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Oscillations and Cognition  
Seville, 7<sup>th</sup> -11<sup>th</sup> May, 2008

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*2<sup>nd</sup> Meeting of the  
Society for Applied Neurocience  
(SAN)  
in collaboration with  
COST B27 Electric Neuronal  
Oscillations and Cognition*

*Seville, Spain  
May 7<sup>th</sup>-11<sup>th</sup> 2008*

*PROGRAMME- ABSTRACTS*

*Co-Chairs:  
José León-Carrión  
John Gruzelier*

*Local Steering Committee:  
Juan Francisco Martín-Rodríguez  
Jesús Damas-López  
Ainara Madrazo-Atutxa  
Lourdes Santamarina Egurrola  
Juan Manuel Barroso y Martín*

## CONDENSED SCHEDULE

	9-10	10-11	11-12	12-13	13-14	
WEDNESDAY MAY 7	<ul style="list-style-type: none"> <li>• Biofeedback Platform (NeuroBird) for posture &amp; equilibrium disorders</li> <li>• QEEG hands-on recording, data analysis and applications</li> <li>• Quantitative EEG and event related potentials as biological markers of brain function and dysfunction</li> <li>• Neurofeedback hands-on introduction</li> </ul> WORKSHOPS BEGIN AT 10.00 <b>SOROLLA 1, 2, 3 &amp; 4</b>					LUNCH 14.00 – 16.00
THURSDAY MAY 8	OPENING LECTURE 9.00-9.45 <b>ZULOAGA</b>	COFFE BREAK & POSTER SESSION 9.45-10.30	OPENING WELCOME 10.30 – 11.00 <b>ZULOAGA</b>	SYMPOSIA: <ul style="list-style-type: none"> <li>• Neurofeedback for ADHD: State of the Evidence <b>SOROLLA 4</b></li> <li>• Neurorehabilitation</li> </ul> <b>SOROLLA 1</b> WORKSHOP: Hands-on Transcranial Doppler Sonography 11.00-13.00 <b>SOROLLA 2</b>	INVITED SPEAKER Jose Maria Dominguez-Roldan 13.00 – 14.00 <b>ZULOAGA</b>	LUNCH 14.00 – 15.00
FRYDAY MAY 10	INVITED SPEAKER Juri Kropotov 9.00-10.00 <b>ZULOAGA</b>	SYMPOSIA: <ul style="list-style-type: none"> <li>• Neurofeedback &amp; Performing Arts: Controlled Studies</li> </ul> <b>SOROLLA 4</b> <ul style="list-style-type: none"> <li>• Cognitive Impairment</li> </ul> <b>SOROLLA 1</b> <ul style="list-style-type: none"> <li>• New Approaches I</li> </ul> <b>SOROLLA 2</b> 10.00-12.00		COFFE BREAK & POSTER SESSION 12.00-12.30	INVITED SPEAKER Arne Dietrich <b>ZULOAGA</b> 12.30 – 13.30	LUNCH 14.00 – 16.00
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SUNDAY MAY 12	INVITED SPEAKER Thomas Elbert & Maggie Schauer 9.00-10.00	CONSCIOUSNESS ROUNDTABLE  SYMPOSIUM: Controlled Treatment Studies 10.00-12.00	COFFE BREAK 12.00-12.30	CLOSING LECTURE Linas Bieliauskas 12.30-13.30	CONFERENCE CLOSE José León-Carrión John Gruzelier	

