

#### HBP Newsletter · July 2023

# Top news



# Human Brain Project: Study presents large brain-like neural networks for AI

In a new study in Nature Machine Intelligence, researchers Bojian Yin and Sander Bohté from the HBP partner Dutch National Research Institute for Mathematics and Computer Science (CWI) demonstrate a significant step towards artificial intelligence that can be used in local devices like smartphones and in VR-like applications, while protecting privacy. <u>Read more</u>

#### **Measuring & describing consciousness: clinical tool and theoretical model prove compatible** The debate on how to describe consciousness is lively in the research community. <u>Read more</u>

# New algorithms enable artificial intelligence to learn like the human brain

Researchers of the Human Brain Project have taken inspiration from the most evolved region of the human brain – the prefrontal cortex – to advance learning in artificial neural networks. Their work has recently been published in PLOS Computational Biology. <u>Read more</u>

# New Human Brain Project study reveals important details about brain activity during unconsciousness

Human Brain Project researchers provide a deeper understanding of the dynamics of brain activity during states of unconsciousness, opening doors to potential therapeutic interventions. <u>Read more</u>

# HBP Fundraising Bootcamp for start-ups

On May 30th and 31st, the HBP Fundraising Bootcamp for start-ups took place at the EBRAINS headquarters in Brussels. <u>Read more</u>

#### Human Brain Project study offers insights into neurotransmitter receptor organisation

A key challenge in neuroscience is to understand how the brain can adapt to a changing world, even with a relatively static anatomy. Read more

#### Brain modelling used to identify necessary circuits of consciousness

Researchers of the Human Brain Project have used a model-based approach to identify the brain circuits implicated in consciousness. <u>Read more</u>

### Interactive computing service enters pre-production stage

The interactive computing service provides an alternative approach to computational resources and is accessible via a web browser with an extended JupyterLab interface. <u>Read more</u>

#### Developing robots with brain-derived skills

The HBP is using neuro-derived technologies to make machines smarter. This not only advances the field of robotics but also helps neuroscientists to better understand how the brain works. <u>Read more</u>

# Events

# Save the Date and join us for the concluding event of the Human Brain Project - Pioneering digital brain research

From September 12 - 13, 2023, the Human Brain Project will celebrate its successful conclusion with a

scientific symposium at Forschungszentrum Julich. In addition to the international project partners, representatives from politics and the media are cordially invited to attend.

Visit the website: https://www.humanbrainproject.eu/en/hbp-final-event/

### 4-6 October 2023 - 7th BigBrain Workshop 2023

Registration is now open for the 7th BigBrain Workshop, taking place in the beautiful city of Reykjavik, Iceland, on October 4th to 6th, 2023. This workshop is an opportunity for the neuroscientific community to come together and present their cutting-edge research, discuss future prospects of the BigBrain data and tools, and explore how to better leverage high-performance computing and artificial intelligence to create multimodal, multiresolution tools for the high-resolution BigBrain and related datasets.

More details and registration



Watch **videos from the HBP Summit** programme including keynotes, presentations, awards ceremonies, and panels <u>here.</u>

Watch the 20th Fenix Infrastructure Webinar "Interactive Computing Services in Fenix" here.



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