinner

Costs*	3 day	1 day
Member	£ 95	£ 50
Student	£ 75	£ 40
Non-member	£ 130	£ 65
Student	£ 100	£ 50
Conference Dinner		£ 25

Accommodation

Halls (en suite) £25

IBIS Hotel (double) £43

* Late payment surcharge of £ 25 after May 31st

Thursday 10th July (a.m.)

9.00 – 11.00

Symposium: “Brain regulation”

Convenor: John Gruzelić, Division of Neuroscience and Psychological Medicine, Imperial College London.

Niels Birbaumer

“New directions in brain regulation”

Herta Flor

“Enhancing neural plasticity”

Tobias Egner

“EEG biofeedback of low beta band frequencies: Past and future”

John Gruzelić

“Optimising performance with EEG alpha/theta biofeedback revisited”

11.00 – 11.30

Coffee/Tea

11.30 – 12.30

Keynote speaker: Herta Flor

Dept. Cognition and Behavioural Neuroscience, Central Institute of Mental Health, Mannheim, Germany.

12.30 – 13.30

Buffet lunch

13.30 – 14.30

Keynote speaker: Cathy Price

“The neural systems of spoken and written word processing”

Welcome department of cognitive neurology, Institute of Neurology, University College London

14.30 – 15.00

Coffee/Tea

15.00 – 17.00

Symposium:

“Multimodal imaging of language”

Convenor: Friedemann Pulvermüller, MRC Cognition and Brain Sciences unit, University of Cambridge

Continued overleaf

Thursday (PM – continued)

Matt Davis
“Hierarchical processing in spoken language comprehension: fMRI studies”

Fiona McNab et. al.
“MEG measures of semantic and phonological word processing”

Martin Meyer
“Converging fMRI, ERP and ERF reveal the role of the left temporal lobe in syntactic processing”

Friedemann Pulvermuller et. al.
“Brain connections of language and actions”

19.30
Conference dinner
(may be preceded by harbour boat tour)

Friday 11th July (AM)

9.30 – 10.30
Free platform presentations
Friday (continued)

10.30 – 11.00

Coffee/Tea

11.00 – 12.00

Keynote speaker: Tony Gale
Dept. Psychology, University of Portsmouth
“Psychophysiological approaches to Personality”

12.00 – 13.00

Buffet Lunch

13.00 – 14.30

Free platform presentations

14.30 – 15.00

Coffee/Tea

Friday (PM – continued)

15.00 – 16.00

Keynote speaker: Jaak Panksepp
Bowling Green State University, Ohio, USA
“Brain-mind dynamics and emotional feelings”

16.00 – 16.30

Concluding discussion



REPORTS OF 2002

The following reports were given to the BPPS committee from the recipients of last year's bursary awards to attend the Glasgow conference (see page 6 for details on applying for a BPPS bursary).

It was a pleasure to attend the 30th Annual British Psychophysiology Society Meeting in Glasgow this September. In the past I have been lucky enough to attend the Society for Psychophysiological Research and American Psychosomatic Society conference meetings, and have to admit that I had assumed from the relatively small number of delegates that had travelled from the UK, that there was little interest in psychophysiology in Britain. It was with great interest that I learnt about the BPPS, and decided to attend the annual meeting.

As a PhD student I found the British Psychophysiology Society meeting to be a very valuable resource for developing new research ideas and interests. The subject content of the meeting was highly informative but the meeting itself was small enough to promote an informal and friendly atmosphere. Although the main thrust of the meeting was based on brain imaging research, I found the subject content of the poster session to be much more diverse and consequentially very appealing. I presented two posters, and found the experience very rewarding. I only regret that I did not get more time to read the other posters myself. Personally, the highlight of the conference was the multimodal imaging symposium held on the last day, which gave me the opportunity to learn more about the uses of different neuroimaging techniques which I may use in the future. I would like to take this opportunity to thank the BPPS for awarding me a bursary to help with my conference expenses, and wish the BPPS continued success for the future.

Louisa Edwards, University of Birmingham, UK

As a PhD student I was fortunate to attend for the first time the 30th BPPS Conference in Glasgow from 23rd to 25th September 2002, also thanks to a granted travel bursary. The programme promised to be very interesting, and indeed my expectations were quite confirmed. Looking over the notes I made during the conference, it is obvious that numerous presentations captured my interest. Obviously, for reasons of length, I cannot consider them all here. Instead, I will focus on the most interesting ones, of course, from my personal point of view and background.

