



DFG-SCHWERPUNKTPROGRAMM 1158

# ANTARKTIS FORSCHUNG

mit vergleichenden Untersuchungen in arktischen Eisgebieten

## Program

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### Coordination Workshop SPP 1158

25<sup>th</sup>-27<sup>th</sup> September 2019, Haus der Wissenschaft, Sandstraße 4/5, 28195 Bremen

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#### Wednesday, 25<sup>th</sup> September 2019

**6:00 pm**

**Icebreaker: Meet & greet at the Überseemuseum Bremen**

(Oceania Exhibition) Bahnhofsplatz 13, 28195 Bremen

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#### Thursday, 26<sup>th</sup> September 2019

**8:10-8:40 am**

*Haus der Wissenschaft (HdW), Olbers-Saal*

<u>Tilman Harder</u> (Bremen)	Greetings
<u>Ulf Karsten</u> (Rostock)	The priority program for Antarctic Research: Background and recent applications

**8:40-10:00 am**

**Short presentations 1** HdW, Olbers-Saal (chair: Burkhard Becker)

<u>Andreas Beck</u> (München)	Influence of deglaciation time on the genetic diversity of lichen symbionts
Christian Printzen (presented by <u>Lilith Weber</u> , Frankfurt)	Natural and human disturbance and recovery of genetic diversity in Antarctic lichen populations
Matthias Schmid & <u>Kai Bischof</u> (Bremen)	Moving South: Migration of kelps into Antarctica
<u>Julia Kleinteich</u> (Tübingen) & Christiane Zarfl	Cold waters: Microbial biogeography at the 'three poles'
Eva Riehle, Barbara Weisbrod, Daniel Dietrich (Konstanz)	Pole to Pole exchange: Climate facilitated cyanobacterial parasite pressure & mat ecosystem response
<u>Charlotte Havermans</u> (Bremen)	Illuminating the presence and role of jellies in the Southern Ocean using advanced technologies
<u>Gertraud M. Schmidt-Grieb</u> (Bremerhaven)	Southern Ocean Cold-water Coral Eco-physiology and molecular Regulation (SOCCER)
Hanieh Saedi & Angelika Brandt (Frankfurt)	Future distribution and biodiversity of marine fauna along the Antarctic Peninsula

<u>Santiago Pineda-Metz</u> (Bremen)	Macrofauna dynamics on the high Antarctic shelf
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**10:00-10:30 am**

**Coffee break HdW**

**10:30-11:40 am**

**Short presentations 2 HdW, Olbers-Saal (chair: Kai Bischof)**

<u>Claudio Richter</u> (Bremerhaven)	Trophic ecology of Antarctic sponges
<u>Burkhard Becker</u> (Köln)	Functional metatranscriptomics of polar biological soil crusts
Karin Glaser & <u>Kenneth Dumack</u> (Köln)	Algivorous Cercozoa as central food web component in biocrusts in Polar Regions
Charlotte Helfrich-Förster & Bettina Meyer (presented by <u>Lukas Hüppe</u> , Oldenburg)	Understanding the mechanistic bases of marine clocks and rhythms in two high latitude krill species ( <i>E. superba</i> and <i>T. inermis</i> )
Thomas Kaiser, Helena Herr (presented by <u>Sacha Viquerat</u> , Hamburg)	Composition, individual properties and group dynamics of fin whale feeding aggregations in the Southern Ocean
Ben Fabry & Daniel Zitterbart (presented by <u>Alexander Winterl</u> , Erlangen-Nürnberg)	Remote Sensing of Emperor Penguin Colony Health and Foraging Success as indicators for the Southern Ocean's ecosystem
<u>Casper Kraan</u> (Oldenburg)	Predicting present and future distributions of vulnerable marine ecosystems in the greater Weddell Sea
<u>Christoph Held</u> (Bremerhaven)	Keeping pace with a changing climate: A molecular perspective to adaptation in the Antarctic

**11:40 am-12:00 noon**

**DFG HdW, Olbers-Saal**

<u>Ulf Karsten</u> (Rostock)	DFG – Hinweise zur Antragstellung
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**12:00-1:00 pm**

