



# Society for Psychophysiological Research

## 2005 Annual Meeting Program

September 21-24, 2005 ♦ Lisbon, Portugal

### Wednesday, September 21, 2005

9:00 a.m.-5:30 p.m. . . . . Auditorium II

#### **Pre-Conference Workshop I**

(available for an additional fee)

#### **The EEGLAB Open Source Matlab Data Analysis**

#### **Environment**

*Scott Makeig, Stefan Debener, Arnaud Delorme, Julie Onton*

12:00 noon-5:30 p.m. . . . . Sala 1

#### **SPR Board of Directors Meeting**

4:00 p.m.-8:00 p.m. . . . . Piso 0 Foyer

#### **Registration**

5:30 p.m.-8:00 p.m. . . . . Piso 0 Foyer

#### **Opening Reception**

### Thursday, September 22, 2005

7:30 a.m.-4:00 p.m. . . . . Piso 0 Foyer

#### **Registration**

8:00 a.m.-3:00 p.m. . . . . Piso 0 Foyer

#### **Exhibits Open**

8:30 a.m.-8:35 a.m. . . . . Auditorium I

#### **Introductory Remarks**

*Niels Birbaumer, PhD, SPR President*

8:35 a.m.-9:30 a.m. . . . . Auditorium I

#### **Invited Address**

#### **Sleep and Dreams in Partial Sensory Deprivation: Learning from Congenital Deaf and Blind**

*Teresa Paiva, MD, PhD, Medical Faculty of Lisbon*

9:30 a.m.-10:00 a.m. . . . . Piso 0 Foyer

#### **Refreshment Break**

10:00 a.m.-11:30 a.m. . . . . Auditorium I

#### **Symposium #1**

#### **NEURAL MECHANISMS OF EMOTION ELICITATION AND REGULATION**

*Chairs: Klaus R. Scherer, University of Geneva; Richard J. Davidson, University of Wisconsin-Madison*

#### **ASYMMETRIES IN THE ELICITATION AND REGULATION OF POSITIVE AND NEGATIVE AFFECT: NEURAL MECHANISMS OF THE NEGATIVITY BIAS**

*Catherine J. Norris, University of Wisconsin-Madison; John T. Cacioppo, University of Chicago*

#### **NEURAL CORRELATES OF VOLUNTARY EMOTION REGULATION: EXAMINING TOP-DOWN EFFECTS OF PFC ON EMOTIONAL RESPONDING**

*Carien M. van Reekum, Heather L. Urry, Tom Johnstone, Marchell E. Thurow, Corrina J. Mueller, Hillary S. Schaefer, Andrew L. Alexander, Richard J. Davidson, University of Wisconsin-Madison*

#### **BRAIN SIGNATURES OF THE TEMPORAL UNFOLDING OF EMOTION-CONSTITUENT APPRAISAL**

*Didier Grandjean, Klaus R. Scherer, University of Geneva*

#### **BRAIN SYSTEMS INVOLVED IN THE APPRAISAL OF EMOTIONAL PROSODY AS A FUNCTION OF SELECTIVE ATTENTION TO THE VOICE**

*David Sander, Didier Grandjean, Gilles Pourtois, Sophie Schwartz, Mohamed L. Seghier, Klaus R. Scherer, Patrik Vuilleumier, University of Geneva*

10:00 a.m.-11:30 a.m. . . . . Auditorium II

#### **Symposium #2**

#### **PSYCHOPHYSIOLOGY OF ODOR PERCEPTION**

*Chair: Bettina M. Pause, University of Kiel*

#### **ENCODING OF OLFACTORY INFORMATION IN THE HUMAN AMYGDALA**

*Julie Hudry, Nestle Research Center*

#### **PERCEPTUAL DIFFERENCES BETWEEN CHEMICAL STIMULI PRESENTED THROUGH THE ORTHO- OR RETRONASAL ROUTE**

*Thomas Hummel, Stefan Heilmann, University of Dresden; Basile N. Landis, Universitaires de Geneve; Jens Reden, Johannes Frasnelli, University of Dresden; Dana M. Small, The John B. Pierce Laboratory; Johannes Gerber, University of Dresden*

#### **THE ROLE OF SNIFFING IN THE FORMATION OF OLFACTORY MENTAL IMAGES**

*Moustafa Bensafi, University Claude Bernard Lyon; Jessica Porter, University of California at Berkeley; Sandra Pouliot, McGill University; Rehan Khan, Noam Sobel, University of California at Berkeley*

#### **IMPLICIT BEHAVIORAL ADAPTATIONS TO CHEMOSENSORY ANXIETY SIGNALS IN HUMANS**

*Bettina M. Pause, Joachim Laudien, Anne Ohrt, Alexander Prehn, Bernfried Sojka, Roman Ferstl, University of Kiel*

10:00 a.m.-11:30 a.m. . . . . Auditorium III

**Symposium #3**

**THE FACILITATED PROCESSING OF AFFECTIVE CUES**

*Chairs: Andreas Muehlberger, University of Wuerzburg; Harald Schupp, University of Konstanz*

**SELECTIVE EMOTION PROCESSING IN THE VISUAL BRAIN: THE NEAR ABSENCE OF HABITUATION**

*Harald T. Schupp, Jessika Stockburger, University of Konstanz; Maurizio Codispoti, University of Bologna; Markus Junghoefer, University of Muenster; Almut I. Weike, Alfons O. Hamm, University of Greifswald*

**MODULATION OF NEUROMAGNETIC ACTIVITY IN CORTICAL SENSORY AND ATTENTION NETWORKS DURING PAVLOVIAN CONDITIONING DEPENDS ON HEART RATE RESPONSE PATTERNS**

