

P O P – U P L A B

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The project **State of the Art – Science and Art in Practice** stems from a collaboration of representatives from different fields of scientific research (physics, genetics, computer science, cognition and environmental science) and artists (poetry, media-art, sculpture, performance), which form an exceptional consortium.

During an immersive nine-month residency in a scientific research institute as part of the Swiss artists-in-labs program (Zurich University of the Arts/Institute for Cultural Studies in the Arts), the consortium members have all been engaging in a long-term creative dialogue between artists and scientists in the scientific community.

Driven by this cross-disciplinary experience and the intention to raise awareness of the contributions both artists and scientists can make to the larger challenges of our time. The consortium wants to extend and explore the dialogue and creative process with society and broader publics. The idea is to take scientific and artistic processes out of the lab/studio and bring them directly into the public domain - to explore the interconnections and develop participatory workshops, activities and events.

Therefore a flexible travelling pop-up-lab has been developed to invite visitors and offer “hands-on” access to the latest developments in quantum physics, body consciousness and human/machine interaction together with the scientists and artists and also challenge the visitors to think about issues such as ecology and environment. Each pop-up-lab is an experimental, interactive space and has a particular and different theme, originating and evolving a sequence of art-science research with participatory public projects and activities spilling out into the public space and working with local groups.

The pop-up-lab website informs about the concept and the places of appearance. An interested audience will be able to book the pop-up-lab. Opening: Tuesday, 23th of February at 6pm. Performance & visual essay from 6:30 to 7:00pm. (Social) Bacteria merges the two formats of performance and visual essay, focusing on mutations in interdisciplinary

work. It displays central issues, such as different mind-sets, questions, and exchange possibilities by enacting multiple perspectives. The viewpoints include artistic and scientific practice and theory and comparative reflections. Following enactment the audience is invited to discuss the issues at stake.

The following art-science projects are on tour:

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The Ball

Marie-France Bojanowski/Prof. Jürg Gutknecht, Computer Systems Institute, Native Systems Group, ETH Zurich

The research topics of the Native Systems Group at the Computer Systems Institute are programming languages and runtime systems. The goal is the design and implementation of novel languages and system models that optimally support the development of future computer applications.

“The Ball”, an idea by the artist Marie-France Bojanowski to link language and sense, is an organic user interface that reacts to the user’s brainwaves with a direct tactile and kinesthetic feedback - in other words, a brain-controlled hand-held haptic computer. The transdisciplinary research team will give insights how to examine a question together and put specific knowledge and skills to contribution for the basic study of haptic perception and neurofeedback training to build a computer.

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Assembling the Morrow

Sandra Huber/Prof. Paul Franken and Prof. Mehdi Tafti, Center for Integrative Genomics, CIG, University of Lausanne

The research group of Prof. Paul Franken at the Center for Integrative Genomics CIG (Faculty of Biology and Medicine of the University of Lausanne) works on the study of sleep homeostasis and on the molecular interactions between circadian rhythms, sleep homeostasis, and brain metabolism. Sandra Huber’s venture „Assembling the Morrow“ is a project of conceptual poetry. The artist was working in the sleep lab where she sculpted a long poem onto the brainwaves of a sleeping subject (the artist) in order to reconsider themes of consciousness, language, the interface of technology and the perimeters of writing.

A video installation will show the work of process as a subject in the scientific experimental setting of the sleep lab. The public is invited to take part in the interactive performances, which will be held by the artist herself and will be accompanied by a scientist of the sleep lab. During these performances the artist will compose in real-time onto the brainwaves of another subject.

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If the body is my lab – then the lab must be my body

Isabella Pasqualini & Nicole Ottiger/Prof. Olaf Blanke, Brain Mind Institute, Ecole Polytechnique Fédérale de Lausanne (EPFL)

The Brain Mind Institute of the Ecole Polytechnique Fédérale de Lausanne sees its mission in the understanding of the fundamental principles of brain function in health and disease, by using and developing unique experimental, theoretical, technological and computational approaches.

“If the body is my lab – then the lab must be my body” is a project, which grapples with the perception of the self and its subjectivity. On one side, a focus will be on data collection of “how identity is generated from touch and vision?” but the other side an emphasis is on the artistic and architectural creating and embodying virtual places and characters as part of the (new) ‘Self’-encounter – such experiences include illusory, body swapping and out-of-body self portraits.

The work in progress of this data acquisition will be presented as both a physical and virtual interactive installation and will constantly be extended by the audience and their own experiences during the “pop-up-lab” visits.

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Water cycle in trees and forest ecosystems affected by climate change

Christina Della Guistina / Dr. Andreas Rigling & Dr. Marcus Schaub, Unite Forest Dynamics, WSL

The Unite Forest Dynamics research explores the functional significance of forest diversity with respect to the ecology of managed and unmanaged forest. The institute collects a great number of data on forest dynamics. “Water cycle in trees and forest ecosystems affected by climate change” is a project, which experiments on data sonification and innovative data visualization technologies. Ecophysiological processes of trees are registered in long-term monitoring data sets from different drought-sensitive forests and are transformed into sound and visual scores for interactive audio-/ light-/ video-installations and live concerts.

As a result the actual ecophysiological processes driven by climate change become aesthetically perceptible and publicly tangible. Using the pop-up-lab as a performance space and a place where the artist will collaborate and perform with local communities will also allow the scientists to reach and interact with those who live close to the long term monitoring sites and to reflect about issues of climate change. The performances will involve actual musical traditions, instruments and ensembles from the local areas. In this way the scientific data will be translated in a communicating form, which is which is intrinsic to the art.

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The Flying Quantum Circus

Christian Gonzenbach/ Prof. Martin Pohl, Department of particle physics (DPNC), University of Geneva

The Department of particle physics at the University of Geneva with its collaboration with the CERN is not a usual physics department. The insight into the different research fields of particle physics inspired Christian Gonzenbach to explore the connections of his art practice with contemporary physics. Many of the artist's work pull an absurd or funny aspect of physical science to the surface and make them visible, touchable or even ridicule them.

Within the pop-up-lab these exponents will be available to the specific audiences. Through photos, video installations, drawings and performances held by the art-science team the visitors and participants will be helped through the diverse input to draw their attention to the two different visions of physical reality.

