

# 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 6<sup>th</sup> 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:

[www.humanbrainproject.eu/en/education-training-career/YRE2022-Croatia/](http://www.humanbrainproject.eu/en/education-training-career/YRE2022-Croatia/)

## Contact:

[yre@humanbrainproject.eu](mailto:yre@humanbrainproject.eu)

## In collaboration with



University of  
Zagreb



**HIBALL**  
HELMHOLTZ International BigBrain  
Analytics & Learning Laboratory



Human Brain Project  
Education Programme

## Organised by

# TUESDAY 25 OCTOBER 2022

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

09:00 – 10:00	<b>Registration &amp; Welcome Coffee</b>
10:00 – 10:10	<b>Welcome by hosts &amp; HBP</b>
10:10 - 11:30	<b>PLENARY SESSION I</b> Chair: Katrin Amunts   Forschungszentrum Jülich, Heinrich-Heine-Universität Düsseldorf
10:10 - 10:30	<b>Introduction to HBP and EBRAINS</b> Katrin Amunts   Forschungszentrum Jülich, Heinrich-Heine-Universität Düsseldorf
10:30 - 11:00	<b>BigBrain data processing with CBRAIN and DataLad</b> Bryan Caron   McGill University
11:00 - 11:30	<b>Postnatal development of the human brain</b> Miloš Judaš   School of Medicine University of Zagreb
11:30 - 12:00	Coffee Break
12:00 – 13:30	<b>PLENARY SESSION II</b> Chair: Nicola Palomero-Gallagher   Forschungszentrum Jülich
12:00 – 12:20	<b>Introduction to EBRAINS Research Infrastructure: Data</b> Jan Bjaalie & Maja Puchades   University of Oslo
12:20 – 12:40	<b>The multilevel human brain atlas in EBRAINS</b> Timo Dickscheid & Lyuba Zehl   Forschungszentrum Jülich
12:40 – 13:00	<b>Can we use cortical folding patterns as a proxy of architectural variability?</b> Jean-François Mangin   CEA
13:00 – 13:30	<b>HIBALL and related international initiatives</b> Alan Evans   McGill University
13:30 – 14:30	Lunch Break
14:30 – 15:30	<b>PARALLEL HANDS-ON SESSIONS, PART I:</b> One out of the three session can be chosen: <ul style="list-style-type: none"><li>• <b>BigBrain data processing with CBRAIN and DataLad</b> Bryan Caron   McGill University Shahbaz Memon   Forschungszentrum Jülich Morris Riedel   Forschungszentrum Jülich Pierre Rioux   McGill University Serge Boroday   McGill University Natacha Beck   McGill University</li></ul>

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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 Larivière | 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





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**[humanbrainproject.eu/education](https://humanbrainproject.eu/education)**