*Stephan Moratti, Andreas Keil, University of Konstanz*

**“THE SOUND OF FEAR”: MEG BASED EVIDENCE FOR AFFECTIVE CONDITIONING IN THE AUDITORY PATHWAY**

*Markus Junghoefer, University of Muenster and University of Konstanz; Peter Peyk, University of Konstanz; Olaf Steinstraefer, University of Muenster; Harald T. Schupp, University of Konstanz; Christo Pantev, University of Muenster*

**DO EMOTIONAL HIGH AROUSING PICTURES INCREASE THE ACTIVITY OF THE PRIMARY VISUAL CORTEX AS EARLY AS 250 MS AFTER STIMULUS ONSET? A COMBINED EEG AND NIRS STUDY**

*Martin J. Herrmann, Michael M. Plichta, Ann-Christine Ehlis, Andreas Muehlberger, Andreas J. Fallgatter, University of Wuerzburg*

**AFFECTIVE PICTURE PROCESSING: FAST FUNCTIONAL IMAGING**

*Dean Sabatinelli, Margaret M. Bradley, Peter J. Lang, University of Florida*

**CORTICAL CORRELATES OF PROCESSING (ARTI-)FACIAL EXPRESSIONS AND THE INFLUENCE OF SOCIAL ANXIETY**

*Matthias Wieser, Andreas Muehlberger, Alexander Dietz, Paul Pauli, University of Wuerzburg*

10:00 a.m.-11:30 a.m. . . . . Sala I

**Symposium #4**

**ERP STUDIES ON LANGUAGE AND CONCEPTUAL KNOWLEDGE**

*Chairs: Alberto Zani, Institute of Molecular Bioimaging and Physiology and Javier Sainz, University of Madrid*

**ERP INDEXES OF SENSORY AND CONCEPTUAL PROCESSING OF LIVING AND NOT-LIVING ENTITIES AT DISTINCT OCCIPITAL AND TEMPORAL BRAIN REGIONS**

*Alberto Zani, National Research Council; Marcia Del Zotto, Alice M. Proverbio, University of Milano-Bicocca*

**CONSTRAINED LEXICAL ACCESS IN A LEXICAL PRODUCTION TASK: ERP CORRELATES OF WORD PARSING IN LEXICAL SELECTION**

*Javier S. Sainz, Ruben Garcia-Zurdo, University of Madrid*

**THE EFFECT OF AGE OF ACQUISITION AND PROFICIENCY ON LANGUAGE-RELATED BRAIN ACTIVATION IN INTERPRETERS: AN ERP STUDY**

*Alice M. Proverbio, Roberta Adorni, Marcia Del Zotto, University of Milano-Bicocca; Alberto Zani, National Research Council*

**CONTEXT-RELATED AND STIMULUS-RELATED EFFECTS IN EARLY ERP LATERALIZATION**

*Bruno Rossion, Catholic University of Louvain*

**FAST PROCESSING OF VISUAL OBJECTS: AT THE INTERPLAY BETWEEN HIGH-LEVEL AND LOW-LEVEL FACTORS**

*Guillaume A. Rousselet, McMaster University*

11:30 a.m.-1:00 p.m.

**Lunch Break** (on your own)

1:00 p.m.-2:30 p.m. . . . . Piso 1 Foyer

**Poster Session 1**

Poster presentations will be available for viewing from 8:30 a.m.-1:00 p.m. The authors will be present for discussion from 1:00 p.m.-2:30 p.m.

2:30 p.m.-3:00 p.m. . . . . Piso 0 Foyer

**Refreshment Break**

3:00 p.m.-4:30 p.m. . . . . Auditorium I

**Symposium #5**

**AGE AND EDUCATION: EFFECTS ON COGNITION**

*Chair: Alexandre Castro-Caldas, Universidade Catolica Portuguesa*

**AGE, SEX AND EDUCATION: INFLUENCE ON NEUROPSYCHOLOGICAL ASSESSMENT IN A HEALTHY NORMAL POPULATION**

*Manuela Guerreiro, Institute of Molecular Medicine*

**MILD COGNITIVE IMPAIRMENT, AGE AND EDUCATION**

*Filipa Ribeiro, Universidade Lusofona*

**AGING, CULTURE AND LATERALIZATION**

*Maria Vania Nunes, Institute of Molecular Medicine*

3:00 p.m.-4:30 p.m. . . . . Auditorium II

**Symposium #6**

**NEUROBIOLOGY OF PLEASURE AND AVERSION**

*Chair: Anne Schienle, University of Trier*

**PLEASANT AND AVERSIVE PICTURES BOTH CAPTURE AND HOLD OVERT ATTENTION**

*Georg W. Alpers, Paul Pauli, University of Wuerzburg*

**DIFFERENTIAL ACTIVATION OF THE N. ACCUMBENS BY EROTICA IN HOMOSEXUAL AND HETEROSEXUAL MALES**

*Rudolf Stark, Mark Zimmermann, University of Giessen; Anne Schienle, University of Trier; Vitali Scheibler, Dieter Vaitl, University of Giessen*

**BRAIN ACTIVATION DURING RAPID AND SUSTAINED PROCESSING OF PHOBIA-RELEVANT STIMULI**

*Thomas Straube, Wolfgang H.R. Miltner, University of Jena*

EFFECTS OF COGNITIVE BEHAVIOR THERAPY IN SPIDER PHOBICS MEASURED WITH FMRI  
*Anne Schienle, University of Trier; Axel Schaefer, Rudolf Stark, Dieter Vaitl, University of Giessen*

GENETIC AND ENVIRONMENTAL INFLUENCES ON CHANGE IN VISUAL P300 AMPLITUDE: A LONGITUDINAL TWIN STUDY  
*Scott R. Carlson, University of British Columbia; William G. Iacono, Matt McGue, University of Minnesota*

3:00 p.m.-4:30 p.m. . . . . Auditorium III  
**Symposium #7**

**TOP-DOWN AND BOTTOM-UP EFFECTS ON THE PROCESSING OF SOUNDS**

*Chair: Erich Schroeger, University of Leipzig*

CAN ONE SOUND BELONG TO TWO TEMPORAL PATTERNS AT THE SAME TIME?

