

Departure into a new world - the digital geography of the 21st century

Theme weekend at the new Ars Electronica Center

THU June 13, 2019, 19:00 - 20:30; FRI June 14, 2019, 9 a.m. – 5 p.m.

SAT June 15 & SUN June 16, 2019, 10:00 a.m. – 6 p.m.

(Linz, 10.6.2019) See where the world the earth is shaking in real time, dive into the inaccessible world of microorganisms, interactively explore the phenomenon of glacier shrinkage or take a closer look at the global traffic routes of merchant ships and their CO2 emissions. On the second theme weekend of the new Ars Electronica Center, the exhibition Global Shift will focus on the current state of our world, with all its global changes and upheavals. Experts will discuss the state of data security in our increasingly interconnected world, show how the ice of the glaciers provides us with insights into climate history, how they attempt to transfer the swarm intelligence of bees to robot swarms, and how robots help to stabilize endangered ecosystems.

On Thursday evening, visitors of Deep Space LIVE will learn interesting details about the retreat of Austrian glaciers, hear about a research facility simulating the Earth's most extreme climatic conditions and learn about the "We are Upper Austria" initiative.

The programme at a glance:

THU June 13, 2019, 7 p.m. - 8:30 p.m. / Lecture

Deep Space LIVE: Departure into a new world - the digital geography of the 21st century

At Deep Space LIVE Thursday evening, June 13, 2019, Glaciologist Kay Helfricht from the Institute for Interdisciplinary Mountain Research of the Austrian Academy

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of Sciences, provides an interesting factual report on the state of the Austrian glaciers and insight into current glacier research. Christian Steurer, Director of terraXcube, will then present a research, test and training infrastructure in which the Earth's most extreme climatic conditions can be simulated. Finally, Rudi Anschober member of the Provincial Government of Upper Austria talks about the initiative "We are Upper Austria".

**SAT June 15 and SUN June 16, 2019, 11 a.m. - 11:30 a.m. /
lecture**

Security for smart things: Smart Security - what else

The Internet of Things has already found its way into many households. Using a PC or Smartphone App, lots of things can be controlled or programmed, from lighting and washing machines to automatic food orders. But how can the smart home or Internet access be protected against attacks? Robert Kolmhofer from the FH Hagenberg shows where the dangers lie and which possibilities there are to secure the devices and the home network.

SAT June 15, 3 p.m. - 4 p.m. / lecture

Climate Archive Alps: Our Window to Ötzi's World

Andrea Fischer from the Institute for Interdisciplinary Mountain Research at the Austrian Academy of Sciences explores the old ice of the Alpine glaciers and opens a window into the past of the earth: thousands of years of climate history are stored in the ice of the highest Alpine peaks. And it turns out that the only constant in a long-term view of the Alps is constant change.

SUN June 16.6.2019, 1 p.m. - 1:30 p.m / lecture

Transfer of swarm intelligence from honeybees to robot swarms

Can bees learn to communicate with robots? Can robots interact with bees? And what does this mean for the research of the swarm behaviour of robots? Martina Szopek and her colleagues from the ASSISIBf research project at the University of Graz are building unusual beehives in which robots coated with wax and equipped with sensors are installed. Using complex bio-inspired algorithms, the small robots are programmed to stimulate bees that will respond to stimuli such as vibrations, changes in air currents and temperature fluctuations. In the next step, the robots will be programmed to mimic the social behaviour they have learnt in their exchanges with the bees. The aim is for the robots to develop autonomous swarm intelligence.

SUN June 16, 2019, 3 p.m. - 3:30 p.m. / lecture
Restoration of defective ecosystems with robot-assisted
substitutes

Ecosystems are currently collapsing worldwide, and the extinction of many insect species in particular is dramatic. Thomas Schmickl from the research project ASSISIBf at the University of Graz talks about robots that penetrate ecosystems to coordinate the swarm behaviour of fish and bees. This can help to stabilize fragile or damaged ecosystems from the outside.

FRI June 14 - Sun June 15, 2019 / campaign by Rudi Anschober,
member of the Provincial Government of Upper Austria
Wirsindooe.at

In Upper Austria there are countless success stories that show how well the coexistence of people from different backgrounds can work. These success stories should show that diversity is a great enrichment and can help to master the challenges of the future in the best possible way.

FRI June 14, 2019, 2 p.m.; SAT June 15 and SUN June 16 2019
each 10:30 a.m. and 2 p.m. (duration: 45 min.) / special guided
tour

Global Shift

During this guided tour, visitors experience breathtaking soundscapes, see spectacular shots of the earth, experience where the earth is shaking and marvel at the worldwide shipping traffic.

FRI June 14, 2019, 2 p.m.; SAT June 15 and SUN June 16 each
11:30 a.m. and 2:30 p.m. (duration: 45 min.) / guided tour
Family Tour (for children 6-10 years)

Family tours introduce families to the new exhibition areas and themes in a child-friendly way. The exhibition "Understanding AI", for example, shows how photorealistic landscapes can be designed according to one's own ideas by simply stroking with one's fingers. In the Machine Learning Studio, young and old learn how machines learn and perceive their surroundings. The exhibition Global Shift, on the other hand, provides information about the current state of the earth.

FRI June 14, 2019, 4:30 p.m.; SAT June 15 and SUN June 16,
2019, 1:30 p.m. and 4:30 p.m. respectively (duration: 90 min.) /
workshop

Flat world views (for children from 10 years)

Earth observation satellites provide breathtaking images of the Earth's surface. In the "Flat World Views" workshop, personal images of the earth are created using cyanopaper, which can also be taken home.

Ars Electronica: <https://ars.electronica.art/en/news>

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