Human Brain Project

Maastricht University

provincie limburg

Co-funded by the European Union

15 OCTOBER 2018 MAASTRICHT

HUMAN BRAIN PROJECT OPEN DAY

ENHANCING OUR UNDERSTANDING OF THE BRAIN

TALKS | DEMOS | ROBOTS | VIRTUAL REALITY

Further information:
www.hbpopendaysummit-2018.org

WELCOME TO THE HBP OPEN DAY 2018!

Maastricht University and the Human Brain Project are delighted to invite you to learn about the latest developments in brain research.

The programme is not only targeted at our scientific colleagues but also at the general public interested in how modern computing technologies enhance our understanding of the human brain and how this knowledge can be applied to develop new diagnostic and therapeutic tools for brain disorders.

A particularly exciting part of the Open Day is the Science Market where HBP members present their work on novel computing (brain-inspired neuromorphic computing) and neurorobotics, demos and experiences allowing visitors to explore the brain in virtual and augmented reality, and much more.

LOCAL HOST

Rainer Goebel | Maastricht University

ATTENDANCE IS FREE, BUT REGISTRATION IS REQUIRED:

www.hbpopendaysummit-2018.org/openday/registration

QUESTIONS AND SUPPORT

E: helpdesk@klinkhamergroup.com
T: +31 (0)43-36 27 008

FURTHER INFORMATION

www.hbpopendaysummit-2018.org

Universiteitsfonds Limburg | SWOL |

SIEMENS Healthineers

The Human Brain Project acknowledges the University Fund Limburg and Siemens Healthineers as key contributors to the Open Day and the HBP Summit 2018.

PROGRAMME

09:00 - 17:00 **Registration**

10:00 - 11:00 **Keynote: "Our creative brains"**
Dick Swaab | Netherlands Institute for Brain Research of the Royal Netherlands Academy of Arts and Sciences

11:00 - 12:00 **Keynote: "Location, location, location: A framework for intelligence and cortical computation"**
Jeff Hawkins | Founder Redwood Neuroscience Institute | Co-founder Numenta, Palm and Handspring

12:00 - 13:00 **Break**

13:00 - 14:00 **Welcome addresses and HBP overview**
Rainer Goebel | Local host | Head of Department of Cognitive Neuroscience | Maastricht University
Rianne Letschert | Rector Magnificus Maastricht University
Katrin Amunts | Director of the HBP Science and Infrastructure Board (SIB)

14:00 - 15:30 **Session "Closed loops: From brains to machines and back"**

Embodied brains & dynamic environments
Mario Senden | Department of Cognitive Neuroscience | Maastricht University

Visual cortical prosthesis for the blind
Pieter Roelfsema | Netherlands Institute for Neuroscience

Possibilities of ultra-high field MRI
Christina Triantafyllou | SIEMENS Healthineer

Mapping human cortical architecture with MRI and lightsheet microscopy
Alard Roebroeck | Department of Cognitive Neuroscience | Maastricht University

15:30 - 16:00 **Break**

16:00 - 17:30 **Session "Big data in clinical neuroscience"**

Maastricht study, neuroimaging findings in relation to phenotype
Miranda Schram | Maastricht University Medical Center | Maastricht University

IMI project, data from wearables
Mark Richardson | King's College London

Relevance of the FAIR principles to the Human Brain Project
Michel Dumontier | Institute of Data Science | Maastricht University

17:30 **Closing**

All day **Science Market: Demos, Robots, Virtual Reality**

SCIENCE MARKET - BOOTH OVERVIEW

Explore the Brain

EXPLORE the mouse and human research data produced in the HBP. DISCOVER how you can SHARE, FIND or USE data through the HBP Neuroinformatics Platform.

Brain Simulation

From the lab via theory to data-driven simulations and back again. How can you join or benefit from this loop?

Silicon Brains

Run an experiment interactively on one of the physical neuromorphic compute systems (SpiNNaker and BrainScaleS) exhibited at the booth and learn more about this novel type of computing.

Understanding Cognition

Imagine an apple — its greenness, sour taste and its fresh crunch; how does the brain create a representation of such an apple? Learn more about learning, perception, sleep and consciousness.

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Medicine

From research to medicine, discover how the Human Brain Project impacts diagnosis, treatment and healthcare, using federated data analysis and state-of-the-art computing technologies.

Robots

Closing the loop between environment and models of cognition via robots allows to test hypotheses of how the brain represents space, selects movement, and predicts sensory consequences of action.

Massive Computing

Discover how we enable neuroscientists to run large-scale, data-intensive, interactive brain simulations and complex workflows comprising simulation, data analysis and visualisation workloads.

Social, Ethical, Reflective

Learn more about social & philosophical research and ethical issues raised by HBP, how you can collaborate, available training opportunities and the HBP's vision on equality, diversity and innovation.