**Lunch break HdW**

**1:00-2:00 pm**

**Poster session HdW, Kleiner Saal/Sitzungsraum**

	13:00 - 14:00 h: posters with even numbers 14:00 - 15:00 h: posters with uneven numbers including <b>coffee break</b>
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**3:00-4:10 pm**

**Short presentations 3 HdW, Olbers-Saal (chair: Martin Horwath)**

Herwig Stibor, Cédric Meunier, Maria Stockenreiter, <u>Maarten Boersma</u> (Bremerhaven)	Investigating the effects of permafrost thaw on adjacent marine systems
<u>Klaus Valentin</u> (Bremerhaven), Bank Beszteri, Uwe John, Gernot Glöckner	Comparative Functional Biodiversity in the Wedell Sea deduced from the largest Polar Metatranscriptome survey
<u>Bánk Beszteri</u> (Duisburg-Essen)& Oliver Esper	Neuaufgabe der <i>Fragilariopsis kerguelensis</i> Morphometrie-basierten Proxies: Re-Kalibrierung und Reanalyse mittels Hochdurchsatz-Mikroskopie und Bildanalysen

<u>Christian Arend</u> (Bremen)	Recognition, signalling and response of <i>Fragilariopsis cylindricus</i> to beneficial and detrimental environmental bacteria
<u>Christoph Plum</u> (Oldenburg)	Altered stoichiometry and species interactions in Antarctic plankton communities under global climate change
<u>Judith Piontek</u> (Warnemünde)	Combined effects of temperature and resource availability on organic matter degradation by Antarctic bacterioplankton (renewal application)
<u>Silke Thoms</u> (Bremerhaven), Morten Iversen	Impact of aggregation on carbon export of phytoplankton in today's and the future Southern Ocean
<u>Michael W. Friedrich</u> (Bremen)	Microbially driven carbon cycling: a comparative study in Antarctic and Arctic coastal sediments

**4:10-4:20 pm**

Short break

**4:20-5:20 pm**

**Logistics & data bank PANGAEA** HdW, Olbers-Saal (chair Svenja Heesch)

<u>Tanja Fromm</u> (Bremerhaven)	Access for external users to AWI's infrastructure: RV Polarstern, Polar 5 & 6, Neumayer-Station III, Kohlen Station, Dallmann Labor (20 min)
<u>Andreas Läufer</u> (BGR Hannover)	BGR logistics (15 min)
<u>Paul Wachter</u> (Oberpfaffenhofen)	Logistik des Deutschen Zentrums für Luft- und Raumfahrt (DLR): GARS-O'Higgins (15 min)
<u>Amelie Driemel</u> (Bremerhaven)	PANGAEA (10 min)

**5:20-6:00 pm**

**Networks** HdW, Olbers-Saal (chair: Svenja Heesch)

<u>Günther Heinemann</u> (Trier)	SCAR Nationalkomitee (15 min)
Louisa von Albedyll & <u>Heike Link</u> (Rostock)	APECS-Gemany Polar Early Career network (10 min)
Monika Kallfelz/Rainer Lehmann	Polarlehrer, Mosaic-Expedition (15 min)

**7:00 pm**

**Dinner at Brauhaus der Freien Gastro Union Bremen**  
(Theodorstraße 12, 28219 Bremen)

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## Friday, 27<sup>th</sup> September 2019

**8:10-9:00 am**

**Short presentations 4 HdW, Olbers-Saal (chair: Bank Beszteri)**

<u>Christian Zurhelle</u> (Bremen)	Iron acquisition in the Southern Ocean: From chemical structure diversity of bacterial siderophores to a quantitative iron cycle model
Jana Geuer (presented by <u>Boris Koch</u> , Bremerhaven)	Mechanisms of iron uptake and primary productivity in the Southern Ocean: Elucidating the role of the ligand domoic acid
<u>Olga Engels</u> (Bonn)	How dynamic is the Antarctic Ice Sheet?
<u>Torben Stichel</u> (Bremerhaven)	Marine Shelf Ice from the Ronne Ice Shelf: Paleo-archive and sleeping iron giant?
<u>Martin Horwath</u> (Dresden)	Revealing climate signals in surface elevation changes of the East Antarctic Ice Sheet
Ilka Weikusat, Paul D. Bons (presented by <u>Jan Eichler</u> , Bremerhaven)	EastGRIP challenge – deformation of ice on the microscale in nature and simulations
Ricarda Winkelmann (presented by <u>Johannes Feldmann</u> , Potsdam)	Thermocline forcing of the Antarctic Ice Sheet