## CONDENSED SCHEDULE

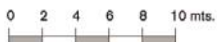
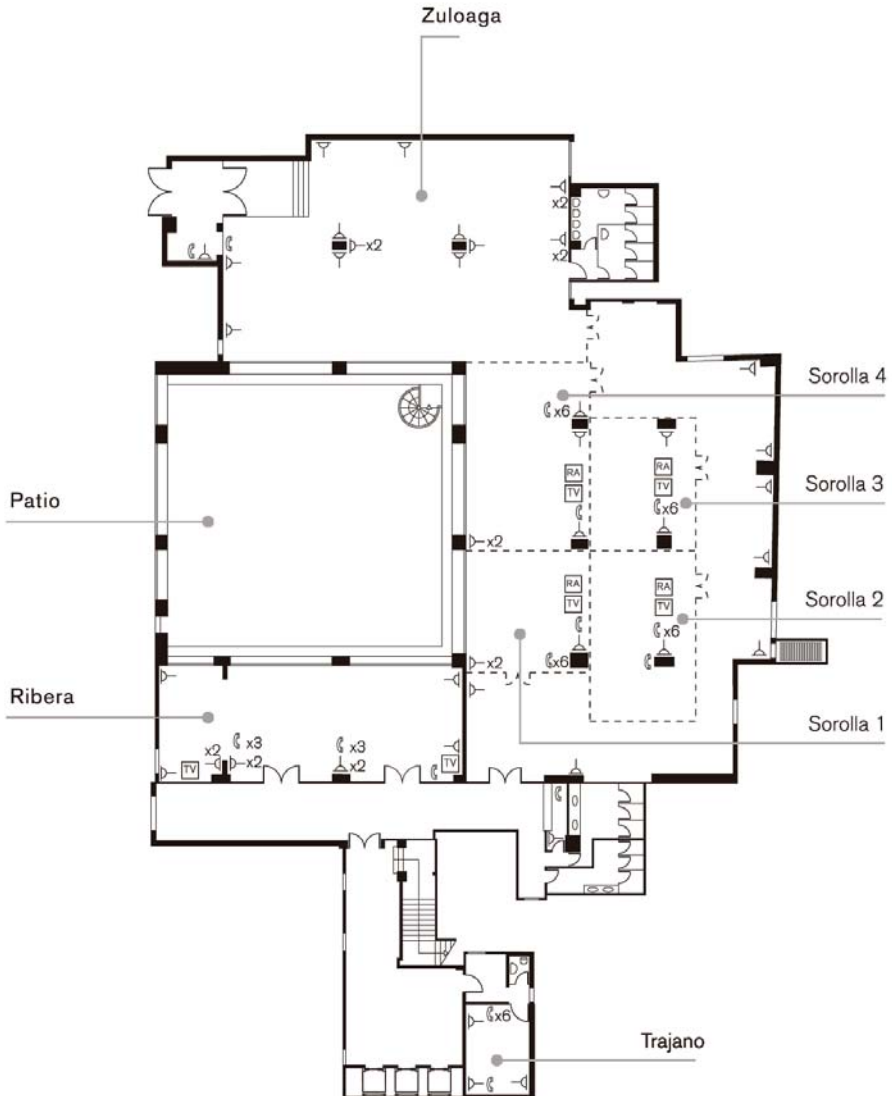
	15-16	16-17	17-18	18-19	19-20		
WEDNESDAY MAY 7	<b>WORKSHOP:</b> Multivariate Whole-Head approaches to EEG assessment training + Tele-Neurofeedback with special application of real-time norm-training 15.00-20.00 <b>SOROLLA 4</b>			<b>WORKSHOPS:</b> <ul style="list-style-type: none"> <li>• SAN Education Track</li> <li>• Psychopharmacology &amp; EEG</li> </ul> 18.00-20.00 <b>SOROLLA 1 &amp; 3</b>			
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# Hesperia Sevilla

★ ★ ★ ★

Planta -1 | Basement Floor

	Toma TV. <b>TV socket.</b>
	Toma Radio. <b>Radio socket.</b>
	Toma de Corriente. <b>Electrical Point.</b>
	Teléfono. <b>Telephone.</b>
	Panel móvil. <b>Moveable partition.</b>



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# REVISTA ESPAÑOLA DE NEUROPSICOLOGÍA

Volumen 10  
Número 1

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## Welcome letter

<sup>1</sup>José León-Carrión, Ph.D., <sup>2</sup>John Gruzellier, Ph.D. Co-chairs SAN'08

<sup>1</sup>*University of Seville*

<sup>2</sup>*Goldsmith University of London*

It is a great pleasure to welcome you to the 2008 Annual Meeting of the Society of Applied Neuroscience that is going to be held together with the EC COST action B27. We feel very fortunate to have the opportunity to hold this Meeting in the beautiful city of Seville in Spain.

According to the legend, Sevilla was founded by Hercules and its origins are linked with the Tartessian civilisation. It lies on the banks of the Guadalquivir River, is the largest town in Southern Spain and the city of Carmen, Don Juan and Figaro. The Hotel Hesperia Sevilla, one of Seville's classics, located close to one of the city's main shopping areas and 5 minutes from the beautiful historic centre of the Andalusian capital will hold this meeting.

The scientific program promises to be an exciting one. Some highlights include plenary addresses by leading scientists such as Dr. Andrew Papanicolau on magnetoencephalography in dyslexia and amnesia, Dr. George Northoff on fMRI and psychiatric conditions, as well as Dr. Roy John on QEEG applications. The meeting will cover a wide amount of applied neuroscience fields. These include neurofeedback, peripheral biofeedback, brain-computer interfaces, neuro-rehabilitation, and neuronal reorganisation through behavioural methods, transcranial magnetic stimulation (TMS), and real-time self-regulation procedures using fMRI and MEG.

There will also be a lively social program which will give us the opportunity to enjoy this wonderful city and its people. In addition to the intellectual stimulation this meeting will provide, one of our main purposes is to give the opportunity for our international colleagues to establish new fruitful collaborations in areas of mutual academic and clinical interests.

## **SOCIETY FOR APPLIED NEUROSCIENCE (SAN)**

John Gruzellier, Ph.D.

*Goldsmith University of London*

This is the second meeting of the Society for Applied Neuroscience (SAN), the first being held at the University of Swansea, Wales in 2006. SAN grew out of the European chapter of the Society for Neuronal Regulation, USA, an EEG-neurofeedback society.

