



Human Brain Project Newsletter

October 2018

Dear Sir or Madam,

Please find below a short overview of news from the Human Brain Project (HBP) in October 2018, as well as upcoming HBP events.

Best Wishes,
HBP editorial office

This month the Human Brain Project had to mourn the loss of Prof. Karlheinz Meier, who passed away on 24 October. He was a founder and leader of the HBP, and a friend and mentor to many throughout the project.

A statement has been made on the [HBP website](#), which is reproduced below.

To pay further tribute to Karlheinz Meier's extraordinary contribution to the Human Brain Project, a page has been set up that collects voices from his colleagues. You can find it [here](#).



IN MEMORY OF PROF. KARLHEINZ MEIER 1955-2018

We mourn the loss of our friend and colleague Prof. Dr. Karlheinz Meier, who passed away suddenly on Wednesday, 24 October 2018, in Heidelberg, Germany. He was 63 years old.

Karlheinz was one of the founders of the Human Brain Project, shaped it like few others, and was one of its most effective advocates. In particular, he made a crucial contribution to establishing the HBP's unique symbiosis between neuroscience and computing. In addition to leading the HBP's Neuromorphic Computing research efforts, he was part of the Project's executive leadership from the beginning, most recently as its Infrastructure Operations Director.

His notable achievements in advancing brain-inspired computing have paved the way to faster than real time brain emulations to explore how the brain rewires itself as it learns. They follow significant accomplishments in other fields, including physics, in a distinguished career which has sadly ended too soon.

We have lost a great scientist, who despite a long illness drove the project's work with vision, energy and enthusiasm. He will be sorely missed by us all. Our thoughts are with his family at this sad time.

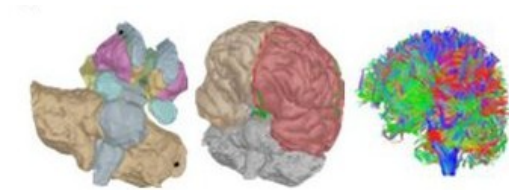
Katrin Amunts, Andreas Mortensen and Christian Fautoux on behalf of the Human Brain Project

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Research News

Improving epilepsy care: HBP researchers involved in major clinical trial



In a world's first, personalized brain modelling is providing the basis for a large-scale clinical trial in epilepsy. On our website, HBP scientist Viktor Jirsa explains how it works, and how the HBP catalyzed the development. The approach could bring the first breakthrough in decades for drug resistant epilepsy patients that have to undergo brain surgery. [More](#)

Watch: Data integration and interactive use of HBP's brain Atlas systems



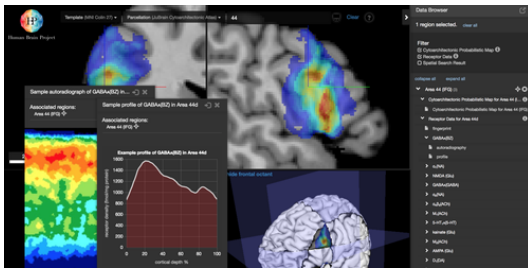
Two new videos about the HBP Brain Atlas systems explain key principles of the workflows used for registration of data into common reference atlases, and demonstrate the different interactive capabilities scientists can use to explore HBP's multi-level human brain atlas. [More](#)

The HBP and Global Neuroethics



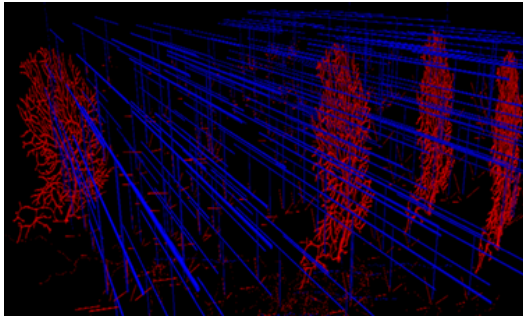
In a joint paper in the October issue of the journal *Neuron*, researchers from the large global brain initiatives, including HBP's Arleen Salles, discuss ethical considerations for neuroscientists throughout the world. October also saw the second Global Neuroethics Summit in Korea, with several HBP delegates. [More](#)