*Istvan Winkler, Hungarian Academy of Sciences and University of Helsinki; Titia L. van Zuijen, University of Helsinki; Elyse Sussman, Albert Einstein College of Medicine; Janos Horvath, Hungarian Academy of Sciences; Risto Naatanen, University of Helsinki*

A ROLE FOR AUDITORY CORTEX IN CONTEXT-DEPENDENT ENCODING OF SOUNDS

*Elyse Sussman, Mitchell Steinschneider, Albert Einstein College of Medicine*

FAMILIARITY AFFECTS THE PROCESSING OF TASK-IRRELEVANT AUDITORY DEVIANCE

*Thomas Jacobsen, Erich Schroger, University of Leipzig; Istvan Winkler, Janos Horvath, Hungarian Academy of Sciences*

EMOTIONAL CONTEXT AND WORKING MEMORY LOAD EFFECTS ON AUDITORY DISTRACTION

*Carles Escera, J. Dominguez-Borrás, I. San Miguel, R. Nowak, Maria J. Corral, University of Barcelona*

ATTENTION TO SOUND LOCATION OR PITCH STUDIED WITH FUNCTIONAL MAGNETIC RESONANCE IMAGING

*Kimmo Alho, University of Helsinki; Alexander Degerman, University of Helsinki and Helsinki University of Technology; Teemu Rinne, University of Helsinki, UC Davis and VANCHCS; Juha Salmi, University of Helsinki and Helsinki University of Technology; Oili Salonen, Helsinki University Central Hospital*

3:00 p.m.-4:30 p.m. . . . . Sala I  
**Symposium #8**

**GENETIC PSYCHOPHYSIOLOGY: UNDERSTANDING PATHWAYS FROM GENES TO BEHAVIOR**

*Chair: Andrey Anokhin, Washington University School of Medicine*

QUANTITATIVE BEHAVIOR GENETIC APPROACHES TO THE STUDY OF EXTERNALIZING PSYCHOPATHOLOGY AND RELATED ENDOPHENOTYPES

*Stephen M. Malone, William G. Iacono, Matt McGue, University of Minnesota*

INSTABILITY OF PREFRONTAL SIGNAL PROCESSING AND COMT-GENOTYPE IN SCHIZOPHRENIA

*Georg Winterer, Heinrich-Heine University Duesseldorf*

INTRAPAIR DIFFERENCES IN HIPPOCAMPAL VOLUME IN MONOZYGOTIC TWINS DISCORDANT FOR THE RISK FOR ANXIETY AND DEPRESSION

*Eco J.C. De Geus, S.P.A. Wolfensberger, D. van't Ent, K. Baas, M.D. Janssen, M. van Belzen, W.J.G. Hoogendijk, D.I. Boomsma, D.J. Veltman, Vrije Universiteit and Vrije Universiteit Medical Center*

BRAIN ACTIVITY PATTERNS ARE HERITABLE

*Jan Willem Koten, Vrije Universiteit; Rainer Goebel, University of Maastricht; Peter Propping, University of Bonn; Caroline van Baal, Vrije Universiteit; Guilherme Wood, University Hospital Aachen; Dorret I. Boomsma, Vrije Universiteit; Klaus Willmes, University Hospital Aachen*

4:30 p.m.-4:45 p.m.

**Break**

4:45 p.m.-5:45 p.m. . . . . Auditorium I

**Invited Address**

**Neural Mass Actions Studied with Electrophysiology and Functional Magnetic Resonance Imaging**

*Nikos K. Logothetis, PhD  
Max-Planck-Institute for Biological Cybernetics, Department of Physiology of Cognitive Processes*

6:00 p.m.-8:00 p.m. . . . . Sala I

**Early Careers Conversation Hour**

6:00 p.m.-7:30 p.m. . . . . Auditorium I

**Hot Topics in Psychophysiology: The Neural Basis of Memory and Learning**

*Chair: Jonathan Wolpaw*

6:00 p.m.-7:30 p.m. . . . . Auditorium II

**Symposium #9**

**EXPECTANCY PRIMING AND THE SCHIZOPHRENIA SPECTRUM**

*Chairs: Dean Salisbury, McLean Hospital, Harvard Medical School and Ruth Condray, University of Pittsburgh and VA Pittsburgh Healthcare System*

ELECTROPHYSIOLOGIC MEASURES OF EXPECTANCY-BASED SEMANTIC PRIMING IN HIGH AND LOW SCHIZOTYPY

*Helen Chenery, David Copland, Simon Finnigan, Paul Bretherton, Jill Harris, Stanley Catts, Michael Humphreys, The University of Queensland*

N400 MEASURES OF CONTEXT UTILIZATION AND EXPECTANCY-BASED PRIMING IN SCHIZOPHRENIA

*Dean F. Salisbury, Akanksha S. Thakur, Courtney L. Brown, Harvard Medical School, McLean Hospital*

SEMANTIC MEMORY IN SCHIZOPHRENIA  
*Ruth Condray, Stuart R. Steinhauer, Greg J. Siegle,  
University of Pittsburgh and VA Pittsburgh Healthcare  
System*

PROBLEMS WITH EXPECTANCY IN SCHIZOPHRENIC  
PATIENTS AND EXPECTANCY-RELATED ELECTRO-  
PHYSIOLOGY IN MONKEYS  
*Anne Sereno, Shelly Babin, S. Amador, University of Texas  
Health Science Center*

NEURAL SYSTEMS OF FEAR ACQUISITION AND CON-  
TINGENCY LEARNING: A TWO LEVEL ACCOUNT OF  
CONDITIONING  
*Alfons O. Hamm, Almut I. Weike, University of Greifswald*

