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Annette Barthelt Foundation takes a stance for marine research 2023 Science Prizes honour female marine scientists for research on ecosystem boundaries and interactions between ocean and atmosphere

17.03.2023/Kiel. Two female marine scientists receive the Annette Barthelt Prize for their outstanding theses. This year's winners are Dr. Cora Hörstmann with her dissertation on microbial biodiversity in different marine areas and Anna Christina Hans with her Master's thesis on the diurnal cycle of small-scale physical processes in the near-surface ocean. This is the 36th time that the Annette Barthelt Foundation has awarded the prize in memory of four scientists from Kiel who died in a terrorist attack in Djibouti, Africa, on 18 March 1987. The award ceremony takes place today at GEOMAR Helmholtz Centre for Ocean Research Kiel.

On 18 March 1987, the detonation of an explosive device killed 13 people in a café in the African port city of Djibouti, including four young marine researchers from the then Kiel Institute of Oceanography (IfM). Annette Barthelt, Daniel Reinschmidt, Marco Buchalla and Hans-Wilhelm Halbeisen did not survive the attack, other scientists were seriously injured. At the time of the attack, the group was waiting for the start of their expedition – the next morning, they wanted to leave for the Indian Ocean with the research vessel METEOR.

“Until today, the deceased marine researchers are unforgotten,” emphasises Professor Dr. Arne Körtzinger, Professor of Marine Biogeochemistry at GEOMAR Helmholtz Centre for Ocean Research Kiel and 1st Chairperson of the Annette Barthelt Foundation. “Only in international cooperation we are able to succeed in maintaining a healthy and functional ocean. With our foundation, we uphold the memory of the scientists and at the same time send a strong signal for open and collaborative marine research in peaceful cooperation.”

In memory of the victims of the attack, survivors and relatives created the Annette Barthelt Foundation e.V. It has been awarding annual prizes for outstanding master's and doctoral theses in the field of ship-based marine research since 1990. “With the Annette Barthelt Prize, we show young talents: Your research makes a significant contribution to understanding the ocean system even better in the future,” says Professor Körtzinger.

“Researching the ocean from the seafloor to the atmosphere is a major task – and the two award winners have made outstanding contributions. I warmly congratulate the researchers on being awarded the Annette Barthelt Prize. A big thank you also goes to the foundation, that once again illustrates how much science depends on cooperation and global solidarity in order to make excellent progress,” emphasises GEOMAR Director Professor Dr. Katja Matthes.

The winners of the Annette Barthelt Prize 2023:

In her doctoral thesis, **Dr Cora Hörstmann** investigated microbial activity and biodiversity in different marine areas. The title of her thesis is “Marine microbes on the map: Defining spatial scales of functional microbial biogeography in the ocean”. She conducted genetic studies in the surface waters of the Atlantic and Indian Oceans as well as in Arctic and sub-Arctic fjords. Through her research, Dr. Cora Hörstmann was able to better resolve marine ecosystem boundaries or, in some cases, make them visible based on changes in microbial species composition. She was supervised by

Professor Dr Anya Waite at Dalhousie University, Canada, and Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI), Dr Uwe John from AWI and Professor Dr Matthias Ullrich from Jacobs University Bremen. The marine researcher volunteers for international and interdisciplinary cooperation within the framework of the United Nations Decade of Ocean Research for Sustainable Development and is currently working as a post-doctoral researcher at the Mediterranean Institute of Oceanography (MIO) in France.

Anna Christina Hans' master's thesis focused on ocean-atmosphere interactions and their effects on diurnal variation in the upper 15 metres of the ocean. The thesis entitled "Diurnal cycle of near-surface shear, stratification and mixing in the equatorial Atlantic" was supervised at GEOMAR by Professor Dr Peter Brandt and Professor Dr Martin Claus. Anna Christina Hans obtained her data during a research cruise in the equatorial Atlantic. There she deployed various drifters that measure ocean currents. Together with wind data and other en-route measurements obtained during the research trip, she was able to decipher the diurnal cycle of temperature, stratification, current shear and mixing at the equator. Thus, she was able to show: The diurnal cycle in the uppermost metre of the ocean and the resulting interaction between current and wind have a major influence on the input of wind energy into the ocean. After her master's thesis, Anna Christina Hans spent several months as a visiting researcher at the Laboratory for Studies in Geophysics and Spatial Oceanography, (LEGOS IRD), Toulouse in France and plans to start a doctoral thesis at GEOMAR.

Links:

<https://www.annette-barthelt-stiftung.de/english/index.html> Annette Barthelt Foundation

<https://www.geomar.de/en> GEOMAR Helmholtz Centre for Ocean Research Kiel

Images:

images will be made available for download at www.geomar.de/n8883-e after the end of the event (around 7:30 pm).

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