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PhD in Medical Sciences
2016-2017

INVITATION to the Public defence of

Jorne Laton

To obtain the academic degree of '**DOCTOR IN MEDICAL SCIENCES**'

Machine learning techniques to improve the value of neurophysiological measurements for individual patients

Monday 18 September 2017

Promotiezaal D2.01, 15:30
Alois Gerlo, VUB-campus Etterbeek, Pleinlaan 2-building D

How to reach the campus Etterbeek:
<http://www.vub.ac.be/english/infoabout/campuses>

Summary of the dissertation

The main topic in this PhD thesis was applying machine learning techniques in neurological disorders, in order to individually distinguish patients from healthy controls, patients with different diseases or patients with different disease severity. This thesis is intended to recapitulate a PhD in which a broad range of subjects was covered. To start with, three different diseases were investigated: schizophrenia, dementia and multiple sclerosis. Two different measurement techniques were used in these studies: electroencephalography and magnetoencephalography. Finally, different analysis methods were applied, such as peak extraction, frequency spectrum analysis, network analysis, group difference analysis and classification.

Curriculum Vitae

Jorne Laton was born in Knokke-Heist on 13 June 1989. In secondary school, he studied Latin-Mathematics in the Koninklijk Atheneum Brugge Centrum. After that, he went to study at the Vrije Universiteit Brussel, where in 2010, he obtained his degree as a Bachelor in Engineering in Electronics and Information Technology - profile Computer Science. In January 2013, he obtained his Master degree in Engineering in Applied Computer Science with great distinction. The knowledge obtained from this master's courses spread from electronics and computer science to biomedical science. In February 2013, he started a PhD in Medical Science at the Vrije Universiteit Brussel, during which he first worked as a researcher at the UPC Kortenberg (KUL) and since the beginning of 2017 he is collaborating with the department of Electronics and Informatics (ETRO) at the Vrije Universiteit Brussel.