ABNORMAL AVERSIVE PAVLOVIAN DELAY  
CONDITIONING AND PSYCHOPATHOLOGY  
*Herta Flor, University of Heidelberg*

THREAT OF SHOCK & THREAT OF REWARD:  
AVERSIVE AND APPETITIVE REINFORCERS  
*Margaret M. Bradley, Tammy Silakowski, Peter J. Lang,  
University of Florida*

EXPERIMENTAL MODEL OF FEAR AND ANXIETY  
USING THREAT OF PREDICTABLE AND UNPRE-  
DICTABLE DANGER  
*Christian Grillon, National Institute of Mental Health;  
Johanna M.P. Baas, Utrecht University; Shmuel Lissek,  
National Institute of Mental Health*

6:00 p.m.-7:30 p.m. . . . . Auditorium III

**Panel Discussion #1**  
**PSYCHOPHYSIOLOGY FOR THE 21st CENTURY: THE**  
**AMBULATORY LABORATORY**  
*Chair: Deane Aikins, Yale University*

A SYMPATHETIC INDICATOR OF CHRONIC PSYCHIC  
TENSION  
*Walton T. Roth, Sigrun Doberenz, Anett Mueller, Alicia E.  
Meuret, VA Palo Alto Health Care System and Stanford  
University*

CONSTRAINTS OF TIME, SPACE AND MOTION IN  
MULTIMODAL AMBULATORY MONITORING  
*Paul Grossman, University of Basel Hospital*

ADVANCES IN THE AMBULATORY PSYCHOPHYSIO-  
LOGICAL MONITORING OF ANXIETY DISORDERS:  
METHODOLOGIES NOT FOR THE FAINT AT HEART  
*Frank H. Wilhelm, University of Basel*

8:00 p.m.-9:30 p.m. . . . . Piso I Foyer  
**Poster Session 2**  
Poster presentations will be available for viewing from 4:30 p.m.-  
8:00 p.m. The authors will be present for discussion from  
8:00 p.m.-9:30 p.m.

**Friday, September 23, 2005**

8:00 a.m.-4:00 p.m. . . . . Piso 0 Foyer  
**Registration**

8:00 a.m.-3:00 p.m. . . . . Piso 0 Foyer  
**Exhibits Open**

8:30 a.m.-9:30 a.m. . . . . Auditorium I  
**Invited Address**  
**Functional Organization of the Infant Brain**  
*Ghislaine Dehaene-Lambertz, MD, PhD  
Chargé de Recherche CNRS, Unité de Neuroimagerie  
Cognitive, Service Hospitalier Frederic Joliot*

9:30 a.m.-10:00 a.m. . . . . Piso 0 Foyer  
**Refreshment Break**

10:00 a.m.-11:30 a.m. . . . . Auditorium I  
**Symposium #10**  
**CUED FEAR AND ANTICIPATORY ANXIETY: MECHA-  
NISMS AND CLINICAL APPLICATIONS**  
*Chairs: Margaret M. Bradley, University of Florida; Alfons  
O. Hamm, University of Greifswald*

10:00 a.m.-11:30 a.m. . . . . Auditorium II

**Symposium #11**  
**ADVANCES IN INFORMATION-BASED EEG SIGNAL  
PROCESSING**  
*Chair: Scott Makeig, University of California San Diego*

INDEPENDENT COMPONENT ANALYSIS OF EEG  
RECORDED SIMULTANEOUSLY WITH FMRI IDENTI-  
FIES MEDIAL FRONTAL CORTEX IN PERFORMANCE  
MONITORING  
*Stefan Debener, University Hospital Hamburg-Eppendorf;  
Markus Ullsperger, Max Planck Institute for Human  
Cognitive and Brain Sciences; Markus Siegel, University  
Hospital Hamburg-Eppendorf; Katja Fiehler, D. Yves von  
Cramon, Max Planck Institute for Human Cognitive and  
Brain Sciences; Andreas K. Engel, University Hospital  
Hamburg-Eppendorf*

BEYOND AVERAGING: EXPLORING N400 BY  
INDEPENDENT COMPONENT ANALYSIS  
*Peter Ullsperger, Federal Institute for Occupational Safety  
and Health; Hilit Serby, Scott Makeig, University of  
California San Diego*

FRONTAL MIDLINE EEG DYNAMICS DURING  
WORKING MEMORY  
*Julie Onton, Arnaud Delorme, Scott Makeig, University of  
California San Diego*

FRONTAL THETA RHYTHMS IN NORMAL SUBJECTS  
AND SUBJECTS WITH PARKINSON'S DISEASE  
*Martin J. McKeown, Wing Lok Au, University of British  
Columbia*

10:00 a.m.-11:30 a.m. . . . . Auditorium III  
**Symposium #12**  
**APPLICATIONS OF ELECTROGASTROGRAPHY TO  
PSYCHOPHYSIOLOGICAL RESEARCH**  
*Chair: Robert Stern, Pennsylvania State University*

ELECTROGASTROGRAPHY IN THE DETECTION OF  
NEUROMUSCULAR DYSFUNCTION OF THE STOMACH:  
APPLICATIONS IN MEDICINE  
*Kenneth, L. Koch, Wake Forest University School of  
Medicine*

NUTRITIONAL INTERVENTIONS FOR GASTRIC TACHYARRHYTHMIA AND NAUSEA ASSOCIATED WITH MOTION SICKNESS AND CANCER CHEMOTHERAPY  
*Max E. Levine, Wake Forest University School of Medicine*

PLACEBO EFFECTS ON GASTRIC SLOW WAVE FREQUENCY  
*Karin Meissner, Helmut Gluender, Ulla Mitzdorf, University of Munich*

ELECTROGASTROGRAPHY AS PART OF A PARADIGM EXAMINING THE EFFECTS OF STRESS ON THE GASTROINTESTINAL SYSTEM  
*Eric R. Muth, Clemson University*

