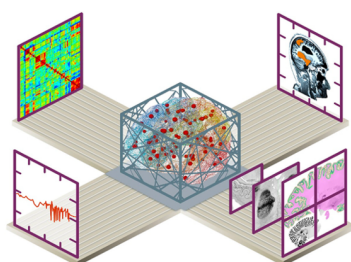**HBP Newsletter · April 2022**

Highlights

"The beginning of a new paradigm for understanding the brain"

In a new article published in eNeuro, fifteen leading scientists of the HBP outline how a new culture of collaboration and an era of digitalization has transformed neuroscience research over the last decade. Read more

### Your contribution to shaping the course of neuroscience

Researchers across Europe are invited to comment on a recently published position paper on the vision for the coming decade of digital brain research. Read more

News

Artificial intelligence helps scientists to measure human consciousness

New research shows that artificial intelligence can be used to quantify changes in consciousness during sleep, dreaming, anaesthesia, and coma. Read more
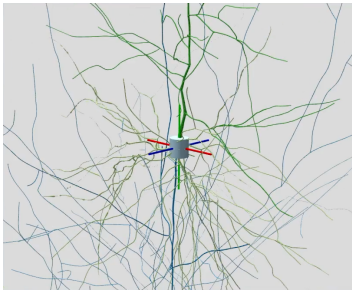
Arbor neural network simulation library gets an update

Arbor v0.6 boasts a range of new features, improvements, and bug fixes. [Read more](#)
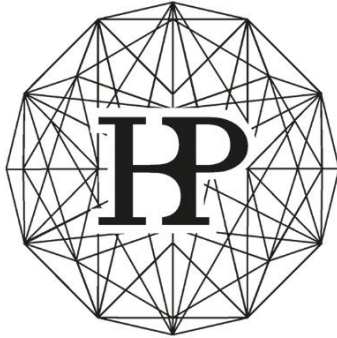
Event Recap: Training Workshop on Tools for Molecular Simulation of Neuronal Signaling Cascades

In the first week of March EBRAINS and the HBP Education Team were happy to host virtually the Training Workshop on Tools for Molecular Simulation of Neuronal Signaling Cascades. [Read more](#)

The HBP celebrates International Women's Day: the goal, the figures, the actions

March 8th is a special occasion to acknowledge women's incredible achievements, raise awareness, and encourage others to advocate for gender equality. [Read more](#)

Indicators and criteria of consciousness for behaviourally unresponsive patients

A recent BMC Medical Ethics publication explores how operational indicators previously introduced to assess consciousness in non-human animals and artificial intelligence can be relevant and have an ethical impact on the diagnosis and care of patients with disorders of consciousness. [Read more](#)

The Human Brain Project welcomes a new partnering project

The HBP has welcomed a new Partnering Project called "ModelDXConsciousness" (Combining model-free and model-based biomarkers for the consciousness diagnosis).

The main goal of ModelDXConsciousness is to obtain a multi-centric validated set of biomarkers for the diagnosis, prognosis and therapeutic responsiveness of post-comatose and patients with disorders of consciousness (DOC) in both chronic and acute stages.

The project originates from the FLAG-ERA JTC 2021.

The Human Brain Project stops receiving Partnering Project applications as of May 1st 2022

As the Partnering Project Scheme will come to an official end in 2023, the HBP will stop accepting new Partnering Project applications from May 1st 2022. May you wish to submit an application by April 30th, you can find the information about the application procedure here.

The HBP Partnering team will continue supporting the current HBP Partnering Projects in their activities. May you have any questions, please do not hesitate to reach out to us: partnering@humanbrainproject.eu!

Read more news items here.

Upcoming Events

21 April 2022: Training: Foresight and anticipation of social & ethical issues

Foresight, the ability to anticipate possible future developments and plan your actions based on this knowledge, is key to developing research in societally desirable directions. Register here

4 May 2022: The Fenix User Forum Virtual Café #3

The Virtual Café will offer an open and informal forum for researchers to

discuss their experiences and challenges of using Fenix services, or to ask questions about how to get access to these resources. The event is open to all researchers that are already using or are interested in using Fenix resources. Register here

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12 May 2022: Training: Neuroethical reflection on personalised virtual brain models

Analyses of the personalised brain models developed in HBP with emphasis on validity, reliability, benefits and risks. The aim of the course is to provide comprehension of their nature and purpose, possible clinical and social applications. Register to join

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16 May 2022 - Young Researchers Event Denmark

HBP and EBRAINS together with the University of Copenhagen invite the entire scientific community, in particular early career researchers, to join the Young Researchers Event on 16 May 2022 at the University of Copenhagen, Denmark. Registration is open!

