

Thirteen new projects selected for implementation on the EBRAINS Infrastructure

Human Brain Project announces winners of third EBRAINS Voucher Call

BRUSSELS, BELGIEN, May 27, 2021 /EINPresswire.com/ -- A new group of projects will soon start on the EBRAINS research infrastructure. Thirteen innovative projects from Europe, the United States, and Canada have successfully applied for a voucher that gives them access to EBRAINS' extensive implementation support. The vouchers fund the work of dedicated expert Human Brain Project's teams for the development and implementation of new tailor-made infrastructure features, which will help the winners turn their ideas into reality. The research areas addressed in this action include computational models of brain diseases, learning algorithms for speech recognition, and therapy robots. The overall budget volume is 1 Million Euro.

EBRAINS is a key enabler to advance brain science. The aim of the Voucher Call is to expand EBRAINS to meet the needs of the user community in a new, dynamic way: the vouchers will fund the work of HBP engineers to solve the technical and scientific questions of the winning proposals via the development of new platform tools and advancement of available services.

EBRAINS received proposals from researchers and groups across the world. After a careful and systematic assessment, a team of eight evaluators, who were all external to the HBP consortium, announced the winning proposals. For each EBRAINS service category, the selected projects are:

For EBRAINS FAIR data services and Brain atlas services:

Unraveling the architecture of murine perirhinal and visual neural networks underlying perceptual and mnemonic processes using FAIR data (PERIVIS)

Marianne Fyhn, University of Oslo (Department of Biosciences), Norway

For EBRAINS Brain modelling and simulation platform:

Next generation neural mass models: bridging the scales from micro to macroscopic dynamics (NextGen)

Simona Olmi, Consiglio Nazionale delle Ricerche - Istituto dei Sistemi Complessi, Italy

Prediction of neurosurgical treatment outcomes in Parkinson's disease (ParkinsonBrain)
Ausra Saudargiene, Lithuanian University of Health Sciences (Neuroscience Institute), Lithuania

Intelligent digital tools for screening of brain connectivity and dementia risk estimation in people affected by mild cognitive impairment (AI-Mind)
Ira Haraldsen, Oslo University Hospital (Neurology), Norway

NEST-demo co-simulation: Towards linking closed-loop motor control models to multi-scale experimental data (NEST-Demoa)
Syn Schmitt, University of Stuttgart (Institute for Modelling and Simulation of Biomechanical Systems), Germany

Efficient support for Sonata in NEST (NESTSONATA)
Anton Arkhipov, Allen Institute, United States of America

Astrocyte-neuron interactions in large-scale networks: Developing new astrocyte modules for NEST simulator (AstroNeuronNets)
Jugoslava Aćimović, Tampere University, Finland

Startle-network modelling for Schizophrenia research – Insights from subcellular models of neuromodulation (SubSchiz)
Tuomo Mäki-Marttunen, Tampere University, Finland

Simulating direct calcineurin suppression of protein kinase A in neurons (NeuroSMS)
Matthew Gold, University College London (UCL), United Kingdom

For EBRAINS Closed loop AI and robotics workflows:

Cognitive architecture for therapy robots and avatars (CATRA)
Julie Robillard, University of British Columbia (Medicine), Canada

For EBRAINS Neuromorphic Computing Platform:

Neuromorphic hardware operating at the edge of asynchrony (Async- Neuromorph)
Emili Balaguer-Ballester, Bournemouth University (Computing and Informatics), United Kingdom

Exploiting local learning and criticality for speech recognition (LoL 4 Speech)
Viola Priesemann, Max Planck Institute for Dynamics and Self-Organization, Germany

Surrogate-gradient-based training on BrainScaleS-2 (STROBE)
Friedemann Zenke, Friedrich Miescher Institute of Biomedical Research (Computational Neuroscience), Switzerland

We are excited to see the projects developing new innovative tools and applications for the EBRAINS infrastructure. We thank all who have participated in the call.

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ABOUT THE HBP

The Human Brain Project (HBP) is the largest brain science project in Europe and stands among the biggest research projects ever funded by the European Union. At the interface of neuroscience and information technology, the HBP investigates the brain and its diseases with the help of highly advanced methods from computing, neuroinformatics and artificial intelligence, and drives innovation in fields like brain-inspired computing and neurorobotics.

ABOUT EBRAINS

EBRAINS is a new digital research infrastructure, created by the EU-funded Human Brain Project, to foster brain-related research and to help translate the latest scientific discoveries into innovation in medicine and industry, for the benefit of patients and society.

It draws on cutting-edge neuroscience and offers an extensive range of brain data sets, a multilevel brain atlas, modelling and simulation tools, easy access to high-performance computing resources and to robotics and neuromorphic platforms.

All academic researchers have open access to EBRAINS' state-of-the art services. Industry researchers are also very welcome to use the platform under specific agreements. For more information about EBRAINS, please contact us at info@ebrains.eu or visit www.ebrains.eu.

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