**9:00-9:10 am**

Short break

**9:10-10:00 am**

**Short presentations 5 HdW, Olbers-Saal (chair: Matthias Braun)**

<u>Ludwig Schröder</u> (Bremerhaven)	Exploring patterns of change of the West Antarctic Ice Sheet by means of satellite altimetry
<u>Tim Ricken</u> (Stuttgart), <u>Andrea Thom</u>	Coupled Physical-Biogeochemical (P-BGC) Driven Phase Transition at Antarctic Sea Ice - Atmosphere- Salt Water Interfaces (In silico modeling based on a continuum mechanical multiphase, multicomponent and multiscale approach)
<u>Lester Lembke-Jene</u> (Bremerhaven)	(Sub-)Millennial-Scale Antarctic Bottom Water Circulation and Oxygenation in Relation to Ice Sheet Dynamics during the last two glacial cycles
<u>Bernd Heinold</u> , <u>Roland Schrödner</u> (Leipzig), <u>Manuela van Pinxteren</u> , <u>Fabian Senf</u> , <u>Hartmut Herrmann</u>	Sources and cloud-mediated climate impact of marine aerosol in polar regions
<u>Silvia Henning</u> (Leipzig)	Variation in Antarctic cloud condensation nuclei (CCN) and ice nucleating particle (INP) concentrations at Neumayer station in context with their Arctic counterparts at Villum Research Station
<u>Gunther Seckmeyer</u> (presented by <u>Jens Duffert</u> , Hannover)	Cloudall, Cloud Properties in Antarctica determined by all-sky observations
<u>Astrid Lampert</u> (Braunschweig), <u>Ellen Damm</u>	ALICE - Airborne tool for methane isotopic composition and polar meteorological experiments

**10:00-10:30 am**

**Coffee break HdW**

**10:30-11:20 am**

**Short presentations 6 HdW, Olbers-Saal (chair: Tilmann Harder)**

<u>Kerstin Ksionzek</u> (Bremerhaven)	Biogeochemical study of dissolved organic sulfur in the Southern Ocean: sources, molecular composition, and pathways
<u>Christian Melsheimer</u> (Bremen)	Satellite-based automatic detection of polar mesocyclones and polar lows in Antarctic Seas: Towards a long-term inventory for change detection
<u>Christian Melsheimer</u> (Bremen), G. Spreen, Y. Ye., M. Shokr	Sea ice type retrieval in the Antarctic from microwave satellite observations (renewal application)
<u>Matthias Braun</u> (Erlangen-Nürnberg), Peter Friedl, Angelika Humbert	Climate sensitivity of western Antarctic Peninsula ice shelves
<u>Mathieu Casado</u> (Potsdam)	Constraining the Climatic Signal archived in Water isotopes in Antarctic Ice cores
<u>Christian Rodehacke</u> (Bremerhaven)	Ocean-Driven Grounding Line Retreat in Antarctica (ODLIRE)
<u>Gesine Witt</u> (Hamburg), Matthias Brenner & Felix Mark	Recording the baseline before the change - A first step towards an integrated biological pollution and effects assessment off Dronning Maud Land

**11:20 am-12:00 noon**

**Wrap-up & discussion HdW, Olbers-Saal**

<u>Ulf Karsten</u> (Rostock)	Summary and conclusion
	Wishes & problems of polar researchers

**12:00-1:00 pm**

**Lunch break HdW**

**1:00-1:30 pm**

**Meeting in small groups HdW**

	Coordination and strategies of projects
	Pooling and cross-linking of projects
	Long-term plans of project initiatives

**2:00-4:00 pm**

**Meeting of the Polar Educators HdW**

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