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16 May 2022: Training: Human data in EBRAINS - Governance & compliance

The module will introduce a number of ethical compliance and data protection issues related to human data processing in neuroscience research, particularly issues raised by data processing activities in EBRAINS (such as informed consent, pseudonymisation, data controllership and data security). Participants will learn how to address these issues in ways that are socially acceptable, ethically responsible and legally compliant. Register here

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18 May 2022 - Diversity in Brain Research: Does it matter?

In this webinar, the Human Brain Project encourages scientists to consider sex, gender and additional diversity factors in neuroscience and related fields: because biology, social factors and culture play an important role in shaping the brain.

Prof. Lutz Jäncke and Dr. Frances Quevenco will discuss recent findings and

different viewpoints on how and when sex/gender differences in brain research are relevant.

The Human Brain Project will also present the winners of our Diversity In Research Paper Awards (DIRPA), who will outline their own research results and join the discussion. Register here

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30 May - 3 June 2022: BRAINS Brain Simulation School 2022

Registration will open soon!

Training on Single Neuron Models, Brain Circuit Models, Cognition, Collaboratory, Synaptic Plasticity and Learning

The target audience of this school are advanced master students, doctoral students and postdoctoral researchers in biomedical and technology sciences, coming from a wide range of disciplines, including medicine, biology, psychology, mathematics, informatics, information technology, physics and chemistry. The school will provide them with an introduction to the neuroinformatics and computational neuroscience tools available in the EBRAINS Infrastructure. The event is limited to 40 participants. Find out more

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2-4 June 2022: NIN Summer School

Every two years, the Netherlands Institute for Neuroscience (NIN), organizes a Summer School. In 2022, the subject of the Summer School is Neurotechnology. Registration is now open!

13-15 June 2022: BASSES EBRAINS Workshop

The goal of the BASSES Workshop (Brain Activity across Scales and Species: analysis of Experiments and Simulations) is to provide an overview of the scientific topic of brain states and complexity, state transitions, and their connection with cognitive functions, and to demonstrate the achievements in this field obtained within the Human Brain Project thanks to the functionalities provided by the EBRAINS research platforms. Register here

Submit your abstract!

We invite original, high-quality submissions describing innovative research addressing the topics of brain dynamics, brain states, state transitions, complexity, cognitive functions, software solutions and analysis tools. Abstract submission deadline: 6 May 2022.

9-13 July 2022: HBP & EBRAINS at FENS Forum 2022

The Human Brain Project and EBRAINS are exhibiting at the FENS Forum 2022 that takes place online 9–13 July 2022 in Paris, France. EBRAINS is organising a networking event on 11 July, 18:45–20:30 CEST. Should you like to join this event and discover our booth, please fill in our contact form here.

Learn about more upcoming events here.

Publications

Read recent publications from Human Brain Project scientists below!

1024-channel electrophysiological recordings in macaque V1 and V4 during resting state

Xing Chen, Aitor Morales-Gregorio, Julia Sprenger, Alexander Kleinjohann, Shashwat Sridhar, Sacha J. van Albada, Sonja Grün & Pieter R. Roelfsema

Read the full paper in Scientific Data

Cortical oscillations support sampling-based computations in spiking neural networks

Agnes Korcsak-Gorzo, Michael G. Müller, Andreas Baumbach, Luziwei Leng, Oliver J. Breitwieser, Sacha J. van Albada, Walter Senn, Karlheinz Meier, Robert Legenstein, Mihai A. Petrovici

Read the full paper in PLOS Computational Biology

Read more publications here.

Event Recordings

Did you miss one of our recent events or workshops? We've got you covered! Watch replays via the links below:

[Watch previous episodes of our Brain Matters webinar series!](#)

[15th Fenix Infrastructure Webinar: How and when to access the ICEI resources](#)

New videos are available in the HBP Education E-Library!

The videos from CodeJam #12, which was mainly dedicated to developer projects supporting EBRAINS interactive usage of tools and services and to improve the robustness of multi-site workflows, are now online! [Find them here](#)

In addition, videos from the Mediterranean Seminar for Consciousness (MESEC) have also been added. [Find them here](#)

Social Media

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