

Jitka Annen

GIGA Consciousness | jitka.annen@uliege.be | jitka.annen@ugent.be
Rue de la Charrette 100-01, 4130 Tilff, Belgium | +32 496 14 48 23 | 27 July 1991 | Mother of one daughter

EDUCATION

UNIVERSITY OF LIEGE

PHD IN BIOMEDICAL SCIENCES AND PHARMACEUTICS

Multimodal Neuroimaging in Patients with Disorders of Consciousness
Grad. April 2019 | Liège, Belgium

UNIVERSITY OF AMSTERDAM

MSc IN BIOMEDICAL SCIENCES

Grad. July 2014 | 8.6/10 | Cum Laude

BSc IN PSYCHOBIOLOGY

Grad. July 2012 | 7.4/10

SKILLS

LANGUAGES

Dutch • Native

English • Fluent (C1)

French • Elementary (A2)

CLINICAL EVALUATION

Coma Recovery Scale Revised

Brain computer interface

NEUROLOGICAL DATA

Multimodal analyses of brain structure and function

EEG • Acquisition and analysis

PET • Analysis

MRI • T1, DWI and fMRI analysis

PROGRAMMING

R, python and MATLAB

AWARDS AND GRANTS

✂ Erasmus+ | 2014 | 4.5k €

✂ Intern. BCI Meeting | 2016 | 2k \$

✂ Modus for ASSC22 | 2018 | 2k €

🎓 Leon Fredericq | 2020 | 7.5k €

🎓 Tom Slick award | 2020 | 15k \$

🎓 FWO postdoc | 2021 | 3 year €

🎓 Leon Fredericq | 2021 | 7.5k €

🎓 FWB | 2021 | 2.5k €

🎓 HBP Expression of Interest | 2021 |

1.5 years int. EU project

COMMUNITY WORK

- Talks for lay people
- Writer for popular science mag.
- Ethics rapporteur within HBP
- Reviewer for scientific journals
- Member of the NIH initiative: Common Data Elements for Coma and Disorders of Consciousness in the Imaging Workgroup

BRIEF PROFILE

The aim of my research is to study the relationship between brain structure and function and consciousness in healthy and pathological or cognitively altered states. My scientific interests intersect neuroscience and clinical applications.

RESEARCH HIGHLIGHTS

- Published o.a. in J. of Neuroscience, Ann. of Neurology, NEJM, Brain, Neuroimage, HBM, TINS
- h-index:15 | i10-index: 19 | >850 citations
- PhD thesis co-promotor
- Leading HBP SGA3 T2.3 and Brain DTI ESA-Prodex projects in ULiege

RESEARCH EXPERIENCE

MAY 2019 - NOW | GIGA CONSCIOUSNESS, LIEGE, BE

Team leader

- Multimodal data analysis in patients with severe brain injury, cosmonauts, entrepreneurs, voluntary apnea, thirst, sleep and anesthesia
- Biological modelling approaches to investigate cognition and consciousness
- Disconnected and connected somatosensory processing in (un)conscious states

SEPT 2014 - APRIL 2019 | COMA SCIENCE GROUP, LIEGE, BE

PhD Student in Medical Sciences

- Multimodal analysis in patients with disorders of consciousness (DOC), combining neuroimaging and neurophysiology such as structural MRI, PET and electroencephalography (EEG) during resting state
- Active EEG paradigms in DOC patients for brain computer interface applications

JAN - JULY 2014 | COMA SCIENCE GROUP, LIEGE, BE

Master internship (2nd)

- Behavioral assessment of patients with disorders of consciousness (DOC).
- Analysis of DTI data combined with PET data in DOC patients.
- Acquisition and analysis of EEG during transcranial magnetic stimulation.

JAN - JUNE 2013 | SILS-CNS, AMSTERDAM, NL

Master internship (1st)

- Training rats in a spatial learning task and analysis of tetrode recordings

MAR - JULY 2012 | DEVELOPMENTAL PSYCHOLOGY, AMSTERDAM, NL

Bachelor internship

- EEG recordings in beginner readers and analysis of P300 and MMN

TEACHING AND SUPERVISION

- Sept 2021 - Now | Co-promotor Naji Alnagger, GIGA Consciousness
- Oct 2020 - Now | Co-promotor Glenn van der Lande, GIGA Consciousness
- Feb 2020 - Now | Co-promotor Rajanikant Panda, GIGA Consciousness
- Oct 2019 - Now | Co-promotor Benedetta Cecconi, GIGA Consciousness
- Oct 2019 - Now | Thesis committee member Marie-Mi Briand, GIGA Consciousness
- Jan - Aug 2019 | Supervisor Benedetta Cecconi, University of Trento, Italy
- 2021 | Translational Neuroscience: Towards clinical applications for disorders of consciousness at Maastricht University
- 2020-21 | GIGA Doctoral School Neuroscience week
- Coma Recovery Scale-Revised workshop for clinicians