10:00 a.m.-11:30 a.m. . . . . Sala I  
**Symposium #13**

**ELECTROPHYSIOLOGICAL STUDIES OF EPISODIC MEMORY RETRIEVAL PROCESSING**  
*Chair: Edward L. Wilding, Cardiff University*

THE INFLUENCE OF STATE-RELATED NEURAL ACTIVITY ON EPISODIC RETRIEVAL  
*Leun J. Otten, University College London*

MULTIPLE ASPECTS OF COGNITIVE CONTROL: COMBINING TASK SWITCHING AND EPISODIC MEMORY RETRIEVAL  
*Axel Mecklinger, Saarland University; Markus Werkle-Bergner, Max Planck Institute for Human Development; Jutta Kray, Saarland University*

THE EFFECT OF UNITISATION ON FAMILIARITY-BASED RETRIEVAL  
*David I. Donaldson, University of Stirling*

INDUCED THETA OSCILLATIONS MEDIATE LARGE SCALE SYNCHRONY WITH MEDIOTEMPORAL AREAS DURING RECOLLECTION  
*Emrah Duezel, Sebastien Guderian, Otto von Guericke University*

11:30 a.m.-1:00 p.m. . . . . Sala I  
**SPR Conversation Hour**

(pre-registration prior to the meeting was required in order to participate)

Table Discussion Topics:

Setting up a Psychophysiology Laboratory  
*Leader: John J. Curtin, University of Wisconsin-Madison*

Grant Writing for Young Investigators  
*Leader: Bruce Cuthbert, National Institute of Mental Health*

Publishing in *Psychophysiology*  
*Leader: Margaret Bradley, University of Florida*

A Multidimensional Approach to Neuroimaging (combining fMRI, EEG, & EROS)  
*Leaders: Monica Fabiani and Gabrielle Gratton, University of Illinois*

11:30 a.m.-1:00 p.m.  
**Lunch Break** (on your own)

1:00 p.m.-2:30 p.m. . . . . Piso 1 Foyer  
**Poster Session 3**

Poster presentations will be available for viewing from 8:30 a.m.-1:00 p.m. The authors will be present for discussion from 1:00 p.m.-2:30 p.m.

2:30 p.m.-3:00 p.m. . . . . Piso 0 Foyer  
**Refreshment Break**

3:00 p.m.-4:30 p.m. . . . . Auditorium I  
**Symposium #14**

**FORMS OF PLASTICITY IN THE MAMMALIAN NERVOUS SYSTEM**  
*Chair: Larry E. Roberts, McMaster University*

FUNCTIONAL ORGANIZATION OF THE SOMATOSENSORY CORTEX: LONG-TERM AND SHORT-TERM ADAPTATION  
*Christoph Braun, University of Tuebingen*

NEURODYNAMICS IN AUDITORY CORTEX DURING CATEGORY LEARNING  
*Frank W. Ohl, Henning Scheich, Leibniz Institute for Neurobiology; Walter J. Freeman, University of California at Berkeley*

THE NEUROPLASTIC P2 AND OTHER EVOKED RESPONSES OF THE HUMAN AUDITORY SYSTEM  
*Daniel J. Bosnyak, Phillip E. Gander, McMaster University; Antoine Shahin, McMaster University and the Rotman Research Institute; Larry E. Roberts, McMaster University*

FUNCTIONAL AND STRUCTURAL BRAIN ATTRIBUTES IN RELATION TO PITCH PERCEPTION AND MUSICAL ABILITY  
*Peter Schneider, University Hospital Heidelberg*

THE INSIDE STORY OF ADDICTION: CONTROL OF DRUG EFFECTS BY INTEROCEPTIVE CUES  
*Shepard Siegel, McMaster University*

3:00 p.m.-4:30 p.m. . . . . Auditorium II  
**Symposium #15**

**AFFECTIVE AND MOTIVATIONAL PERSPECTIVES ON ERROR-RELATED BRAIN ACTIVITY**  
*Chair: Greg Hajcak, University of Delaware*

ANTERIOR CINGULATE CORTEX AND NEGATIVE AFFECT IN EVALUATION OF EXPECTANCY VIOLATIONS  
*Phan Luu, University of Oregon and Electrical Geodesics, Inc.*

ERROR VALUE, AFFECTIVE DISTRESS, AND THE ERN/PE COMPLEX  
*Greg Hajcak, Jason S. Moser, Robert F. Simons, University of Delaware*

ERROR-RELATED POTENTIALS: RELATIONS WITH REWARD AND PUNISHMENT SENSITIVITY, AND CORTISOL REACTIVITY  
*Mattie Tops, Maarten A.S. Boksem, Anne E. Wester, University of Groningen*

ERROR CORRECTION AND ERROR SIGNALING - DIFFERENTIAL MOTIVATIONAL EFFECTS REFLECTED IN THE ERN

Markus Ullsperger, Max Planck Institute for Human Cognitive and Brain Sciences

THE ERN AND THE EMOTIONAL MODULATION TO EVENTS

Sidney J. Segalowitz, Diane Santesso, Jane Dywan, Brock University

3:00 p.m.-4:30 p.m. .... Auditorium III

**Symposium #16**

**PSYCHOPHYSIOLOGICAL SIGNATURES OF APPRAISAL**

Chairs: Klaus R. Scherer, University of Geneva; Craig A. Smith, Vanderbilt University

FIRST EVIDENCE FOR DIFFERENTIAL AND SEQUENTIAL EFFERENT EFFECTS OF GOAL RELEVANCE AND GOAL CONDUCTIVENESS APPRAISAL

Tatjana Aue, University of Geneva; Anders Flykt, Mid Sweden University; Klaus R. Scherer, University of Geneva

ON USING RT AND FACIAL EMG TO EXAMINE THE TEMPORAL SEQUENCE OF NOVELTY AND VALENCE APPRAISAL

Elise S. Dan, Tatjana Aue, University of Geneva; Anders Flykt, Mid Sweden University; Klaus R. Scherer, University of Geneva

ABILITY APPRAISAL ANALYSIS OF FATIGUE INFLUENCE ON EFFORT-RELATED CARDIOVASCULAR RESPONSE

Rex A. Wright, University of Alabama at Birmingham; Guido H.E. Gendolla, University of Geneva

PHYSIOLOGICAL ACTIVITIES IN EMOTION ARE ORGANIZED AROUND THE ADAPTATIONAL IMPLICATIONS OF APPRAISALS. BUT, WHAT DOES THIS MEAN?

