

### NEWSLETTER

HBP Newsletter · November 2021

### Top news



# Putting brain health at the centre of the European policy agenda

Whether seen from the point of view of the individual citizen, patient or policy-maker, brain health will gain a growing centrality in the current decade. <u>Read remarks from Paweł Świeboda,</u> <u>CEO of EBRAINS and Director General of the</u> <u>Human Brain Project</u>



## NEW WEBINAR: Brain Matters #6 - Sensory processing: visual brain circuits

We are delighted to inform you that a new episode of our Brain Matters webinar 'Sensory processing: visual brain circuits' will take place on 30 November from 16:30 - 17:30 CET. <u>Register</u> <u>here</u>



# EBRAINS HealthDataCloud – Tackling the sensitive data challenge in brain research

The EBRAINS research infrastructure will add a new service for sensitive medical brain data to its offers for the scientific community – the EBRAINS HealthDataCloud. <u>Read more</u>





#### New Tools for the Neurosciences: Human Brain Project Presents Key Advances at Annual Summit

The Human Brain Project opened its 8th annual Summit with presentations of new scientific insights and technologies as well as a powerful new infrastructure for brain research – EBRAINS

#### Read more

#### When algorithms get creative

Human Brain Project scientists present new approach to reveal neuronal learning principles with algorithms that mimick biological evolution. <u>Read more</u>



Human Brain Project researchers demonstrate highly efficient deep learning on a spiking neuromorphic chip

The advance was enabled by the BrainScaleS-2 neuromorphic platform, which can be accessed online as part of the EBRAINS research infrastructure. <u>Read more.</u>

All publications on the social, ethical & reflective work in the HBP

We have compiled a list of all articles, books, and reports related to social, ethical and reflective work we have produced since the beginning of the Human Brain Project: October 2013. The folder with the list was presented during the HBP Summit earlier in October & can be downloaded <u>here.</u>

Read more news items here.

### News from EBRAINS Services



Volumetric rat brain atlas on EBRAINS now covers entire brain

Researchers from the Human Brain Project (HBP) have released version 4 of the Waxholm Space atlas of the Sprague Dawley rat brain, a volumetric open access atlas. <u>Read more</u>



## Complete data package of Julich-Brain Atlas released

The full dataset of the Julich-Brain probabilistic maps has been published and can be freely downloaded. <u>Read more</u>

#### **EBRAINS Live Papers**

We are happy to present a new service under EBRAINS called Live Papers. EBRAINS Live Papers are interactive documents bringing together code, models, and data.

For more details, do take a look at our preprint article: <u>https://doi.org/10.31219/osf.io/4uvdy</u>

Or you can dive in and explore the live paper platform: <u>https://ebrains.eu/service/live-papers/</u>

Learn more about EBRAINS services here.

### Join the EBRAINS user panel

If you are not a HBP member and wish to use the EBRAINS RI offerings for you research or to develop your own applications and tools, we would like to hear from you.

EBRAINS RI aspires to become a platform that will address the needs of different communities, based on the tools and services it offers, but also on the technologies used, available later to all the interested end-users.

Join now the external panel comprising scientists and developers from (a) the neuroscience community, (b) neighbouring fields, (c) completely external fields (e.g., Al/ML, Data Scientists).

For more information, click here.

### **Publications**

Read recent publications from Human Brain Project scientists below!

#### A neuronal basis of iconic memory in macaque primary visual cortex

Rob R.M. Teeuwen, Catherine Wacongne, Ulf H. Schnabel, Matthew W. Self, Pieter R. Roelfsema

Watch the video explanation

Read the full paper in Current Biology

#### General Anesthesia Disrupts Complex Cortical Dynamics in Response to Intracranial Electrical Stimulation in Rats

A. Arena, R. Comolatti, S. Thon, A. G. Casali and J. F. Storm

Read the full paper in eNeuro

#### Neuromodulation in epilepsy: state-of-the-art approved therapies

Prof Philippe Ryvlin, MD, Prof Sylvain Rheims, MD, Prof Lawrence J Hirsch, MD, Arseny Sokolov, MD, Prof Lara Jehi, MD

Read the full paper in The Lancet Neurology

#### A dopamine gradient controls access to distributed working memory in the large-scale monkey cortex

Sean Froudist-Walsh, Daniel P. Bliss, Xingyu Ding, Lucija Rapan, Meiqi Niu, Kenneth Knoblauch, Karl Zilles, Henry Kennedy, Nicola Palomero-Gallagher, Xiao-Jing Wang

Read the full paper in Neuron

Personalized brain models identify neurotransmitter receptor changes in Alzheimer's disease

Ahmed Faraz Khan, Quadri Adewale, Tobias R Baumeister, Felix Carbonell, Karl Zilles, Nicola Palomero-Gallagher, Yasser Iturria-Medina

Read the full paper in Brain

Read more publications here.

### Upcoming Events

30 November 2021: Brain Matters #6: Sensory processing: visual brain circuits

The webinar will feature Human Brain Project researchers who were recently selected to present posters at the Neuroscience 2021 virtual conference organized by the Society for Neuroscience (SfN)!

**Register here** 

# 09-11 December 2021: The Future of Medical Data Sharing in Clinical Neurosciences (EAN-EBRAINS Joint Workshop)

This event aims at exposing and openly discussing all issues and challenges associated with data sharing in Europe, from ethics to data safety and privacy, including those specific to data federation, such as the development and validation of federated algorithms.

Registration deadline: 25 November 2021

**Register here** 

# 14 December 2021 at 15:00 CET - FENIX webinar: How to request resources through JARDS

This webinar will present the new electronic application and review system JARDS, which has recently been released for HBP/EBRAINS experts and the neuroscience community to apply for Fenix resources.

**Register here** 

# 17 December 2021: TVB-EBRAINS Integrated Workflows - 7th Virtual Workshop

The purpose of this Workshop Series is to discuss existing interfaces and workflows of TVB in EBRAINS.

**Register here** 

# 22–25 February 2022: 6th HBP Student Conference on Interdisciplinary Brain Research

Participation in the 6th HBP Student Conference is open to the entire student

community and early career researchers, regardless of whether they are affiliated with the HBP or not.

Registration deadline: 07 February 2021

**Register here** 

Learn about more upcoming events here.

### Event Recordings

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

EBRAINS & IBRO First Virtual Master Class on Brain Atlasing and Simulation Services

<u>12th Fenix Infrastructure webinar: EBRAINS services deployed on ICEI</u> <u>services: NMC front-end</u>

Towards multipurpose neural network models II: Model testing and model fitting

Viola Priesemann: User report: using BrainScaleS to investigate dynamics in neural networks

### Call for paper submissions: DIRPA



# CALL FOR Paper SUBMISSIONS: Diversity in Research Paper Award (DIRPA)

The <u>Diversity and Equal Opportunities Committee</u> (DEOC) invites you to apply for the DIRPA, if your publication considers diversity traits such as sex, gender, age, ethnicity, etc. in your specific field of research like neuroscience, AI, Robotics.

#### Submission deadline: 21<sup>st</sup> December 2021

#### More information &

submission: <u>https://www.humanbrainproject.eu/en/about/gender-equality/measures-and-materials/</u>

### Social Media

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