



Human Brain Project Newsletter

October - November 2019

Dear Sir or Madam,

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

Best Wishes,
HBP Public Relations

NEXT WEEK: HBP Brain Days in Heidelberg

The HBP EBRAINS Brain Days will take place from November 25 - 28 at the University of Heidelberg in Germany. They will mark the introduction of EBRAINS to the scientific community. Workshops will cover an array of fascinating topics including data sharing, High Performance Computing, and coding. [Find out more](#)



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Research News

Simulation-based method to target Epilepsy goes into clinical trial



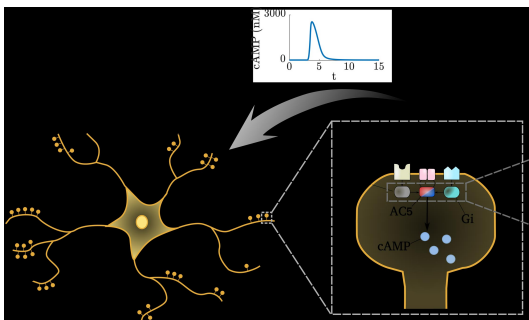
In what represents a major milestone on the path to clinical application, a novel method to improve outcomes of Epilepsy surgery has now received approval for clinical testing in 13 French hospitals. [Read more](#)

AI 360: Expert evaluation of future implications of AI and how to steer for societal benefit



In March 2019, recognized experts in rights and ethics, law, social science, culture, politics and economy met in Copenhagen for a multi-dimensional and thorough treatment of AI and its implications for our future societies. The discussion results were published in October. [Read more](#)

The way of making memories



New study on how memories are formed and the ability of the nervous system to learn and adapt to changing conditions. [Read more](#)

Selected recent papers

Response Dynamics in an Olivocerebellar Spiking Neural Network With Non-linear Neuron Properties. Frontiers in Computational Neuroscience, Vol. 13 Oct 01

Impaired adult neurogenesis is an early event in Alzheimer's disease neurodegeneration, mediated by intracellular A β oligomers. Cell Death & Differentiation Oct 07

The Amyloid Precursor Protein C-Terminal Domain Alters CA1 Neuron Firing, Modifying Hippocampus Oscillations and Impairing Spatial Memory Encoding.

Cell Reports, Vol. 29, No. 2 Oct 08

Holistic recollection via pattern completion involves hippocampal subfield CA3. The Journal of Neuroscience Oct 09

Dissecting the Shared and Context-Dependent Pathways Mediated by the p140Cap Adaptor Protein in Cancer and in Neurons. Frontiers in Cell and Developmental Biology, Vol. 7 Oct 15

Beta Oscillations in Working Memory, Executive Control of Movement and Thought, and Sensorimotor Function. The Journal of Neuroscience, Vol. 39, No. 42 Oct 16

In Focus: EBRAINS Splash Page launch

The Human Brain Project revealed its new collaborative platform for brain research, EBRAINS. The splash page is now live with a select amount of services available:

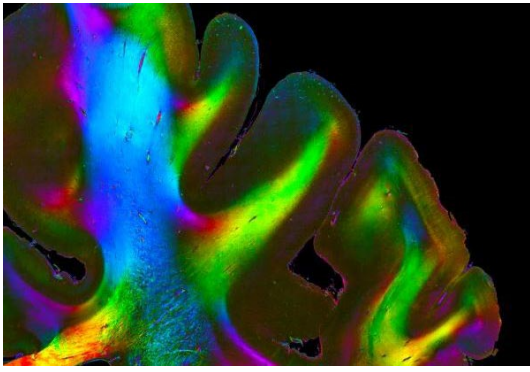
ebrains.eu

Stay tuned for the full launch!



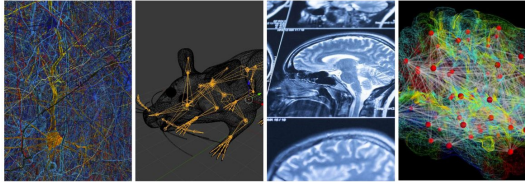
Project News

Human Brain Project exhibition opens in the German Bundestag



A new exhibition about the Human Brain Project will open on November 27th in the foyer of the German Parliament in Berlin. [Read more](#)

9 Calls for Expression of Interest



The Human Brain Project had nine Calls for Expression of Interest open in October, covering research areas such as microcircuits, High Performance Computing, and robotics. [Read more](#)

SfN 2019 recap



Scores of visitors caught a first look at EBRAINS, the new collaborative platform for brain science, at the HBP exhibition booth during SfN 2019, 19-23 October in Chicago. The annual meeting of the American Society for Neuroscience is the world's largest gathering of brain scientists, drawing almost 28000 participants from 70 countries this year.