Leslie D. Kirby, Craig A. Smith, Vanderbilt University

3:00 p.m.-4:30 p.m. .... Sala I

**Symposium #17**

**EVENT-RELATED POTENTIAL MARKERS OF CONSCIOUSNESS**

Chair: Boris Kotchoubey, University of Tuebingen

CONSCIOUSNESS AND EVENT RELATED POTENTIALS. LESSONS FROM SLEEP AND SLEEPINESS STUDIES

Helene Bastuji, Neurological Hospital Lyon; Fabien Perrin, CNRS UMR 5020; Luis Garcia-Larrea, Neurological Hospital Lyon

HOW CONSCIOUS AND UNCONSCIOUS ERPS INTERACT

Howard Shevrin, Cambridge University

CONSCIOUSNESS AND OBSTRUCTIVE HALLUCINATIONS IN HYPNOSIS: ELECTROPHYSIOLOGICAL CONCOMITANTS

Vilfredo De Pascalis, University of Rome 'La Sapienza'

AUTOMATIC PROCESSING AND CONSCIOUSNESS

Martin Elton, University of Amsterdam

PREDICTION OF AWAKENING USING MMN IN COMA: A VALIDATED MODEL

Catherine Fischer, Neurological Hospital Lyon and INSERM U280

Discussant: Boris Kotchoubey

4:30 p.m.-5:00 p.m. .... Piso 0 Foyer  
**Refreshment Break**

5:00 p.m.-6:00 p.m. .... Auditorium I

**Advances in the Neurobiology of Emotion**

Antonio R. Damasio, MD, PhD  
University of Iowa, Department of Neurology

6:00 p.m.-7:30 p.m. .... Piso 1 Foyer

**Poster Session 4**

Poster presentations will be available for viewing from 4:30 p.m.-6:00 p.m. The authors will be present for discussion from 6:00 p.m.-7:30 p.m.

10:00 p.m.-12:00 midnight

**Student Social Event**

(All students are invited to attend—location to be announced. See the program addendum at the meeting and the announcements board in the SPR Registration Area.)

**Saturday, September 24, 2005**

8:00 a.m.-12:00 noon .... Piso 0 Foyer  
**Exhibits Open**

8:30 a.m.-4:00 p.m. .... Piso 0 Foyer  
**Registration**

8:30 a.m.-10:00 a.m. .... Piso 1 Foyer

**Poster Session 5**

Authors will be present for discussion from 8:30 a.m.-10:00 a.m.

10:00 a.m.-10:30 a.m. .... Piso 0 Foyer  
**Refreshment Break**

10:30 a.m.-11:00 a.m. .... Auditorium I

**Award for Distinguished Early Career Contribution to Psychophysiology**

**A Paralimbic Dysfunction Model of Psychopathy**

Kent A. Kiehl, PhD  
Institute of Living and Yale University

11:00 a.m.-12:00 noon .... Auditorium I

**Presidential Address**

**Breaking the Silence: Brain-Computer-Communication in Paralysis and Emotional Disorders**

Niels Birbaumer, PhD  
University of Tuebingen and University of Trento

12:15 p.m.-2:15 p.m. . . . . Restaurant, FIL Centre

**Luncheon and General Business Meeting**

*Chair: Niels Birbaumer, PhD*

*SPR President*

(luncheon tickets will be collected at each table)

**Tursky Award for Outstanding Student Poster Presentation**

*Chair: Bruce N. Cuthbert, PhD*

2:30 p.m.-4:00 p.m. . . . . Auditorium I

**Symposium #18**

**P300: FORTY YEARS LATER**

*Chair: Emanuel Donchin, University of South Florida*

**THE P300 FROM THE PERSPECTIVE OF OPTICAL IMAGING**

*Gabriele Gratton, Monica Fabiani, University of Illinois at Urbana-Champaign*

**SPATIOTEMPORAL ANALYSIS OF THE P300 AND ITS NEIGHBORS**

*Kevin M. Spencer, Harvard Medical School and VA Boston Healthcare System*

**DECISION MAKING, THE P300, AND THE LOCUS COERULEUS-NOREPINEPHRINE SYSTEM**

*S. Nieuwenhuis, Vrije Universiteit Amsterdam; G. Aston-Jones, University of Pennsylvania; Jonathan D. Cohen, Princeton University*

**A HINDSIGHT PERSPECTIVE ON OUR FORESIGHT**

*Emanuel Donchin, University of South Florida*

**THE P300 FROM THE PERSPECTIVE OF fMRI**

*Kent A. Kiehl, Yale University*

*Discussant: Judith Ford, Yale University*

2:30 p.m.-4:00 p.m. . . . . Auditorium II

**Symposium #19**

**AGING AND EVENT-RELATED POTENTIALS**

*Chairs: Michael Falkenstein, Leibniz Research Institute for Working Environment and Human Factors; David Friedman, New York State Psychiatric Institute*