SELECTED PUBLICATIONS

2021

- Panda*, López-González*, Zamora-López*, **Annen*** Posterior integration and thalamo-frontotemporal broadcasting are impaired in disorders of consciousness (2021). *submitted*
- **Annen***, Panda*, Mapping the functional brain state of a world champion freediver in static dry apnea (2021). *Brain structure and function*
- **Annen***, Candida-Rivia*, Neural responses to heartbeats detect residual signs of consciousness during resting state in post-comatose patients (2021). *Journal of Neuroscience*
- Thibaut*, Panda*, **Annen**, Preservation of brain activity in unresponsive patients identifies MCS star (2021). *Annals of Neurology*

2020

- Cecconi, Laureys, **Annen**. Islands of awareness or islands of cortical complexity? (2020). *Trends in Neurosciences*
- **Annen**, Laureys, Gosseries. Brain-computer interfaces for consciousness assessment and communication in severely brain-injured patients (2020). *Handbook of Clinical Neurology* 168, 137-152.
- Martens, ... **Annen**, ... Behavioral and electrophysiological effects of network-based frontoparietal tDCS in patients with severe brain injury: A randomized controlled trial (2020). *Neuroimage: Clinical* • **Annen***, Mertel*, Xu, Chatelle, ... Müller. Auditory and somatosensory P3 are complementary for the assessment of patients with disorders of consciousness (2020). *Brain Sciences*

2019

- **Annen***, Filippini*, Bonin, Cassol, ... Chatelle. Diagnostic accuracy of the CRS-R index in patients with disorders of consciousness (2019). *Brain Injury* 33 (11), 1409-1412.
- Rizkallah, **Annen**, Modolo, Gosseries, ..., Laureys. Decreased integration of EEG source-space networks in disorders of consciousness (2019). *NeuroImage: Clinical* (23), 101841.
- Martial, Larroque, Cavaliere, Wannez, **Annen**, ..., Laureys. Resting-state functional connectivity and cortical thickness characterization of a patient with Charles Bonnet syndrome (2019). *PloS one* (14) 7.
- Mortaheb, **Annen**, Chatelle, Cassol, ... Laureys. A Graph Signal Processing Approach to Study High Density EEG Signals in Patients with Disorders of Consciousness (2019). *IEEE Engineering in Medicine and Biology Society (EMBC)* 4549-4553

2018

- **Annen**, Frasso, Crone, Heine, ... Laureys. Regional brain volumetry and brain function in severely brain-injured patients (2018). *Annals of Neurology*, 83 (4), 842-853.
- **Annen**, Blandieux, Lejeune, Bahri, ... Chatelle* Laureys*. BCI performance and brain metabolism profile in severely brain-injured patients without response to command at bedside (2018). *Frontiers in Neuroscience*, 12, 370.
- Engemann, Raimondo, King, Rohaut, ..., **Annen**, ..., Sitt. Robust EEG-based cross-site and cross-protocol classification of states of consciousness (2018). *Brain* 141 (11), 3179-3192.
- Van Ombergen, Jillings, Jeurissen, Tomilovskaya, ..., **Annen**, ..., Wuyts. Brain tissue-volume changes in cosmonauts (2018). *New England Journal of Medicine* 379 (17), 1678-1680.

2017

- Chennu, **Annen**, Wannez, Thibaut, ... Laureys (2017). Brain networks predict metabolism, diagnosis and prognosis at the bedside in disorders of consciousness, *Brain*, 140(8), 2120-2132.
- Amico, Marinazzo, Di Perri, Heine, **Annen**, ... , Goñi (2017) Mapping the functional connectome traits of levels of consciousness. *NeuroImage*, 148, 201-211.
- **Annen**, Laureys, Gosseries (2017). People with disorders of consciousness. In Routledge, *Neuropsychological Rehabilitation. The international handbook* (pp. 124-135).
- Di Perri, Amico, Heine, **Annen**, ..., Laureys. Multifaceted brain networks reconfiguration in disorders of consciousness uncovered by co-activation patterns (2017). *Human brain mapping* 39 (1), 89-103.

2016

- **Annen***, Heine*, Ziegler, Frasso, ... Laureys (2016). Function-structure connectivity in patients with severe brain injury as measured by MRI-DWI and FDG-PET. *Human Brain Mapping*, 37(11) 3707-3720.
- Di Perri, Thibaut, Heine, **Annen**, Laureys (2016). Towards new methods of diagnosis in disorders of consciousness—Authors' reply. *The Lancet Neurology*, 15(11) 1115-1116.

FULL PUBLICATION LIST ONLINE

- [Google Scholar](#) | • [Orbi ULiège](#)