

Press release

EMBARGO: Thursday, October 11, 16:00

KlarText – Prize awarded for science communication

The Klaus Tschira Foundation awards six researchers for highly transparent explanations of their doctoral theses

Heidelberg, October 11, 2018. An underground collective of fungi and bacteria that can help to clean contaminated areas, cosmic radiation that enables large-scale measurements of soil moisture or algorithms that recognize musical styles - these are just some of the topics that the winners of the KlarText Prize for Science Communication of the Klaus Tschira Foundation are engaged in. In their doctoral theses, six young scientists have devoted themselves to very different questions and explained their work in German - a text designed to grasp the interest of non-scientists to what is currently happening in research. Today, on Thursday, October 11, at 4 p.m., they will be awarded the KlarText Prize in the Old Aula of the University of Heidelberg.

This will be the 16th time that the Klaus Tschira Foundation is awarding the prize. In 2018, 161 scientists submitted their texts in the following categories: biology, chemistry, geoscience, computer science, mathematics, neuroscience or physics. A jury of scientists and journalists selected the best submissions via a three-stage process. This year, the jurors were unable to agree on a winner in physics because none of the entries fulfilled the prerequisites. The selections in the other categories wrote their doctoral theses at the Helmholtz Centre for Environmental Research (UFZ) in Leipzig, ETH Zurich, TU Ilmenau, TU Munich and the Medical Center Hamburg-Eppendorf (UKE). Their CVs and the substance of their work are summarized below.

"Science and society cannot be alienated from each other, which is why it is important for researchers to express themselves clearly. We foster this awareness with the KlarText Prize for Science Communication," says Beate Spiegel, Managing Director of the Klaus Tschira Foundation.

As in previous years, each of the winners will receive 5,000 Euro in prize money. The Klaus Tschira Foundation invites all applicants, not just the winners, to a two-day workshop on science communication in Heidelberg. The winning entries will be published on the day of the award ceremony in a science magazine enclosed with the ZEIT. Experienced science journalists have edited the KlarText contributions in close cooperation with the winners.

The application phase for KlarText 2019 begins in mid-November, and the deadline for submissions is February 28, 2019.

To the editors:

With this press release, we would like to extend an invitation to attend and report on the event. More information can be found at www.klartext-preis.de

Photos of the prize recipients are available on October 11, beginning at 19:30 at <https://www.klartext-preis.de/meldungen/> and the winning submissions can be found beginning at 16:00 at www.klartext-preis.de

Press inquiries and registration:

Agnes Schulze
Klaus Tschira Foundation
Press and Communication
+49-6221-533 114
agnes.schulze@klaus-tschira-stiftung.de

The Winners of the KlarText Prizes 2018 – Portraits and brief summaries:

Biology: Anja Worrich, winning entry “A Strong Alliance“

Anja Worrich was born in Forst (Lausitz) in 1987. She studied biotechnology in Zittau and moved to Leipzig for her master's thesis at the Helmholtz Centre for Environmental Research (UFZ). She wrote her doctoral thesis “Role of fungus-mediated transport mechanisms for bacterial activity under environmental stress,” at UFZ and received her PhD in Biochemistry from the University of Leipzig. After spending one year as a postdoctoral fellow at the German Centre for Integrative Biodiversity Research (iDiv), Anja is now back at the UFZ researching the spatial dynamics of microbial communities.

In her submission, “A Strong Alliance,” Anja Worrich describes how fungi and bacteria can work together to reduce the amount of pollutants in soil. Bacteria are excellent consumers of toxins but their cleaning power is diminished when environmental conditions fluctuate. A dense network of fungal filaments in the soil can create a secure web and help them filter out pollutants.

Chemistry: Jan-Georg Rosenboom, winning entry “Plastic from the field“

Jan-Georg Rosenboom comes from Hamburg, where he was born in 1987. He studied chemical engineering at the Hamburg University of Technology (TUHH). He spent a year at the University of California in Berkeley and wrote his thesis at the University of Cambridge (England). Jan-Georg received his doctorate at the ETH Zurich with his dissertation “Polyethylene Furanoate (PEF) from Ring-Opening Polymerisation.” Together with a Swiss company, he is currently developing processes for the industrial implementation of bioplastic production.

In his entry, “Plastic from the field,” Jan-Georg Rosenboom explains a new method for the large-scale production of bioplastics. He has been actively working on a new process to produce polyethylene furanoate (PEF) faster using ring-shaped molecules. PEF is a potential substitute for PET and other polyesters.

Geoscience: Martin Schrön, winning entry “From floods, drought and help from outer space“

Martin Schrön was born in Cottbus in 1985. He studied physics in Heidelberg and specialized in star simulation. He returned to his roots during his PhD thesis at the Helmholtz Centre for Environmental Research (UFZ) in Leipzig. Martin received his doctorate in hydrogeology from the University of Potsdam in 2017 on “Cosmic-Ray Neutron Sensing and its Applications to Soil and Land Surface Hydrology.” He spent six months researching at Bristol University and has been continuing his work at the UFZ ever since.

In his contribution, “From floods, droughts, and help from outer space,” Martin Schrön takes on large-scale measurements of soil moisture. His method uses cosmic radiation generated during the explosion

of stars. In the future, Martin's measurements would be most useful for farmers, but could also help to timely identify risk areas susceptible to flooding.

Computer Science: Christof Weiß, winning entry "That is Haydn. For sure!"

Christof Weiß was born in Regensburg in 1986. He studied physics at the Julius-Maximilians-Universität (JMU) and composition at the Hochschule für Musik Würzburg. Christof then did research at the Fraunhofer Institute for Digital Media Technology (IDMT). In his dissertation entitled "Computational Methods for Tonality-Based Style Analysis of Classical Music Audio Recordings," he focused on algorithms that analyze music. Currently, he is further developing the technology at the International Audio Laboratories Erlangen.

In his contribution, "That is Haydn. For sure!" Christof Weiß describes how computers can successfully recognize the composer of a piece of music and in which epoch it originated. He programmed an algorithm that can measure the dominant pitches of a recording and then derive their characteristic traits.

Mathematics: Katharina Schaar, winning entry "Pure mathematics"

Katharina Schaar was born in Nuremberg in 1989. She studied mathematics at the Technical University of Munich, where she wrote her doctoral thesis at the Chair of Geometry and Visualization with the title "Fundamental Properties of Phirotopes - Duality, Chirotopality, Realisability, Euclideaness."

In her contribution "Pure Mathematics" Katharina Schaar explains the mathematical structures that play a role in natural science by describing the relative positions of objects. For example, in chemistry they are used to determine the location of atoms.

Neuroscience: Tineke Steiger, winning entry "Nothing new in old age?"

Tineke Steiger was born in 1987 and grew up in Bremen. She studied biology and neuroscience in her hometown and received her doctorate in 2017 at the Medical Center Hamburg-Eppendorf (UKE) with the thesis "The influence of age-dependent structural and functional brain changes on learning and memory." Tineke is currently working as a lecturer and neuroscientist at the Universität zu Lübeck.

In her contribution "Nothing new in old age?" Tineke Steiger explained why our learning and memory performance deteriorates in old age. During late adulthood, if iron deposits in certain areas of the brain or if nerve fibers lose their insulation, then learning and memory processes are impaired.

Physics: no winner for 2018

If you would prefer not to receive any future press releases from the Klaus Tschira Foundation, please send an email with the subject "No more press information" to the sender address.