First I would like to mention the keynote speakers. Within 'The Psychophysiology of Workload' symposium, John A. Stern of Washington University talked about the gaze control system — especially involuntary eye blinks, but also saccadic eye movements — as a reflection of cognitive processing. He argued, for instance, that such eye movements seem to be able to predict (off road) motor vehicle accidents and missing signals. As an introduction to the 'Gamma Oscillations and Conscious Processing' symposium, Cathérine Tallon-Baudry from INSERM Lyon, France gave a keynote presentation about 'Oscillatory synchrony and human visual cognition'. She pointed out that synchronized oscillatory activity in the gamma range (known in bottom-up feature binding in monkey research) is also induced in humans in response to coherent static or moving visual objects. Moreover, during short-term memory delay/maintenance, specific and topographically localized synchronous gamma and/or beta oscillations are observed. She maintained that these synchronized oscillations seem to play a role in the coordination of distributed neural activity, in keeping with Hebb's concept of reverberating activity within the activated short-term memory network.

It is not surprising that 'Multimodal Imaging' was also a topic of a successful symposium. Nikos Logothetis of the Max Planck Institute

for Biological Cybernetics, Tübingen gave a keynote talk on 'fMRI of the monkey brain: Imaging, physiology, and connectivity studies'. His interesting talk was about the neural basis of the Blood Oxygenation Level Dependent (BOLD) signal. He recorded local field potentials (LFPs), and single (SUA) and multi unit activity (MUA) in the visual cortex of anesthetized monkeys, simultaneously with fMRI. These electrophysiological measures were all found to correlate with the BOLD responses. Yet in transient responses only LFPs were positively correlated with the BOLD response. He explained that the negative BOLD effect is perfectly 'anti-correlated' with adjacent/different inactive visual areas, i.e. negative neural activity (inhibition). This negative (neural) BOLD effect occurs before the positive (hemodynamic) BOLD signal. In general, BOLD could be better modeled using LFPs (having the highest signal-to-noise ratio) as input to the neural-hemodynamic system.

Further, I was very pleased with the numerous presentations (both paper and poster) about event-related (de)synchronization (ERD/ERS) in the theta, alpha, beta and gamma bands during visual and auditory perception, attention, memory processing, auditory-motor integration, word processing, and emotion. For instance, interesting work from the Imperial College School of Medicine, London revealed greater induced alpha power during internally versus externally directed attention. As this 'paradoxical' alpha power synchronization could not be attributed to sensory or phase-locked/evoked activity, the authors suggested that this induced alpha power increase might be due to increased top-down attentional control.

During the conference I was introduced to Synthetic Aperture Magnetometry (SAM), i.e. a source localization technique utilizing a beam-forming approach to map spatio-temporal ERD/ERS correlates of EEG/MEG cortical activity. Several presentations from researchers of Aston University made use of this fascinating technique.

As I have planned to start EEG biofeedback research in sleep-disordered patients in the (near) future, I was delighted to see that this promising training/therapy modality (a.k.a. neurofeedback) was the topic of several poster presentations from investigators of the Imperial College School of Medicine, London. This technique has been applied successfully in various neurocognitive disorders such as ADHD and epilepsy. However, very little is known about the effects of EEG training on cognitive function in healthy populations. Basically, these researchers showed significant positive effects of this neuronal self-regulation training on music performance (alpha/theta), mental imagery (alpha), and working memory (sensorimotor rhythm/SMR, 12-15 Hz).

Next to the good science, it struck me that the atmosphere during the conference was very friendly and constructive. Moreover, the conference's organization was really impeccable. I had a very good time in Glasgow and will certainly attend another BPPS conference ... even without a Ceilidh party!

Edwin Verstraeten, Vrije Universiteit Brussels

BPPS BURSARIES

Bursaries are available from the BPPS for post-graduate students to attend conferences in the UK or abroad.

They are typically available to help students with the costs associated with presenting at a conference.

The maximum amount available per person is £200.

Applications for bursaries should be sent to Dr Adrian Burgess (a.burgess@imperial.ac.uk).

Information should include name, institution, purpose of funding and

MEMBERSHIP RECRUITMENT CAMPAIGN

At last year's annual meeting in Glasgow, I volunteered to run a campaign aimed at increasing membership of the BPPS. At the time the number of psychophysiologicalists registered as members was around 100, and we failed to reach a quorum so we could not take crucial decisions at the meeting.

