

HBP Newsletter · September 2022

Top news



How HBP is changing the way we treat epilepsy

Ongoing Human Brain Project research is dedicated to improving the surgery success rate for epileptic patients, by using extremely detailed brain simulation, patient-specific models and predictive software tools. <u>Read more</u>

How EBRAINS modelling tools are used to investigate the relationship between brain structure and function

A team of scientists is using the tools offered by the HBP's digital research infrastructure EBRAINS to address one of the oldest enigmas in neuroscience: the dichotomy of brain structure and function. Read more

HBP scientists propose guidelines for describing network connectivity

Scientists at the Human Brain Project now propose guidelines for the unambiguous description of network connectivity by formalizing concepts already in use in the computational neuroscience community. <u>Read</u> <u>more</u>

EBRAINS welcomes Karolinska Institutet as new associate member

EBRAINS is pleased to announce that Karolinska Institutet (KI) – Sweden's single largest centre of medical academic research – has joined the EBRAINS AISBL as an associate member. <u>Read more</u>

EBRAINS and HBP were present at the Bernstein Network conference on computational neuroscience

EBRAINS and The Human Brain Project were present at the Bernstein Conference 2022, which took place in Berlin from 13 to 17 September. EBRAINS was one of the sponsors of the conference, held annually by the Bernstein Network to bring together the international computational neuroscience community for scientific exchange. <u>Read more</u>

Human Brain Project research on Alzheimer's

To mark World Alzheimer's Month, we've curated a selection of news items, publications, and partnering projects that highlight the Human Brain Project's commitment to dementia research. Read more

FENIX success story: RUDI, an open-data project for everyone

The RUDI project offers a collaborative platform of data sets of general interest to the metropolitan area of Rennes (in Brittany, France). This data can be of different nature: socio-economic, environmental, geographical, or mobility data. RUDI is a corner stone in the implementation of Rennes' smart-city strategy. Read more

HBP Partnering Projects meet at Nijmegen to discuss their scientific outcomes and the future of EBRAINS

The meeting gave the platform for thirty-one speakers to showcase their scientific achievements that were fostered by the HBP Partnering Project environment, and approximately 50 participants, including summer school attendees, to engage into scientific discussions and networking. <u>Read more</u>



4-5 October 2022 - Neuro, digital & A.I. Innovation summit

This Summit will launch a new global initiative aimed at bringing together key stakeholders from across industries and disciplines not only to partner, but to address both the challenges and opportunities in the sector. Partners include the Human Brain Project, EBRAINS, the Brain Capital Alliance, and the OECD's Neuroscience Inspired Policy Initiative. <u>Find out more</u>

11 October 2022 - EBRA Final Conference

Collaboration and cooperation in the brain research area remain more important than ever and the EBRA Final Conference will be a major milestone to ensure unification and commitment to the future of brain research in Europe. Find out more

16-18 October 2022 - World Health Summit 2022

Pawel Swieboda and Petra Ritter will present at this event where science, politics, the private sector and civil society meet for inspiring talks, enhanced cooperations and new solutions. <u>Find out more</u>

19 October 2022 - Fenix Infrastructure webinar - "Federated Resource Management using FURMS"

Register here

20 October - Brain Matters webinar Episode 11 - Schizophrenia: a temporal disorder?

The next episode of Brain Matters will take place on 20 October from 16:30-17:30 CET and will feature HBP researchers: <u>Register Here</u>

21 October 2022 - EBRAINS Side Event at ICRI 2022 (hybrid)

The EBRAINS Side event will be an excellent opportunity to learn more about how the EBRAINS Research Infrastructure is supporting the future of brain science. <u>Find out more</u>

25 October 2022 - Young Researchers Event meets HIBALL in Zadar, Croatia

In conjunction with the 6th HIBALL BigBrain Workshop. Register here before 4 October

7-10 November 2022 - Simulate with EBRAINS

This online workshop aims at giving an overview of how to simulate with EBRAINS, from the infrastructure level to simulations at multiple scales. <u>Find out more</u>

12-16 November 2022 - SfN 2022 in San Diego, USA

Meet the EBRAINS & HBP team at Neuroscience 2022. Learn more

18–20 January 2023 7th and final HBP Student Conference in Madrid, Spain

Abstract submission & registration are open! Abstract submission deadline is 3 October.

14-16 March 2023 - EBRAINS Workshop: Anatomy and function of the pre-frontal cortex across species in Paris, France

Registration is open!

28 - 31 March 2023 - Human Brain Project Summit in Marseille, France

Save the date! The Human Brain Project Summit 2023 provides an open forum for hundreds of researchers, plus policy makers, media and public, to discuss exciting scientific results, the latest developments in the project, and the cutting-edge services and tools available on the EBRAINS Research Infrastructure is a great opportunity to share the latest developments of the Human Brain Project with the community and external audiences. Learn more

Publications

Neuronal congruency effects in macaque prefrontal cortex

Tao Yao & Wim Vanduffel. Read the full paper in Nature Communications

Toward noninvasive brain stimulation 2.0 in Alzheimer's disease

Arianna Menardi, Simone Rossi, Giacomo Koch, Harald Hampel, Andrea Vergallo, Michael A. Nitsche, Yaakov Stern, Barbara Borroni, Stefano F. Cappa, Maria Cotelli, Giulio Ruffini, Georges El-Fakhri, Paolo M. Rossini, Brad Dickerson, Andrea Antal, Claudio Babiloni, Jean-Pascal Lefaucheur, Bruno Dubois, Emiliano Santarnecchi. <u>Read the full paper in Ageing Research Reviews</u>

Combining hypothesis- and data-driven neuroscience modeling in FAIR workflows

Olivia Eriksson, Upinder Singh Bhalla, Kim T Blackwell, Sharon M Crook, Daniel Keller, Andrei Kramer, Marja-Leena Linne, Ausra Saudargienė, Rebecca C Wade, Jeanette Hellgren Kotaleski. <u>Read the full</u>

An accurate and flexible analog emulation of AdEx neuron dynamics in silicon

Sebastian Billaudelle, Johannes Weis, Philipp Dauer, Johannes Schemmel. Read the full paper in arXiv

Read more publications here.

Event Recordings

Watch our recent LinkedIn Live interviews on replay on YouTube:

'Degeneracy: is big data big enough?' with Svenja Caspers and Lisa Otten

'Virtual Brain Modelling for Epilepsy' with Philippe Ryvlin and Viktor Jirsa

Brain-based technology to support safe, human-robot collaboration' with Jörg Conradt & Yannick Morel

Watch previous episodes of our 'Brain Matters' webinar in this playlist.

Innovation

Market Analysis of the EBRAINS Multilevel Human Brain Atlas

Covering the Atlas' main features, international context and competitors; a SWOT analysis; its exploitation possibilities gathered from six interviewees and a list of some of the most important private players in neurotech nowadays. <u>Read more</u>

Solution Workshop: Neuropharma Edition

The Innovation team has recently organized the third online Solution Workshop, focused on Neuropharma, with the participation of HBP researchers and European startups that are showing outstanding approaches in the drug discovery and development area. <u>Read more</u>

EBRAINS Community

EBRAINS Subcommunity for Young Researchers in the EBRAINS Community Space!

The HBP Education Programme kindly invites you to join the subcommunity "Young Researchers – Education and Career"!

Community members will be informed you about upcoming activities and opportunities that help you to develop your career further and gain more knowledge and skills in your field of interest/research by using Human Brain Project and EBRAINS resources.

Join the community



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