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                      CALL for PAPERS

          NAT2017 Neuroadaptive Technology Conference

                       Berlin, Germany
                    19th – 21st July 2017

                    www.neuroadaptive.org
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INTRODUCTION

Neuroadaptive technology utilises real-time measures of neurophysiological activity within closed loop Human-Computer Interaction to enable intelligent software adaptation. Neurophysiological measures are used to create a representation of transient psychological states. Real-time monitoring of these states, in combination with information concerning the situational context of the user, enables neuroadaptive technology to adapt to the person in ways that are both timely and personalised.

The goal of neuroadaptive technology is to extend communication bandwidth between people and computers by monitoring and modelling processes within the brain and central nervous system. The adaptation of software to the psychological state of the user closes the loop by actively promoting desirable psychological states or mitigating negative ones. For example, neuroadaptive technology may purposefully initiate software adaptation designed to reduce workload or fatigue or stimulate positive emotions to aid productivity. In this way, neuroadaptive technology creates novel modes of interaction where the intentions of the user are inferred by using the brain and body as a sensor.

From a longitudinal perspective, sustained and repeated use of neuroadaptive technology can evolve the user representation into a detailed model of user preferences and responses. This development will enhance the process of system personalization to reach a level of intelligent software adaptation constructed around the desires of the individual across a range of situational and psychological contexts.

The potential of neuroadaptive technology to significantly impact on current modes of human-computer interaction raises a number of human factors issues

pertaining to machine autonomy and human-machine cooperation. The reliance of this technology on neurophysiological data also begs a number of ethical and societal questions related to privacy, consent and ownership of personal data.

The closed control loop at the heart of neuroadaptive technology encapsulates multidisciplinary methods, from neuroscientific measures to engineering wearable sensors, it encompasses the development of machine learning techniques, the design/evaluation of the neuroadaptive interface and assessment of societal impact.

This is a multidisciplinary conference with strong engagement with: applied neurosciences, mathematics, electronic engineering, robotics, computer science and human factors psychology.

The format of the conference is 5 Keynotes, up to 3 parallel sessions for oral presentations, poster presentations and demonstrations of Neuroadaptive Technology.

IMPORTANT DATES

Website open for abstract submission 1st January
Deadline for Abstracts
13th March
Feedback to authors
1st April
Early-bird registration
21st April 2017
Conference
19-21st July

REGISTRATION

Registration fee:
Early Bird (before 21/4/17)
300 Euro for the conference (inclusive Lunch) + 50 Euro for the Social Evening

Standard Registration
430 Euro for the conference (inclusive Lunch) + 50 Euro for the Social Evening

TOPICS OF INTEREST

BROAD AREAS
- Applied Neurosciences
- Signal Detection Methods / Machine Learning
- Human Computer Interaction

SPECIFIC TOPICS
- Passive brain-computer interfaces
- Physiological computing
- Robotics
- Affective Computing
- Neurofeedback
- Brain as Sensor
- Adaptive Automation
- Autonomous Driving
- User Modelling / Statistical Inference
- Cognitive InfoCommunications
- Closed-Loop Cognition
- Neuroergonomics
- Introspectibles for mental health
- Social Interaction
- Neurogaming
- Personalisation
- Wearable Sensors
- Mobile Brain-Body Imaging
- Evaluation Methodology
- Neuroethics

PAPER SUBMISSION

Submissions to the main conference, including Research
Track, Work-In-Progress Track, and Demo Sessions
should be made through www.neuroadaptive.org/
conference/2017/.
Submissions should be in the form of 1-page abstracts. A
template will be made available on the website.

All submissions will be blind reviewed by the Program
Committee on the basis of technical quality, relevance to
conference topics of interest, originality, significance,
and clarity. Author names and affiliations must not
appear in the submissions, and bibliographic references
must be adjusted to preserve author anonymity.

All accepted abstracts will be published in the conference proceedings (probably through ELSEVIER). A selection of authors will be invited after the conference to submit full bookchapters about their research.

ORGANIZING COMMITTEE

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