My past experience in campaigning for both voluntary and non-voluntary organisations suggests that the best way to encourage new members is for current members to ASK them personally. So, armed with a floppy disc containing email addresses I tooled up my Microsoft Outlook and jiggled around with it for a couple of hours, and finally managed to email every member on the email contact list. Twice. Sorry everyone.

So, what has happened so far? Well I've had a few direct enquiries specifically about recruiting new members (brilliant – thanks), a couple of replies from members wanting to update their email addresses (good) and even some renewals (no comment). I must state though, that Deborah Bentley is membership secretary, so most of the enquiries I've had I've forwarded to her. Perhaps there are loads of members out there who have quietly recruited colleagues without telling me, in which case we'll only know when it comes to counting later. On the bleak side - maybe not. If you have recruited why not let me know – remember there's a chocolate prize for the person who's recruited the most by our next annual meeting in Portsmouth.

If you haven't yet done so – get on out there, ask a colleague or a student or even someone at the next neuroscience meeting you're at. If you don't ask they won't necessarily know we exist. And if you do ask they may well see what a good idea it is to have an organisation within Britain that represents our ever-growing speciality, offers an environment where ideas are encouraged, discussed and advised on positively and knowledgeably, and subscribes us both to other European bodies and the Journal of Psychophysiology. Bargain!

Best wishes and good luck recruiting
Caroline Brown (caroline.brown@bris.ac.uk)

MEMBERSHIP DETAILS

Ordinary (full) membership	£ 35
Affiliate membership	£ 15
Subscribers	£ 15
Student membership	£ 25

Ordinary and student membership includes the subscription to the Journal of Psychophysiology. See attached membership form for full details.

MEMBERS NOTICEBOARD

Anybody Know Anything About the Detection of Deception?

The British Psychological Society is updating its guidelines on the use of polygraphy in the detection of deception (popularly known as lie detection), last reviewed in 1986! I (Gina Rippon) have been invited to join the working party (chaired by Ray Bull) and have been charged with producing a review on current research and practice on the use of psychophysiological techniques in detection of deception. I would be very grateful to hear from anyone who has any experience (direct or indirect) of such work, even if it is only an email to point me to some interesting publications. This can include more recent use of cortical measures (such as P300) as well as the more standard autonomic measures. The application can be within the security services (vetting etc.), in criminal investigations and also in clinical settings (e.g. detection of malingering, assessment of paedophile re-offending risk etc.) I would also like to know of anyone who knows anything about current practitioners in the UK. Please send any information you have to g.rippon@aston.ac.uk or contact me for more details.

CAREER OPPORTUNITIES

Watch for adverts for Ph.D. studentships @Aston University

3 internally funded Ph.D. studentships will be available at the Neurosciences Research Institute (NRI), in the School of Life and Health sciences at Aston University from October 2003 and will shortly be advertised. The NRI currently houses the only full-head Magnetoencephalography (MEG) system in the UK and a 3T fMRI system will be installed in a new building in March 2004. A 128-channel dense array EEG system has recently been acquired, together with a state-of-the-art Transcranial Magnetic Stimulation system. A new clinical research facility is due to be completed by the end of 2003 and there will be close collaboration with the Birmingham Children's Hospital. Students with particular interest in psychophysiological techniques and behavioural neurosciences are encouraged to apply.

Details of these studentships and associated projects will shortly be available in the press and on Aston University's web-site: <http://www.aston.ac.uk/lhs/research/postgrad.html>

CONFERENCES

The Biofeedback Foundation of Europe

The Biofeedback Foundation of Europe is holding its 8th annual meeting in Zurich, Switzerland from February 24-28, 2004. There will be choices of 1-day, 2-day, 3-day and 4-day workshops led by well-known clinicians from Europe and North America. These clinicians will demonstrate the latest biofeedback techniques and technology for many applications. A scientific program on the third day, February 26th, will feature lectures, symposia, paper sessions, and poster presentations. There will be an exhibition area for commercial and non-profit organizations.

For more information, contact:

Danielle Matto

P.O. Box 75416 1070 AK Amsterdam

Tel : +31 (0) 33 48 90 754 · Fax: +31 (0) 33 48 00 520

dm-matto@hetnet.nl

www.bfe.org

