Human Brain Project

Co-funded by the European Union

Human Brain Project Newsletter

July 2019

Dear Sir or Madam,

Please find below a short overview of news from the Human Brain Project (HBP) in June and July 2019, as well as an overview of upcoming HBP events.

Best Wishes,
HBP Public Relations

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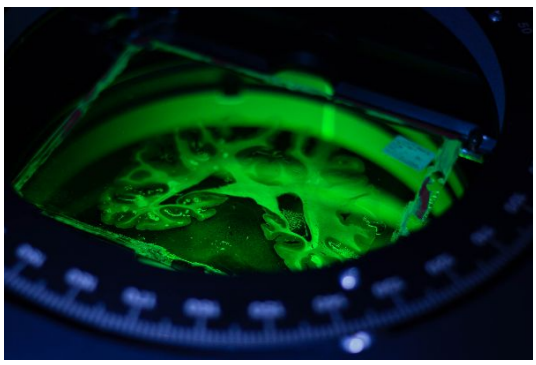
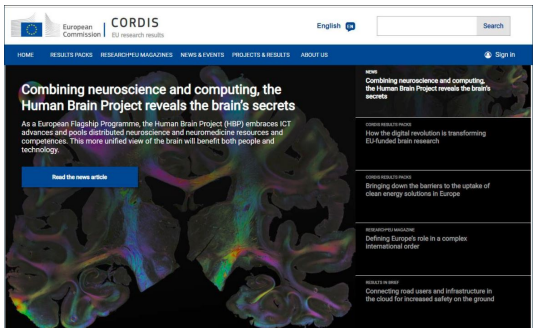
Research News

The HBP: driving synergy between neuroscience and technology



In a new PLOS Biology community page, leading scientists from the Human Brain Project give an overview of the project's science and infrastructure approach, as well as opportunities for the scientific community to make use of novel computational ressources for neuroscience. More

Cordis Results Pack features six articles on the Human Brain Project

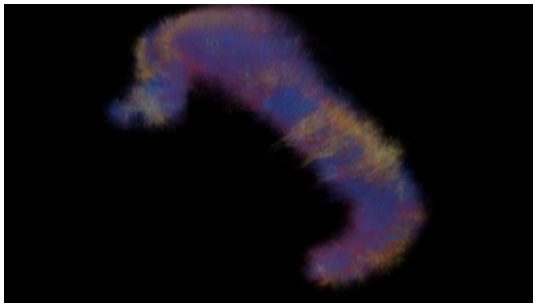


The newest CORDIS results pack “How the digital revolution is transforming EU-funded brain research” covers the Human Brain Project's work in six articles. Each article introduces a different focus point with a researcher from the project presenting key scientific aims, research platforms or ethics safeguards. More

The scientific case for brain simulation

Scientists from the simulation area of HBP argue for brain simulators as “mathematical observatories” to allow systematic testing and refinement of models in a loop between computational and experimental neuroscience. Their article has been published in the journal Neuron. More

ICEI resources used in the first detailed 3D hippocampus model

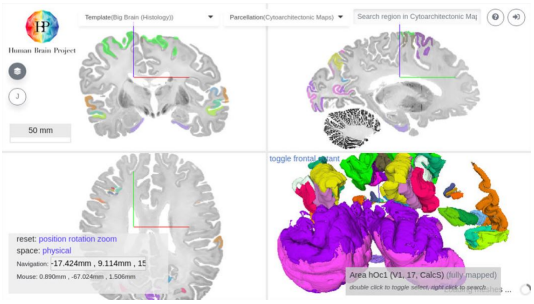


ICEI resources are being used in a large-scale project that aims to develop the first detailed and realistic 3D model of an area of the hippocampus.In theICEI (Interactive Computing E-Infrastructure for the Human Brain Project) project five leading European Supercomputing Centres are working together to develop a set of e-infrastructure services that will be federated to form the Fenix Infrastructure. More

The beneficial effects of sleep in a cerebral simulation

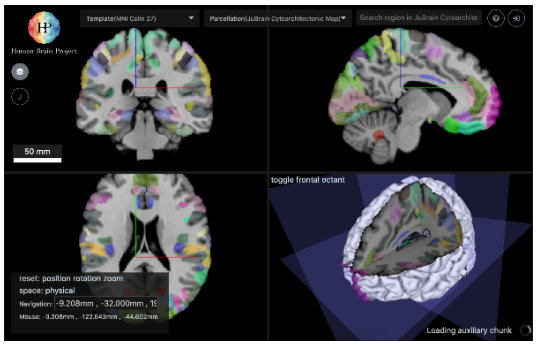
Why do we sleep? A study by HBP researchers in Italy now hints at a potential mechanism behind beneficial effects on memory. The work was conducted within the framework of the WaveScalES experiment in the HBP. More