Fenix webinar series kicked off



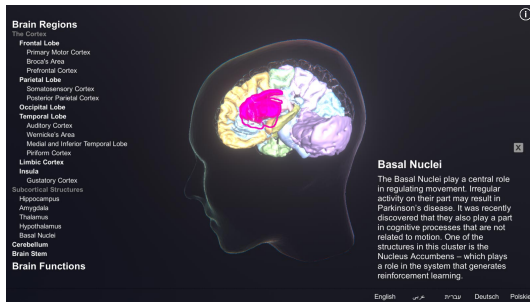
The webinar series on the Fenix Research Infrastructure kicked-off on October 8, 2019. This webinar series aims to inform the audience of what the Fenix infrastructure has to offer to its users and how to use the available resources. To see more about the upcoming webinars, please visit [this page](#)

FLAG-ERA finances 25 FET Flagship projects, Nine new Partnering Projects Join The Human Brain Project



FLAG-ERA, the Flagship ERA-NET, will fund 25 transnational projects in synergy with the Graphene Flagship and the Human Brain Project as a result of its fourth Joint Transnational Call (FLAG-ERA JTC 2019). [Read more](#)

Check out the new Brainweb Atlas!



The Virtual Brain's 'Brainweb Atlas' has received an amazing response on social media - people love this thing! Try it for yourself [here](#)

[HBP in the media](#)

Bloomberg (United States): [The Next Computer Revolution Will Be Based on Our Brains](#)



Nature (United Kingdom): [The search for secrets of the human brain](#)

Nature (United Kingdom): [The four biggest challenges in brain simulation](#)

Technology Networks (International): [Simulation-based Method To Target Epilepsy Goes to Clinical Trials](#)

EET India (India): [Neuromorphic Looks Set to Improve AI](#)

The Kavli Foundation (United States): [Creating a Perfect Brain Storm](#)

The Royal Irish Academy (Ireland): [The Case for National Research Data](#)

[Centres](#)

Simons Foundation (United States): [Taming the Wild Data World of Neuroscience](#)

Events and Dates

December and beyond

Network science for cortical circuits: specificity versus regularity.

Paris, France

December 4, 2019 - December 5, 2019

When one thinks of the brain – networks of connected neurons and connected brain regions immediately comes to mind. Indeed, already in 1949, Donald Hebb suggested that the activity of connected cell assemblies underlie the engram, proposing biological mechanism for forming such assemblies. Hebb's idea was recently validated by a set of ingenious optogenetic studies, showing that memory is indeed embedded in the activity of local microcircuits. But what is the anatomical structure of these networks? In particular, of local cortical microcircuits? This question is intensely studied using new experimental and theoretical approaches.

Modern trends in cognitive architectures and systems: From theory to implementation in natural and artificial agents.

University of Glasgow

Dec. 11, 2019 – Dec. 13, 2019

In order to understand and implement cognitive systems, recent developments in neuroscience need to be brought together with computational techniques that integrate models and implement simulations.

BrainModes Conference

Pokhara, Nepal

December 12, 2019 - December 13, 2019

BrainModes is an annual meeting that brings together international experts from various disciplines and seeks to explore innovative means of understanding complex brain activity and multimodal neuroscience data sets. This year's meeting will focus on exploring "Unified Principles of Brain Connectivity and Dynamics". It will be held in Pokhara, Nepal. The main conference will be on December 12 - 13. The pre-conference course, intended to provide participants with the foundations of neuroimaging and computational neuroscience, will be offered on December 11. For both of these events, the total number of participants will be limited to 100.

Workshop on Modeling brain signals

Paris, France

9th-10th January, 2020

Alain Destexhe, Gaute Einevoll and Viktor Jirsa are organizing a workshop in Paris on Modeling brain signals. The workshop will be on January 9 and 10, 2020.

The goal of the workshop is to review the different approaches to obtain biophysically correct models of brain signals, from different model types such as morphologically-reconstructed models, point neuron models or mean-field and population models. We will consider electric (units, LFP, EcoG, EEG), magnetic, optical (VSD and calcium imaging), up to fMRI signals.

4th HBP Student Conference on Interdisciplinary Brain Research

Pisa, Italy

Jan. 21, 2020 – Jan. 22, 2020

The human brain is such a complex system that it can only be understood by combining knowledge and practices from multiple scientific fields. The 4th HBP Student Conference provides an open forum for the exchange of new ideas among young researchers working across various aspects of science relevant to the Human Brain Project (HBP). The

conference offers a space for extensive scientific dialogue, both intra- and interdisciplinary, among peers and faculty through a variety of discussion sessions, lectures and social events.

9th Human Brain Project Summit & Open Day

Athens, Greece

Feb. 3, 2020 – Feb. 6, 2020

The HBP Summit & Open Day will explore multiple dimensions of neuroscience, including infrastructure, research, technology, application, education, and innovation.

More information can be found on the [HBP Summit & Open Day website](#).

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

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