YOUNG RESEARCHERS EVENT

YOUNG RESEARCHERS EVENT MEETS HIBALL: NEW DIGITAL TOOLS TO STUDY THE BRAIN

25 October 2022
Zadar, Croatia & virtual

Scientific Programme
ABOUT THE EVENT

The human brain is a multi-level and highly complex system that produces, processes and transmits information in an incomparable manner. The Human Brain Project (HBP) unites researchers and scientists to decode the mechanisms underlying this unique system by investigating the human brain and its diseases with the help of highly advanced ICT tools. As such, the HBP is developing **EBRAINS, the new European digital research infrastructure**, as a lasting contribution to the global science community, an open source tool that allows scientists and technology experts to seamlessly collaborate, thereby accelerating advancements in the fields of neuroscience, computing and brain-related medicine.

The Helmholtz International BigBrain Analytics and Learning Laboratory (HIBALL) is an HBP Partnering Project that aims to transform the well-known BigBrain model to its next level by reinforcing utilization and co-development of the latest AI and high-performance computing (HPC) technologies for building highly detailed 3D brain models. This event will take place in conjunction with the 6th BigBrain Workshop - From microstructure to functional connectomics.

**SCIENTIFIC CHAIR**
Katrin Amunts | Forschungszentrum Jülich/Heinrich-Heine-Universität Düsseldorf

**PROGRAMME COMMITTEE**
Katrin Amunts | Forschungszentrum Jülich/Heinrich-Heine-Universität Düsseldorf
Caroline Ernoult | EBRAINS AISBL
Maja A. Puchades | University of Oslo
Goran Sedmak | School of Medicine University of Zagreb
Andrija Štajduhar | School of Medicine University of Zagreb
Paule-J Toussaint | McGill University/HIBALL
Susanne Wenzel | Forschungszentrum Jülich/HIBALL

Further information:  

Contact:  
yre@humanbrainproject.eu

In collaboration with

Organised by
TUESDAY 25 OCTOBER 2022

All times displayed are in CEST (=UTC+2).

09:00 – 10:00    Registration & Welcome Coffee
10:00 – 10:10    Welcome by hosts & HBP
10:10 - 11:30    PLENARY SESSION I
                Chair: Katrin Amunts | Forschungszentrum Jülich, Heinrich-Heine-Universität Düsseldorf
10:10 - 10:30    Introduction to HBP and EBRAINS
                Katrin Amunts | Forschungszentrum Jülich, Heinrich-Heine-Universität Düsseldorf
10:30 - 11:00    BigBrain data processing with CBRAIN and DataLad
                Bryan Caron | McGill University
11:00 - 11:30    Postnatal development of the human brain
                Miloš Judaš | School of Medicine University of Zagreb
11:30 - 12:00    Coffee Break
12:00 - 13:30    PLENARY SESSION II
                Chair: Nicola Palomero-Gallagher | Forschungszentrum Jülich
12:00 - 12:20    Introduction to EBRAINS Research Infrastructure: Data
                Jan Bjaalie & Maja Puchades | University of Oslo
12:20 - 12:40    The multilevel human brain atlas in EBRAINS
                Timo Dickscheid & Lyuba Zehl | Forschungszentrum Jülich
12:40 - 13:00    Can we use cortical folding patterns as a proxy of architectural variability?
                Jean-François Mangin | CEA
13:00 - 13:30    HIBALL and related international initiatives
                Alan Evans | McGill University
13:30 - 14:30    Lunch Break
14:30 - 15:30    PARALLEL HANDS-ON SESSIONS, PART I:
                One out of the three session can be chosen:

                • BigBrain data processing with CBRAIN and DataLad
                  Bryan Caron | McGill University
                  Shahbaz Memon | Forschungszentrum Jülich
                  Morris Riedel | Forschungszentrum Jülich
                  Pierre Rioux | McGill University
                  Serge Boroday | McGill University
                  Natacha Beck | McGill University
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Using EBRAINS atlas services to explore and analyse the human brain
Timo Dickscheid | Forschungszentrum Jülich
Sebastian Bludau | Forschungszentrum Jülich

Introduction to the ENIGMA Toolbox: Surface data visualisation and multiscale neural contextualisation
Sara Lariviére | McGill University

15:30 - 16:30 PARALLEL HANDS-ON SESSIONS, PART II
One out of the three session can be chosen (see above for session details).

16:30 - 17:00 Coffee Break

17:00 - 17:30 EARLY CAREER RESEARCHERS SESSION
Chair: Ariane Bruno | Forschungszentrum Jülich

Frequency-dependent spatial distribution of features for Major Depressive Disorder (MDD)
Eda Jovičić | University of Zagreb

Julich-Brain GapMaps parcellation based on structural connectivity using Constellation
Clément Langlet | CEA

Building Goal-Driven Models of the Sensorimotor System to Understand Human Dexterity
Tonio Weidler | University of Maastricht

17:30 - 18:00 What are you missing in EBRAINS? Feedback and Q&A
Jan Bjaalie | University of Oslo

18:00 End of the event