New cytoarchitectonic maps in BigBrain



With an isotropic resolution of 20 micron, the BigBrain is the most detailed human brain model available to date, and one of three reference templates of the HBP atlases. HBP has now released a first set of 3D maps of cytoarchitectonic areas, which are based on expert delineations employing image analysis and multivariate statistics in individual histological, coronal sections. More

JuBrain: Probabilistic maps for 32 new human brain areas released



To reflect brain variability, the JuBrain cytoarchitectonic atlas consists of probabilistic maps of cortical areas defined by analysis of ten human post-mortem brains for each structure. The existing atlas of 74 individual maps has now received an update, and is extended by 32 new cytoarchitectonic maps. More

In Focus: HBP Curation support for neuroscience data

Help us realize the promise of Open Data!

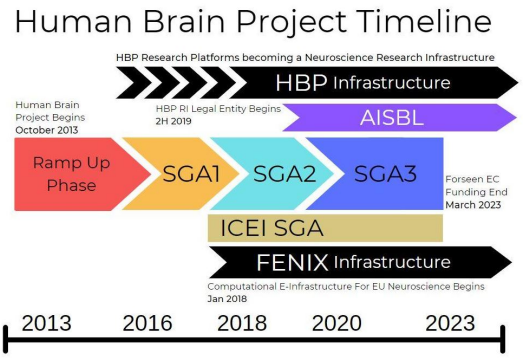
If you are ready to publish your data, and want to maximize the impact of your research by making it available to the broader scientific community you need to know what the HBP Data Curation team can do for you! The recently launched HBP Curation Support Service offers data and metadata management services, along-side a long-term data storage solution. HBP Curation Support Service can ensure your published data is FAIR - Findable, Accessible, Interoperable and Re-usable. Be FAIR with your data and contact us at: curation-support@humanbrainproject.eu

Ask the Data Curators: What is curation?

curation-support@humanbrainproject.eu

Project News

HBP Timeline Page



A new page on the HBP website explains in detail the timeline and details of how the Human Brain Project FET Flagship is funded by the European Union. Find out more about the different project phases and the planned foundation of a Legal Entity. here

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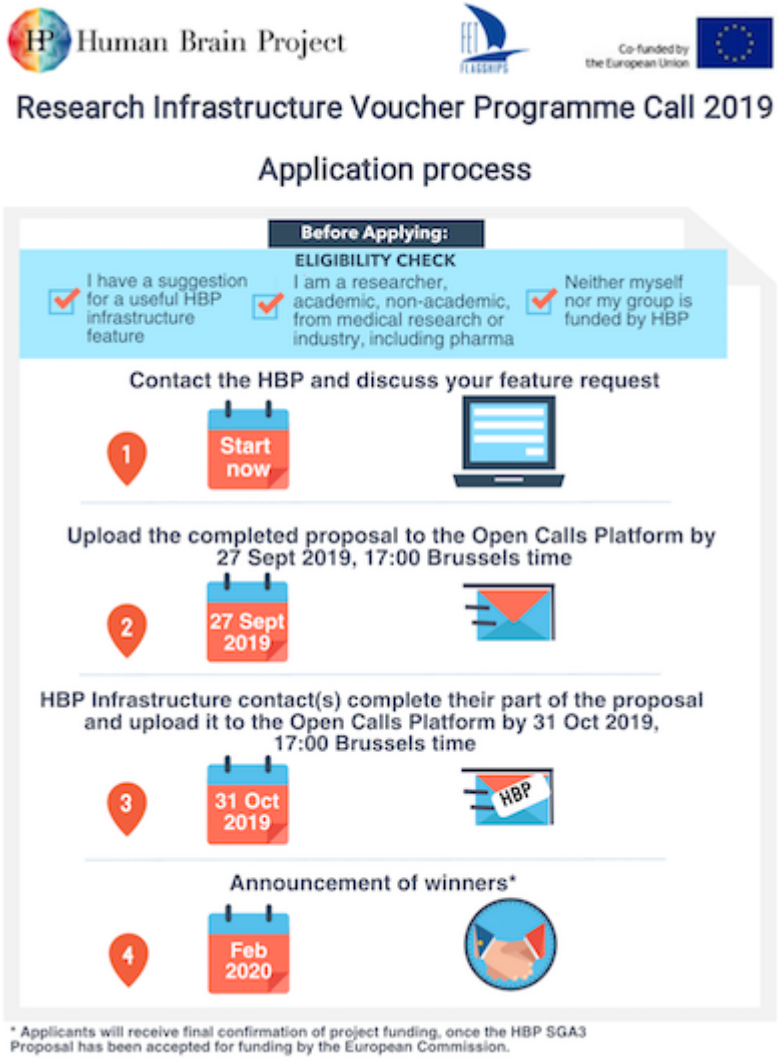
Advance your research and tech development with a voucher for the HBP Research Infrastructure – Submission deadline is on 27 September 2019.



