

Workshop: Current and future applications of non-invasive and invasive BCIs



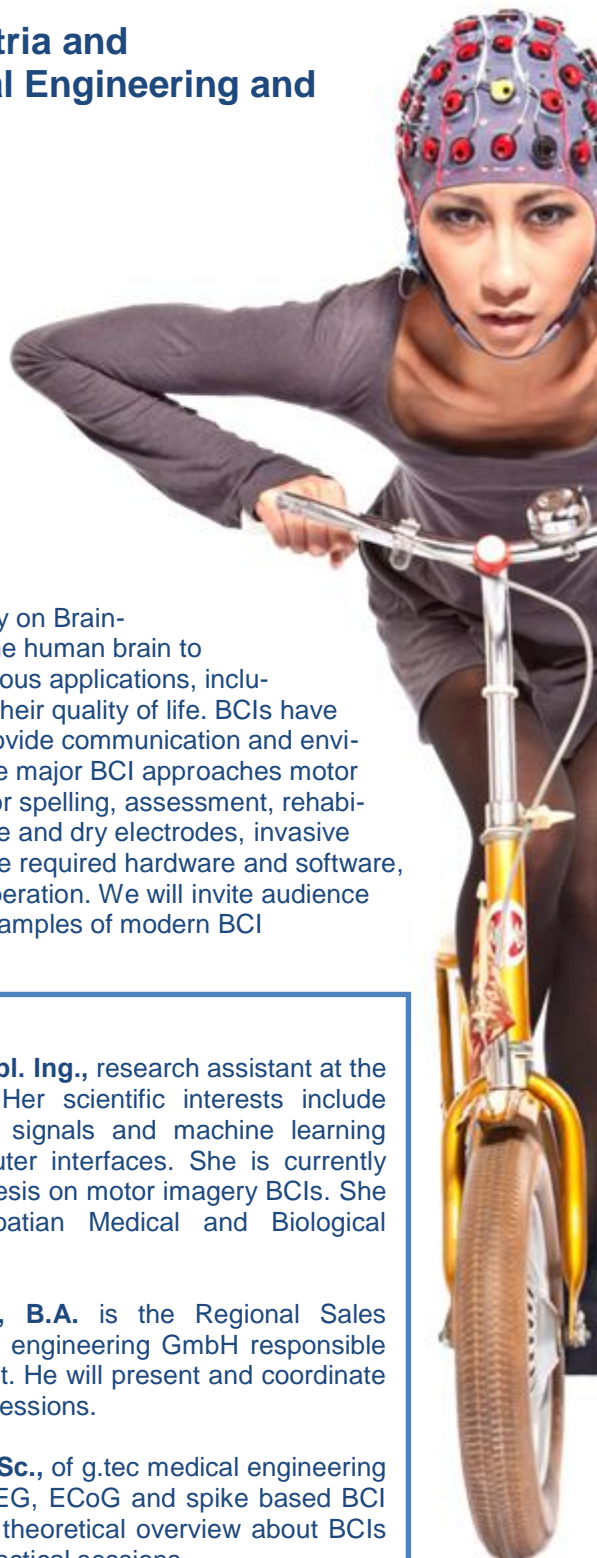
g.tec medical engineering Austria and
University of Zagreb - Faculty of Electrical Engineering and
Computing

March 18th, 2015

Venue: University of Zagreb
Faculty of Electrical Engineering and Computing
Room D160
Unska 3,
10000 Zagreb
Tel: +38516129642
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About the Workshop

Research groups all over the world have been working enthusiastically on Brain-Computer Interfaces (BCIs), which provide a direct connection from the human brain to a computer. BCIs translate brain activity into control signals for numerous applications, including tools to help severely disabled users communicate and improve their quality of life. BCIs have been used to restore movement, assess cognitive functioning, and provide communication and environmental control. During this workshop, we will demonstrate the three major BCI approaches motor imagery, P300 and steady state visual evoked potentials (SSVEP) - for spelling, assessment, rehabilitation and robot control. We will also explain new directions like active and dry electrodes, invasive ECoG systems and advanced VR control. The audience will see all the required hardware and software, procedures for cap mounting, training and classifier setup, and BCI operation. We will invite audience members to participate in live demonstrations, providing real-world examples of modern BCI performance in field settings.



Program:

- 10:00 Introduction to major methodological approaches of BCI & introduction to hard- and software
- 11:00 Jerbić, Ana Branka: "Detection of motor imagery from electroencephalogram with application to brain-computer interface."
- 12:00 Lunch break
- 13:00 Hands-on sessions: BCI live experiments
- 16:00 Final discussion & questions

Attendance is free of charge but registration is required due to limitation of space. Please contact Francisco Fernandes: fernandes@gtec.at
N.B.:The workshop will be held in English.

Speakers:

Ana Branka Jerbić, Dipl. Ing., research assistant at the University of Zagreb. Her scientific interests include analysis of biomedical signals and machine learning applied to brain computer interfaces. She is currently finishing her doctoral thesis on motor imagery BCIs. She is a member of Croatian Medical and Biological Engineering Society.

Francisco Fernandes, B.A. is the Regional Sales Officer of g.tec medical engineering GmbH responsible for the Slovenian market. He will present and coordinate the practical hands-on sessions.

Alexander Lechner, MSc., of g.tec medical engineering GmbH is working on EEG, ECoG and spike based BCI projects. He will give a theoretical overview about BCIs and will also hold the practical sessions.

Special thanks to Prof. Mario Cifrek and the hosts of the Workshop.

This workshop is also supported by the Croatian Medical and Biological Engineering Society (CROMBES) and the Croatian section of IEEE Engineering in Medicine and Biology Society (IEEE EMBS18).



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Registration Form:

Please fill in and fax back: 0043 7251 22240 39
or email it to Francisco Fernandes: fernandes@gtec.at

Name & Degree (as to appear on conference materials):

Institution/Affiliation:

Department:

Business Address:

City: _____ State: _____ Zip: _____

Business Phone: _____

E-mail Address (important for receiving the confirmation)



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