



# Human Brain Project Newsletter

January 2019

Dear Sir or Madam,

Please find below a short overview of news from the Human Brain Project (HBP) from December 2018 to January 2019, as well as an overview of upcoming HBP events.

Best Wishes,  
HBP editorial office

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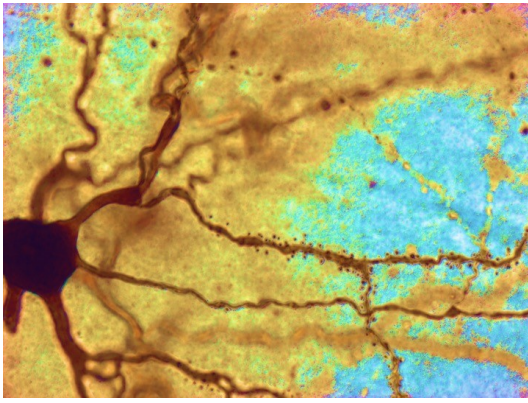
## Research News

### Opinion on Responsible Dual Use from the Human Brain Project



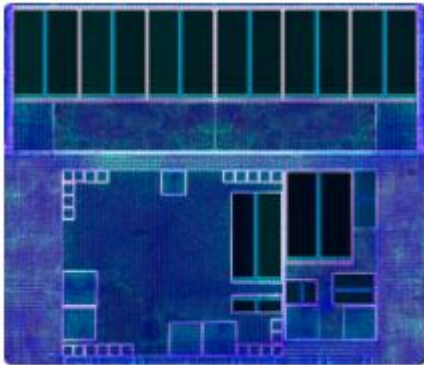
The Ethics and Society group of the Human Brain Project (HBP) has just published its opinion on “Responsible Dual Use” including recommendations for dealing with dual use concerns in relation to misuse of brain research and new computing technologies. [More](#)

**Large and fast human pyramidal neurons associate with intelligence**



Scientists working within the Human Brain Project have for the first time uncovered a direct relation between brain cell size and IQ level. As they describe in the journal *eLife*, larger neurons in the so-called temporal lobe of the brain that generate electrical signals with higher speed are related to faster processing rates and intelligence level as assessed in standard IQ testing. [More](#)

### One step closer to brain-like computing

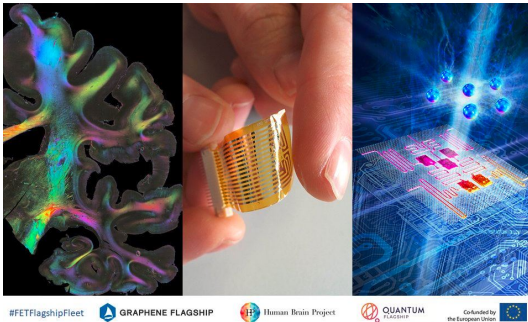


"Neuromorphic" computers take inspiration from the brain to achieve enhanced efficiency. *SpiNNaker*, one of two neuromorphic systems in HBP, recently hit the milestone of one Million cores. In this article for *sciencebreaker.com*, HBP Scientists Sacha van Albada and Markus Diesmann give insight in how they explore the potential of these machines for brain simulation. [More](#)

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## Project News

### Successful representation at ICT 2018



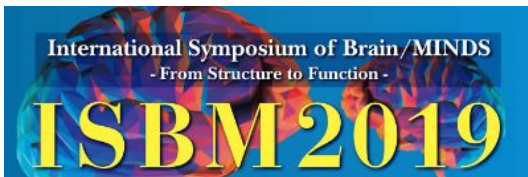
From 4-6 December, Europe's largest ICT event, ICT 2018, took place in Vienna, featuring a dedicated exhibition and special events on the digital transformation of society and industry. For the first time, all three of the EU's FET Flagships – Graphene Flagship, Human Brain Project and Quantum Flagship – were represented side by side. Several media events and three neighboring exhibition booths with interactive demos invited visitors to discover Europe's Flagship Fleet.

### Third FLAG-ERA Call for Flagship Supporting Projects



FLAG-ERA has published the announcement of its third Joint Transnational Call (JTC2019) in support of projects in synergy with the Graphene Flagship and the Human Brain Project. The call aims to add a third wave of transnational partnering projects to support and extend these two FET Flagship initiatives. The pre-proposal submission deadline is February 19, 2019. [More](#)

### **HBP at the Brain/Minds meeting in Tokyo**



Leaders of the large global brain initiatives came together at the International Symposium of Brain/MINDS ISBM2019 in Tokyo. HBP Research Director Katrin Amunts presented the HBP in a plenary session that also featured speakers from Brain/Minds Japan, the US Brain Initiative, the Allen Institute for Brain Science and the China Brain Project. [More](#)

### **SPANISH HBP NATIONAL HUB FOR INNOVATION LAUNCH**



The Spanish HBP National Hub for Innovation was launched on December 14th at the Ministry of Science & Research, in Madrid. About 30 interested companies from sectors as biotechnology, pharma or bioinformatics attended the event, together with members of the HBP's Innovation & Technology Transfer Node and Project Coordination Office.

