

Studying, Measuring and Altering Consciousness

21 November 2019

Merton College, University of Oxford



8:30 - 9:00 **Registration**

9:00 - 9:10 **Welcome - Irene Tracey**



Warden of Merton College and Nuffield Chair in Anaesthetic Science, University of Oxford; irene.tracey@ndcn.ox.ac.uk

9:10 - 9:30 **Aureli-Soria Frisch - Luminous: A study of consciousness in the electrical brain**



Starlab Barcelona, Barcelona, Spain; aureli.soria-frisch@starlab.es

9:30 - 10:10 **Keynote Speaker: Anil Seth - A higher state of consciousness? Neural dynamics in the psychedelic brain**



Professor of Cognitive and Computational Neuroscience and Co-Director, Sackler Centre for Consciousness Science, University of Sussex, UK; A.K.Seth@sussex.ac.uk

10:10 - 10:30 **Wim Pinxten - The ethical imperative of studying Consciousness**



Prof. dr. at the Faculty of Medicine and Life Sciences, Hasselt University, Belgium; wim.pinxten@uhasselt.be

10:30 - 11:00 **Refreshments**

11:00 - 11:20 **Julien Modolo - Can we use computer models of brain activity to understand how consciousness emerges and vanishes?**



Laboratoire Traitement du Signal et de l'Image (Rennes), INSERM / National Institute for Health and Research in Medicine, France; julien.modolo@gmail.com

11:20 - 12:00 **Keynote Speaker: Hector Zenil - Algorithmic Complexity and Cognition**



Director, Oxford Immune Algorithmics, Oxford; Lab Leader, Algorithmic Dynamics Lab, Center for Molecular Medicine, Karolinska Institute, Stockholm; Head of Group, Algorithmic Nature Lab, LABORES for the Natural and Digital Sciences, Paris; hector.zenil@ox.cs.ac.uk

12:00 - 12:20 **Giulio Ruffini - KT: an algorithmic information theory of consciousness**



Starlab Barcelona, <http://starlab.es> and Neuroelectrics, <http://neuroelectrics.com>, Barcelona, Spain; giulio.ruffini@starlab.es

12:20 - 12:40 **Flash talks**

1. **Michele Farisco - The ethical relevance of the unconscious**

Centre for Research Ethics and Bioethics, Uppsala University, Sweden; michele.farisco@crb.uu.se

2. **Rodika Sokoliuk - Investigating top-down conscious awareness using auditory speech entrainment**

School of Psychology & Centre for Human Brain Health, University of Birmingham; R.Sokoliuk@bham.ac.uk

3. **Riku Ihäläinen - Computational modelling of posterior hot zone in anaesthesia-induced loss of consciousness**

School of Computing, University of Kent, Kent; rij4@kent.ac.uk

4. **Angus Stevner - Large-scale brain networks and transition dynamics during fluctuations between wakefulness and sleep in humans**

Department of Psychiatry, University of Oxford; Center for Functionally Integrative Neuroscience & Center for Music in the Brain, Aarhus University, Denmark; angus.stevner@psych.ox.ac.uk

12:40 - 1:40

Lunch & E-posters

1:40 - 2:20



Keynote Speaker: Claire Sergent - From subjective experience to brain activity, and return

Associate Professor, Integrative Neuroscience and Cognition Center, Université Paris Descartes & CNRS, Paris, France; claire.sergent@parisdescartes.fr

2:20 - 2:40



Hubert Preissl - Are there signs for conscious processing in the fetal brain?

MEG Center/Internal Medicine IV/Institute for Diabetes Research and Metabolic Diseases of the Helmholtz Center Munich, University of Tübingen & German Center for Diabetes Research, Tübingen, Germany, <http://preissl-lab.net/>; hubert.preissl@uni-tuebingen.de

2:40 - 3:20



Keynote Speaker: Morten Kringelbach - Awakening: predicting perturbation to force transitions between different brain states

Associate Professor, Hedonia Group, University of Oxford, UK
Professor of Neuroscience, Aarhus University, Denmark; morten.kringelbach@queens.ox.ac.uk

3:20 - 3:40



Silvia Casarotto - Assessing consciousness through cortical perturbations

Department of Biomedical and Clinical Sciences "L. Sacco", University of Milan, Italy;
silvia.casarotto@unimi.it

3:40 - 4:10

Refreshments

4:10 - 4:30



Katie Warnaby - Slow waves and anaesthesia-induced unconsciousness

Wellcome Centre for Integrative Neuroimaging, Nuffield Department of Clinical Neurosciences, University of Oxford; katie.warnaby@ndcn.ox.ac.uk

4:30 - 4:50



Michael Nitsche - Transcranial electrical stimulation to modulate sleep-dependent processes

Department of Psychology and Neurosciences, Leibniz Research Centre for Working Environment and Human Factors (IFADÖ), Dortmund, Germany; nitsche@ifado.de

4:50 - 5:10



Aurore Thibaut - Non-invasive brain stimulation to promote consciousness in the injured brain

GIGA Institute | GIGA Consciousness | Physiology of Cognition Research Lab, University of Liège, Belgium ; a.thibaut@uliege.be

5:10 - 5:30



Niels Birbaumer - Brain Computer Interfaces in complete paralysis: rebirth of the grandmother cell

Institute of Medical Psychology and Behavioral Neurobiology, University of Tübingen, Germany; birbaumer@uni-tuebingen.de

5:30 - 5:40



Marcello Massimini - Concluding Remarks

Department of Clinical and Biomedical Sciences, University of Milan, Italy;
marcello.massimini@gmail.com

Please let us have your feedback on the event online at bit.ly/workshop-luminous.