**AGING AND THE PERCEPTUAL ORGANIZATION OF SOUNDS: A CHANGE OF SCENE?**

*Claude Alain, Baycrest Centre for Geriatric Care*

**AGE-RELATED CHANGES IN PROCESSING OF NOVEL STIMULI AND CATEGORIZATION IN VISUAL MODALITY: ERP RESULTS**

*Istvan Czigler, Julia Weisz, Laszlo Balazs, Livia Pato, Emese Poszet, Hungarian Academy of Sciences*

**THE DETRIMENTAL EFFECTS OF AGE ON EXECUTIVE FUNCTIONS: RESULTS FROM TASKS REQUIRING DIFFERENT TYPES OF COGNITIVE CONTROL**

*Doreen Nessler, David Friedman, NY Psychiatric Institute; Ray Johnson, Queens College*

**P3a AND P3b, CORTICAL THICKNESS AND AGING**

*Ivar Reinvang, Kristine B. Walhovd, Anders M. Fjell, University of Oslo*

**SUBSTANTIAL REORGANIZATION OF ERROR PROCESSING WITH AGING: TIME-FREQUENCY ANALYSIS OF ERROR-RELATED POTENTIALS**

*Juliana Yordanova, Bulgarian Academy of Sciences; Michael Falkenstein, Leibniz Research Institute for Working Environment and Human Factors; Vasil Kolev, Bulgarian Academy of Sciences*

2:30 p.m.-4:00 p.m. . . . . Auditorium III

**Symposium #20**

**PSYCHOPHYSIOLOGICAL INSIGHTS INTO ANGER AND AGGRESSION**

*Chair: Eddie Harmon-Jones, Texas A&M University*

**VIOLENT VIDEO GAME EXPOSURE, P300 AMPLITUDE, AND AGGRESSIVE BEHAVIOR**

*Bruce D. Bartholow, University of Missouri; Marc Sestir, University of North Carolina at Chapel Hill*

**TOWARD AN UNDERSTANDING OF DIFFERENT NEURAL CIRCUITS INVOLVED IN ANGER**

*Eddie Harmon-Jones, Texas A&M University*

**ILLUMINATING PHYSIOLOGICAL AND BEHAVIORAL ASPECTS OF ANGER BY TESTOSTERONE ADMINISTRATION AND MAGNETIC BRAIN STIMULATION**

*Jack van Honk, Utrecht University*

**STATE AND TRAIT NEGATIVE EMOTIONALITY LINKS TO AGGRESSIVE BEHAVIOR IN MEN AND WOMEN**

*Edelyn Verona, University of Illinois at Urbana-Champaign*

2:30 p.m.-4:00 p.m. . . . . Sala I

**Symposium #24**

**VISUAL ATTENTION AND INFORMATION PROCESSING**

*Chair: Steven A. Hackley, University of Missouri*

**BRAIN POTENTIALS REVEAL THE INFLUENCE OF PERCEPTUAL LOAD AND SCENE ORGANIZATION ON THE ATTENTIONAL BLINK**

*Mitchell Valdes-Sosa, Jorge Iglesias, Rodriguez Rodriguez, Cuban Center for Neuroscience*

**THE N2pc AS A CORRELATE OF ATTENTIONAL PROCESSES IN VISUAL AREAS THAT RESULT IN AWARENESS**

*Andrea Schankin, Max Planck Institute for Human Cognitive and Brain Sciences; Emund Wascher, Leibniz Research Center for Working Environment and Human Factors*

**LOCALIZATION OF TEMPORAL PREPARATION EFFECTS VIA TRISECTION OF REACTION TIME**

*Steven A. Hackley, University of Missouri; Edmund Wascher, Leibniz Research Center for Working Environment and Human Factors; Andrea Schankin, Andreas Wohlschlaeger, Max Planck Institute for Human Cognitive and Brain Sciences*

**DICHOPTIC MASKING AND EYE DOMINANCE STUDIED WITH ERP**

*Fernando Valle-Inclan, University of La Coruna; Manuel J. Blanco, University of Santiago; Milagros Redondo, University of La Coruna*

4:00 p.m.-4:30 p.m. .... Piso 0 Foyer  
**Refreshment Break**

4:30 p.m.-6:00 p.m. .... Auditorium I  
**Symposium #22**

**REAL-TIME PSYCHOPHYSIOLOGICAL MEASURES FOR ADAPTIVE AUTOMATION SYSTEMS**

*Chairs: Wolfram Boucsein, University of Wuppertal; Shinji Miyake, Japan University of Occupational and Environmental Health*

ON-LINE ASSESSMENT OF PSYCHOPHYSIOLOGICAL MARKERS OF OPERATOR FUNCTIONAL STATE UNDER DYNAMIC TASK LOAD

*Peter Nickel, G. Robert J. Hockey, University of Sheffield*

THE USE OF AUTONOMIC MEASURES FOR BIOCYBERNETIC ADAPTATION

*Stephen Fairclough, Louise Venables, Andrew J. Tattersall, Liverpool John Moores University*

THE USABILITY OF CARDIOVASCULAR AND ELECTRODERMAL MEASURES FOR ADAPTIVE AUTOMATION DURING A SIMULATED IFR FLIGHT MISSION

*Wolfram Boucsein, Andrea Haarmann, Florian Schaefer, University of Wuppertal*

ON-ROAD INVESTIGATION OF EFFECTS OF ADAPTIVE CRUISE CONTROL ON WORKLOAD

*Shinji Miyake, Takuro Shoji, University of Occupational and Environmental Health; Yasuhiko Takae, Nariaki Etori, Takayuki Watanabe, Yasuhiro Shiraishi, Nissan Motor Co., Ltd.*

HEART RATE OF PILOTS DURING LONG HAUL FLIGHTS INDICATE LOW AROUSAL STATES

*Michael Trimmel, Christoph Goger, Eva-Maria Vouk, Marlene Kritz, Alexandra Klaus, Elisabeth Groll-Knapp, Medical University Vienna*