### **HBP research presented at AI collaboration meeting in Canada**



During a joint workshop on AI and Neuroscience of the Canadian Institute for Advanced Research (CIFAR) and Forschungszentrum Jülich, HBP research was presented by Katrin Amunts, Timo Dickscheid and Simon Eickhoff. CIFAR and FZJ signed a memorandum of understanding to ramp up future collaboration in the areas of neuroscience, artificial intelligence, and high-performance computing.

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### HBP Curriculum enters third Teaching Cycle



After careful evaluation and revision, the HBP Curriculum on Interdisciplinary Brain Science, organised by the Human Brain Project's dedicated Education Programme, has entered its third Teaching Cycle. A new online course on Cognitive Systems has been added to the video collection and six face-to-face workshops will take place in 2019. Applications are open now. [More](#)

### Fundamentals of Ontology Engineering Course



Organized by HBP and INCF and hosted by University of Oslo, this introductory 'hands-on' course provided participants with the theoretical foundations and some practical experience to begin building OWL ontologies using Protégé-OWL tools. In addition, the Neuroscience Information Framework (NIF) Ontology, which is used in the HBP KnowledgeGraph for data curation, was introduced as a resource for standardizing annotation and classification of neuroscience knowledge, methods and resources.

### 1st HPAC Platform Training Event took place in Barcelona



17 attendants from eight different institutions, several of them external to HBP, participated in the 1st HPAC Platform Training Event, which took place in Barcelona during the second week of December. All presentations are available on the event website. [More](#)

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## **Events and Dates**

### **February and beyond**

#### **3<sup>rd</sup> 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).

#### **High Performance Computing for Neuroscience (PDP2019)**

Pavia, Italy, 15-19<sup>th</sup> Feb

High Performance Computing for Neuroscience 2019 aims at collecting recent advances both on the design and test of digital systems and in software (parallel) simulations of brain models.

#### **Brain Research & Tech: How can Horizon Europe improve human brain health and performance?**

6 March 2019, Brussels, Belgium

The first part of the conference addresses progress in brain technology: modelling the whole brain, reproducing its function and repairing its dysfunction. We will see how this approach opens new directions, in particular by means of high performance computing, towards the care of disorders such as epilepsy and dysfunctions such as blindness. The second part addresses societal relevance and impact of latest brain technology. The triangle of academic, industrial and clinical partners enables the translation of scientific advances into society. We will discuss the underlying mechanisms of successful translation and its failures, and interrogate Europe's future roadmap from the perspective of industry, policy makers and ethics.

Both parts will present concrete examples of progress and perspectives from within the Human Brain Project, Technology Transfer in Health and European data and computing infrastructures. They will highlight significant progress made in these fields due to interdisciplinary research, identify challenges, and address issues targeted by future European programmes, in particular Horizon Europe.

With the participation of high level experts & speakers

- Prof. Dr. Katrin AMUNTS; Scientific Director, Human Brain Project
- Dr. Thomas SKORDAS, European Commission, DG CONNECT
- Dr. Pierre MEULIEN; Exec. Dir, Innovative Medicine Initiative
- ... & high-representatives from European Parliament, European Commission, Industries

Scientific coordination:

Prof. Dr. Viktor JIRSA, Principal Investigator Human Brain Project, Scientific Lead & Curator The Virtual Brain

#### **AI 360 I Copenhagen**

Strandgade 6, st., 1401 Copenhagen

Marts 21<sup>st</sup> - 22<sup>nd</sup>, 2019

AI 360 I COPENHAGEN is a one-and-a-half-day, multi-disciplinary expert workshop on the societal implications of AI. The workshop will prioritize implications and provide actionable recommendations for addressing the most important ones. Additional information can be found [here](#).

## **NEST Conference 2019**

June 24, 2019 – June 25, 2019

Norwegian University of Life Sciences (NMBU), Ås, Norway

Dear NEST Community!

The NEST Conference 2019 will be held Monday/Tuesday 24./25. June 2019 at NMBU, Ås, Norway followed by a Hackathon during the rest of the week.



We are very much looking forward to welcoming you back to our beautiful campus. Save the date and stay tuned for more information!

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

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