The Human Brain Project (HBP) is providing its expertise and skills to researchers and groups around the world through the HBP Research Infrastructure (RI) Voucher Programme. The call is open to researchers worldwide, academic, non-academic, from medical research, including hospitals, and industry, including pharmaceuticals, diagnostics and medical devices. The aim is to open the HBP RI to meet the needs of the user community in a dynamic new way and to establish collaborations that pursue technology innovation and engineering solutions of mutual interest and benefit. The submission deadline for applicants is on 27 September 2019 17:00

Brussels time (CET). For more information please read the call documents under: https://opencalls.humanbrainproject.eu/call/voucher-programme-2019

Opening of the HBP traveling exhibition

On July 11th the much anticipated Human Brain Project Museum Exhibition was formally opened at the Bloomfield Science Museum in Jerusalem. After three months in Israel the exhibition will move to Poland's Kopernick Science Museum in September and tour throughout Europe over the coming years. More

High Performance Computing for neuroscience: Hands-on introduction

The SimLab Neuroscience of the Jülich Supercomputing Centre (JSC) organised an HBP Education Workshop that set the grounds for young neuroscientists to get started with supercomputing-based research methods. The tools and applications presented are currently being developed in the HBP's High Performance Analytics and Computing (HPAC) Platform. More

NEST conference in Norway

At the yearly NEST conference in Ås, Norway, developers and users of one of the HBPs main simulation engines gathered to discuss the latest science and technological developments. NEST (Neural Simulation Tool) is an engine using simplified point neurons for large scale network simulations.

HBP in the media

Mind the Brain: Report by i24NEWS on the opening of the Human Brain Project exhibition in Israel

Report on the HBP Young Researcher Event in Belgrade by Serbian TV channel RTS. Full article and video here

Neurosciencenews: (USA): The scientific case for brain simulations

Nature Outlook (USA): The four biggest challenges in brain simulation

i24NEWS English: (Israel): Project Aims to Unravel Mysteries of the Brain

Sciencedaily (USA): Hidden dynamics detected in neuronal networks

Corriere Nazionale (Italy): Gli effetti benefici del sonno in una simulazione cerebrale

Closeup Engineering (Italy): BCI: Human Brain Project

Datacenter Insider (Germany): Was ist neuromorphes Computing?

BBC News Mundo (Spain): Nuestro cerebro humano ya está en la nube

Investigación y Desarrollo (Mexico): Combinación de neurociencia y computación, el Human Brain Project revela los secretos del encéfalo

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Events and Dates

August and beyond

School of Brain Cells & Circuits "Camillo Golgi"
Erice, Italy
27th August – 1st September 2019
The 2019 Course of the school of brain cells and circuits in Erice, Italy, will be dedicated to modelling the brain and its pathologies. Modelling local microcircuits properties as well as large scale network properties is essential to understand how the brain works.

CAJAL course for whole brain imaging
Bordeaux Neurocampus, France
8-28 September 2019
The CAJAL course in Whole Brain Imaging in Bordeaux, France, is an intensive three-week course that will carry participants through the theory and practice of advanced methods for investigating brain structure-function relationships at the organ level.

Ninth SpiNNaker Workshop - From Virtual to Real Robotics using SpiNNaker
Manchester, UK
Sept. 9, 2019 at 09:00 – Sept. 13, 2019 at 17:00
INFRASTRUCTURE TRAINING EVENT
This event aims to bring together researchers interested in Neurorobotics, using both virtual and real devices, with those interested in SpiNNaker, with the aim of fostering links between the communities, and encouraging ongoing collaboration. By the end of the week, we want to establish SpiNNaker as a platform for neurorobotics and have a plan to remove any barriers to its adoption.

HBP Satellite workshop at Bernstein Conference 2019
Berlin, Germany
17 September 2019
The yearly Bernstein Conference (Sept 17-20 2019, Berlin) is the largest annual Computational Neuroscience conference in Europe, attracting an international audience from across the world. The Satellite Workshop "Brain Circuit Insight: From brain circuit models to brain circuit insights" on the Sept 17 features more than a dozen speakers from the Human Brain Project.

Neuroscience, robotics, AI and medical informatics: New insights with diversity & ethics
Graz University of Technology, Austria
26-27 September 2019
In this 2-day workshop, scientists from different fields like neuroscience, robotics, AI and medical informatics will provide you with insights on how they consider variables such as sex, gender, age etc. Application deadline: *19 August 2019*

Find further events at: https://www.humanbrainproject.eu/en/follow-hbp/events/