Neuroimaging and the future of brain cartography



HBP scientists Simon Eickhoff and Sarah Genon this month explained in the journal *Nature Reviews Neuroscience* how rapid advances in Magnetic Resonance Imaging may help revolutionize our understanding of the brain's organization and its relation to human behavior. Both researchers are contributors to the HBP's Human Brain Atlas. [More](#)

An artificial cerebellum that also learns to blink



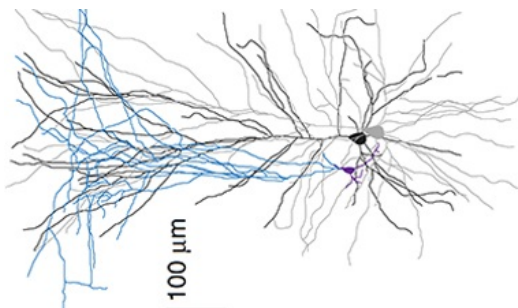
CerebNEST is an Partnering Project of the HBP that focuses on the study of a brain region related to movement: the cerebellum. The scientists have developed a model with which to study how that area of the brain works and how it is affected when under illness. [More](#)

Goldman-Rakic Prize for Prof. Jean-Pierre Changeux



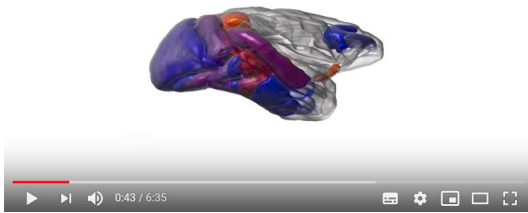
Prof. Jean-Pierre Changeux has been honored with the Goldman-Rakic prize for outstanding Achievement in Cognitive Neuroscience Research. The scientist has made contributions to multiple fields, from molecular neurochemistry to the theory of consciousness. In HBP he currently leads the Co-Design Project “Modelling Drug Discovery”. [More](#)

Acetylcholine rapidly alters lateral inhibition in cortical circuits



In a recent publication in *Nature Communications*, HBP scientist Huib Mansvelder and his team at Vrije Universiteit Amsterdam revealed rapid effects of the neuromodulator acetylcholine on human and mouse cortical neuronal networks. [More](#)

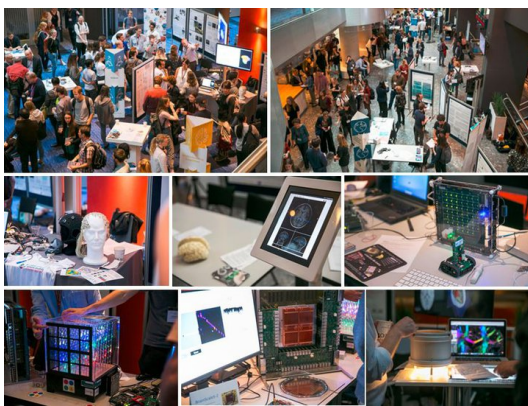
Multi-scale spiking network model of macaque visual cortex



A new cortical multi-area model elucidates relationships between local and global scales in cortex and provides a platform for future studies of cortical function. The [study](#) was published in PLOS Computational Biology. A [video](#) on YouTube provides instructions on how to get started with the model.

Project News

HBP Open Day 2018 – the Flagship at the halfway mark



On October 15th the HBP's held its annual Open Day, this year hosted by Maastricht University, with a record number of visitors. The Open Day marked a special occasion: Started in October 2013 as a ten-year FET Flagship project of the European Commission, the HBP crossed half-time this month. [More](#)

WATCH: Video from the HBP Open Day 2018



Maastricht University has produced a nice video that gives a glimpse into the HBP Open Day 2018. We thank our host **Rainer Goebel** and his team in Maastricht as well as all other members of the organizing team, the many speakers and presenters, and all visitors for making this event a success.