SAN was established to provide an International forum for applied neuroscience, and so from the outset to place EEG-neurofeedback research in a broader context scientifically. It is concerned with interventions for the therapeutic and optimal performance fields. Its philosophy is integrative and educative, allowing applications in neuroscience to develop side by side, rather than confining different approaches to exclusive specialisms. New members of SAN are welcomed.

The International meetings aim to provide a stimulus for scientists and practitioners to undertake controlled studies so as to provide the necessary evidence base to inform best practice and protocols. In this regard SAN acknowledges the collaboration with the EU COST initiative B27 Electric Neuronal Oscillations and Cognition (ENOC) with its working groups on theory/methods, cognition, and practitioner applications. This is a four-year initiative headed by Professor Jordan Pop-Jordanov, and one which collaborated with SAN for the Swansea meeting in 2006.

SAN is concerned with the standards of professional practice and therefore also protection of the public. The occasion also provides an opportunity to offer training courses. In Seville, through the interests of the local organizer and conference programme co-chair Professor Jose Leon Carrion, training opportunities have been extended to include inter alia neuropsychological rehabilitation. SAN also ratifies training courses and provides certification through its scientific Training Committee.

SOCIETY FOR APPLIED NEUROSCIENCE (SAN)

In conclusion, on behalf of the SAN Council we welcome you to the second international meeting in Seville, we thank the presenters for what promises to be a strong and exciting meeting, and please join us in thanking the local organizers for providing the excellent arrangements for another foundational meeting for SAN and our field of applied neuroscience.

John Gruzelier  
Professor of Psychology  
SAN President

## Venue

### Hotel Hesperia Sevilla (4\*)

Avenida Eduardo Dato 49

41018 Sevilla

Tel: (+34) 954 548 300

Fax: (+34) 954 532 342

hotel@hesperia-sevilla.com

<http://www.hesperia-sevilla.es>

How to get to the hotel:

From Seville International Airport “San Pablo” (SVQ):

San Pablo Airport is located 10 kilometers to the north of the city at km. 532 on National highway IV, Madrid-Cádiz. Taxis and buses are available. Taxis route lasts about 15 min. and costs 18.58 euros (unique tariff from Monday to Friday, 6:00 to 22:00) and 20.72 euros on Weekends (same timetable). Buses route lasts 30 minutes aprox. and costs 2 euros (one-way ticket) and 3.5 (round trip ticket). Please get off in Calle Luis de Morales. It is only five minutes walking to the hotel (See images).

From Central Train Station “Santa Justa” (5-10 minutes to the hotel Hesperia Sevilla): Taxis and buses are also available.

The Hotel Hesperia Sevilla is located in the neighbourhood of Nervion. Many shopping centers and recreation areas are located in this zone. The historic center of Seville is at a walking distance and there are many bus stops nearby. Also rent-a-bike spots are available.

## VENUE



### **Santa Justa Train Station**

Avenida de Kansas City: +34-954 540 202 (7 to 23 h)

**Tickets Reservation:** +34-954 540 303

**AVE Speed Train Reservation:** +34-954 537 828

**RENFE.** Calle Zaragoza, 29. Phone. +34-954 222 693

**Airport Information:** +34-954 449 000

**Flights Information (Iberia):** +34-954 510 677

**Customer Service:** +34-902 400 500

### **Iberia**

Almirante Lobo, 2 (Puerta Jerez)

+34-954 228 901

**National Flights Reservation:** +34-901 33 31 11

**International Flights Reservation:** +34-901 33 32 22

**Analysis of qQEEG spectrum-weighted frequency (Brain-rate) for visual and emotional CPT**

Silvana Markovska-Simoska, Biljana Gjoneska, Igor Tomovski,  
Jordan Pop-Jordanov

*Macedonian Academy of Sciences and Arts*

The sample consisted of 40 healthy adults aged 19-50 years. Inclusion criteria required individuals to be free of current or past history of ADHD symptomatology as assessed with the personal interview, self-report and the DSM-IV symptom checklist for ADHD. Each individual completed the Amsterdam Neuropsychological Test (ANT) one day before QEEG recording. The raw EEG in four conditions: eyes closed, eyes opened, visual continuous performance task (VCPT) and emotional continuous performance task (ECPT), was collected using Mitsar electroencephalograph and WinEEG acquisition software. Comparisons of power spectra for eight bands (Delta = 1.5-4 Hz; Theta = 4-7.5 Hz; Alpha = 7.5-12Hz; SMR = 12-15 Hz; Beta 1 = 15-18 Hz; Beta 2 = 18-30 Hz; Gamma 1 = 30-40 Hz; Gamma 2 = 40-50 Hz) in all four conditions were made. Also, brain-rate parameter (spectrum-weighted frequency) was calculated for each 19 channels in all conditions. The results were compared with the published data from three databases (NeuroRep, SKIL and EureKa3!). Brain-rate can be considered as an integral brain state indicator, correlated to its electric, mental and metabolic activity. It can serve as a useful parameter directly comparable with the fMRI data.