

Press release, March 30, 2015

The Brain Forum shows how collaboration advances research

The Brain Forum 2015 in Lausanne opened today and is generating huge interest: more than 1000 people have registered. Philanthropists, industry representatives from Nestlé and Roche, scientists from all over the world, entrepreneurs, and representatives from the biggest brain initiatives meet to exchange ideas on brain research. An exhibition area displays groundbreaking science, e.g. a project that shows how “reality substitution” is on track to replace traditional virtual reality. On April 1, 2015 a startup pitch session will take place to promote novel solutions related to brain research.

Professor Patrick Aebischer, co-chair of The Brain Forum and President of Ecole polytechnique fédérale de Lausanne (EPFL, Switzerland), is convinced that only through collaboration we are able to solve the mystery of the brain: “With The Brain Forum we offer a unique opportunity for thought leaders from academia, healthcare, foundations, business and policy to engage on current challenges in brain research. We actively need to collaborate to deliver innovative technological solutions to patients and the society.”

EPFL and the W Science Initiative are hosting The Brain Forum 2015, bringing together for the first time scientists from all the major international brain programs: The Human Brain Project (EU), the Allen Brain Initiative (US), the Israel Brain Initiative and the China Brain Science Project. Other highlights are lectures and panel discussions on topics such as the development of novel therapies for neurodegenerative disease and exhibitions from companies showcasing innovative medical technologies.

In-depth presentations and lively panel sessions with leading experts

During the three days of the event, The Brain Forum stakeholders enjoy in-depth presentations and live panel sessions with worldwide leading experts.

New advances in computing, microelectronics and nano-devices are advancing our understanding of the principles of information processing in the brain and have led to the development of new tools, platforms and electronic devices. The session “Emerging tools for Neurotechnology” will focus on these new possibilities for understanding the brain and the treatment of neurological disorders.

Eric Karran, Director of Research Strategy at Alzheimer's Research UK, will host the session “21st century challenge: Neurodegeneration”, which will highlight some of the latest advances towards developing novel therapies for the treatment of neurodegenerative diseases such as Alzheimer's and Parkinson's diseases.

The session “Neuroscience funding and policy” will focus on assessing the private and public funding landscape for brain research and explore the best funding mechanisms and models for public-private partnerships to address these grand challenges. Martin Vetterli, President of Swiss National Science Foundation, will share his view with colleagues from other national research foundations.

Swiss startups promote their novel solutions on April 1

Committed to the promotion of startups, The Brain Forum also hosts a pitch session for Swiss startups on April 1, allowing early-stage companies to showcase their innovations in front of a high-profile panel and The Brain Forum stakeholders.

From eye-inspired cameras to brain-machine interfaces, an exhibition area is specifically designed to provide a platform to demonstrate progress in the translation of groundbreaking science into novel solutions for social challenges. One of them is the Reality Substitution prototype RealiSM.

Reality Substitution is on track to replace traditional virtual reality

Until recently, virtual reality's widespread use, both commercially and in scientific research, has been hampered by the need to develop custom virtual worlds using labor-intensive 3D animation. Researchers and engineers from EPFL's Laboratory of Cognitive Neuroscience and the W Science Initiative are unveiling a Reality Substitution Machine prototype at The Brain Forum that could change all of that. The project, known as RealiSM, has developed an easy-to-use virtual world creator that captures real-world situations to be played back in head-mounted displays (HMD). The system will soon be employed in the lab to study memory and peri-personal space (the space defined by what is within one's reach) and will have numerous clinical uses for treating phobias and PTSD therapy.

"There is a positive feedback loop between virtual reality and cognitive neuroscience," says EPFL researcher and project leader Bruno Herbelin. "On one hand, with a Virtual Reality setup we have an environment that can be completely controlled and endlessly repeated—which are ideal experimental conditions. On the other hand, insights from the cognitive sciences are leading to more immersive, extremely realistic experiences for increasingly effective clinical therapies, behavioral experiments and even better gameplay for entertainment."

The RealiSM project aims to make this technology more accessible to the average clinician and could also bring the technology to developing countries. Other potential uses include immersive, real-time video recording to bring business calls to the next level or even help those working or serving their country abroad feel closer to home.

Real-time demonstrations at The Brain Forum 2015

An immersion booth, dedicated to the RealiSM project and designed especially for The Brain Forum, will house a real-time demonstration of the teleconferencing ability of the new reality substitution platform until April 1, 2015.

Program information: <http://thebrainforum.org/program>

Live streaming: The sessions will be streamed live on www.live.thebrainforum.org

Startup pitch session: Wednesday, April 1, 2015 at 11.15 am / Announcement of the Swiss startup pitch awards will be announced at 15.30 pm with a press release.

Media information (videos, pictures):

<http://thebrainforum.org/Media>

<http://bit.ly/TheBrainForum2015>

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About The Brain Forum – www.thebrainforum.org / info@thebrainforum.org

The Brain Forum, first launched in 2013, brings together novel thinkers and pioneers in the fields of brain research, technology and healthcare. Academics, entrepreneurs, healthcare professionals, investors and policy makers will meet at The Brain Forum 2015 to share their knowledge, experience and vision for the future.

About EPFL – www.epfl.ch

EPFL, in Lausanne (Switzerland), is one of the most international higher education institutions in Europe. It counts among its ranks roughly 10,000 students and 5,000 employees representing more than 120 nationalities. Education and research are organized into five schools and two colleges, with a strong emphasis on interdisciplinary work. In 2013, the European Commission selected the Human Brain Project, an international effort at understanding the human brain, led by EPFL, as a “FET Flagship initiative”.

About W Science

W Science Laboratories AG is a private company that provides funding as well as technology and leadership resources to support initiatives that enable the integration and packaging of science with information technologies that advance personal healthcare and well-being. The goal is to create an interdisciplinary, dynamic environment to address new age health challenges and rapidly develop innovative applications using prevailing technologies across sectors.