4:30 p.m.-6:00 p.m. .... Auditorium II  
**Symposium #23**

**A MARKER OF SELECTIVE PROCESSING IN THE VISUAL SYSTEM: THE UTILITY OF N2PC FOR COGNITIVE NEUROSCIENCE**

*Chair: Rolf Verleger, University of Luebeck*

N2PC IN THE CONTEXT OF RECENT MODELS OF VISUAL ATTENTION

*Edmund Wascher, Leibniz Research Centre for Working Environment and Human Factors*

THE N2CC: RESPONSE SELECTION UNDER NON-STANDARD SENSORIMOTOR MAPPINGS

*Peter Praamstra, University of Birmingham*

ON THE CONTROL OF VISUAL SPATIAL ATTENTION: EVIDENCE FROM HUMAN ELECTROPHYSIOLOGY

*Paola Sessa, Roberto Dell'Acqua, University of Padova; C. Ouimet, Pierre Jolicoeur, University of Montreal*

SPATIAL AND CENTRAL ATTENTIONAL INFLUENCES ON THE N2PC EVENT RELATED POTENTIAL

*Pierre Jolicoeur, B. Brisson, N. Robitaille, E. Leblanc, D. Prime, University of Montreal; Roberto Dell'Acqua, University of Padova*

**MECHANISMS OF RIGHT-HEMISPHERE DOMINANCE IN IDENTIFYING RAPIDLY PRESENTED LETTERS AND DIGITS**

*Rolf Verleger, Sina Gebauer, Michaela Fritzmannova, University of Luebeck; Piotr Jaskowski, Warsaw University of Finance and Management*

4:30 p.m.-6:00 p.m. .... Auditorium III  
**Symposium #21**

**ADAPTATIONS TO DISTORTED SPEECH DURING TALKING: SUCCESSES AND FAILURES OF THE COROLLARY DISCHARGE**

*Chair: Judith M. Ford, Yale University*

WHEN WHAT YOU HEAR IS NOT WHAT YOU SAID: GAMMA-BAND COHERENCE TO DISTORTIONS OF SPEECH

*Daniel H. Mathalon, Yale University; Max Gray, Stanford University; T.H. Heinks-Maldonado, Albert-Ludwigs-Universitaet Freiburg; Judith M. Ford, Yale University*

COROLLARY DISCHARGE DYSFUNCTION IN SCHIZOPHRENIA: EVENT-RELATED-POTENTIALS AND BEHAVIORAL DATA

*Theda H. Heinks-Maldonado, Albert-Ludwigs-Universitaet Freiburg; Daniel H. Mathalon, Yale University; J.F. Houde, University of California San Francisco; Judith M. Ford, Yale University*

THE NEURAL SUBSTRATES OF IMPAIRED FEEDBACK PROCESSING IN PARKINSONIAN SPEECH

*John F. Houde, University of California San Francisco; Theda H. Heinks-Maldonado, Albert-Ludwigs-Universitaet Freiburg; Srikantan S. Nagarajan, University of California San Francisco; Cynthia Fox, Lorraine Ramig, National Center for Voice and Speech; Robert S. Turner, William J. Marks, University of California San Francisco*

AUDITORY, SOMATOSENSORY, AND MOTOR INTERACTIONS IN SPEECH ACQUISITION AND PRODUCTION

*Frank F. Guenther, Boston University*

4:30 p.m.-6:00 p.m. .... Sala I  
**Symposium #25**

**CURRENT STATE-OF-THE-ART OF INVASIVE AND NON-INVASIVE METHODS FOR BRAIN-COMPUTER INTERFACE (BCI) CONTROL IN PATIENTS WITH NEUROLOGICAL DISEASES**

*Chair: Andrea Kuebler, University of Tuebingen*

CLINICAL TRIALS AND FRONTIERS IN INTRACORTICAL BCIS AND HUMAN NEUROMOTOR PROSTHESES

*Leigh R. Hochberg, Jon A. Mukand, Gerhard M. Friehs, John P. Donoghue, Brown University*

EVENT-RELATED CHANGES OF OSCILLATORY ACTIVITY IN ECOG DATA FOR BRAIN-COMPUTER COMMUNICATION

*Bernhard Graimann, Technical University Graz; Jane E. Huggins, Simon P. Levine, University of Michigan, Gert Pfurtscheller, Technical University Graz*



**BRAIN-COMPUTER INTERFACE (BCI) USING THE P300 EVENT-RELATED POTENTIAL**

*Eric W. Sellers, New York State Department of Health;  
Femke Nijboer, Andrea Kuebler, University of Tuebingen;  
Jonathan R. Wolpaw, New York State Department of Health*

**BRAIN COMPUTER-INTERFACE (BCI) USE WITH MU RHYTHM, SLOW CORTICAL POTENTIALS AND P300S BY PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS; A WITHIN SUBJECT COMPARISON**

*Femke Nijboer, Juergen Mellinger, Tamara Matuz, Ursula Mochty, Yvonne Eitel-Braitsch, University of Tuebingen;  
Eric W. Sellers, Theresa M. Vaughan, New York State Department of Health; Niels Birbaumer, University of Tuebingen; Jonathan R. Wolpaw, New York State Department of Health; Andrea Kuebler, University of Tuebingen*

*Discussant: Jonathan R. Wolpaw, New York State Department of Health*

7:00 p.m.-9:00 p.m. . . . . Piso 1 Foyer, FIL Center

**Poster Session 6**

Poster presentations will be available for viewing from 3:30 p.m.-7:00 p.m. The authors will be present for discussion from 7:00 p.m.-9:00 p.m.

9:00 p.m.-12:00 midnight . . . . . Piso 0 Foyer

**Saturday Night Social**

(All registrants are invited to attend – location to be announced)

**Sunday, September 25, 2005**

8:30 a.m.-12:00 noon . . . . . Sala 1

**SPR Board of Directors Meeting**