European Commissioner Mariya Gabriel at the HBP Summit



On 16 October the Human Brain Project had the honor of welcoming Mariya Gabriel, European Commissioner for Digital Economy and Society, in Maastricht to the first day of its annual meeting, the HBP Summit. In her welcoming message, the Commissioner expressed her strong support for the HBP's work. before visiting exhibits from the project's research. [More](#)



Max Planck School of Cognition
The new Max Planck School of Cognition invites applications starting on November 1, 2018. HBP Scientific Director Katrin Amunts is Co-Speaker of the school, which establishes a novel type of collaboration between German universities and research organizations, to jointly train the next generation of scientists. [More](#)

Four New Projects in HBP

Results of the second round of Calls for Expression of Interest (CEoI) are in. Four successful projects were selected for EC funding via the HBP:

- **SEEGMIP** will work on *Testing pathophysiological models of brain diseases*. Coordinator: Université Grenoble Alpes (UGA), France
- **TVB-NDD** and **TANS** will contribute to the *Federated analysis of human intracerebral stimulation and recording data*. Coordinators: Charité Universitätsmedizin Berlin (CHARITE), Germany; Uniklinik RWTH Aachen (UKAACHEN), Germany, and King's College London (KCL), United Kingdom
- **ROHAN** will assess the *Comprehensive ontologies for brain diseases*. Coordinator: Fraunhofer Society for the Advancement of Applied Research (FG), Germany

Events and Dates

November and beyond

SpiNNaker 1 million – a flagship for neuromorphic computing

2 November

University of Manchester

Hosted by Prof. Steve Furber, the delivery of the full 1 million processor SpiNNaker machine will be celebrated. Find more about the event [here](#). A video can be found here: "[SpiNNaker: 1 million core neuromorphic platform](#)"

Dual Use and Responsible Research: Ethical Challenges

Nov. 15, 2018 – Nov. 17, 2018

Karolinska Institutet Stockholm, Sweden

This workshop aims to provide participants with insights on ethical aspects of dual-use research in neuroscience and Responsible Research and Innovation (RRI).

Late application still possible!

Are we building the right user-level documentation?

22-23 November

Paris

At this EITN workshop, current and prospective users of the simulation engines NEST, SpiNNaker and BrainScaleS will have the opportunity to share their experience with the software, and provide feedback and ideas regarding user-level documentation. The aim is to integrate the larger user community into the development process of the documentation and better understand user perspectives and usage of neuroscientific software and tools.

The HBP CodeJam #9 Workshop

Nov. 26, 2018 at 09:00 – Nov. 28, 2018 at 18:00

Palermo, Italy

The goal of the CodeJam workshops is to catalyze open-source, collaborative software development in computational and systems neuroscience and neuroinformatics, by bringing together researchers, students and engineers to share ideas, present their work, and write code together.

The HBP at ICT 2018: Imagine Digital - Connect Europe

4-6 December

Vienna

This research and innovation event will focus on the European Union's priorities in the digital transformation of society and industry. It will present an opportunity for the people involved in this transformation to share their experience and vision of Europe in the digital age. The HBP will be represented in the exhibition area of ICT 2018 to showcase its achievements and provide visitors with a glimpse into the ongoing construction of the HBP Joint Platform, the world's first integrated ICT infrastructure for brain research. A networking session will be organized in which participants can learn about ways to collaborate and contribute. HBP contact: outreach@humanbrainproject.eu

1st HPAC Platform Training

Dec. 11, 2018 at 09:30 – Dec. 12, 2018 at 13:00

Barcelona Supercomputing Center

The objective of the 1st HPAC Platform Training Event is to introduce the HPAC Platform as well as to provide assistance to the potential users in understanding the application process for supercomputing resources access.

3rd HBP Student Conference on Interdisciplinary Brain Research

Ghent University, Belgium

6-7 February 2019

The 3rd 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). Extended abstract submission deadline: 6 November 2018

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

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