Deutsche Gesellschaft für Polarforschung e.V.

Program of the 27th International Polar Conference

25 – 29 March 2018
Rostock, Germany

Sunday, 25 March 2018

15:00 – 18:00 APECS – Getting involved in Polar Organizations: Opportunities and Challenges (ITMZ, room 110)

15:00 – 17:00 DGP Meeting, Executive Board (ITMZ, room 109)

18:00 – 21:00 Icebreaker (Atrium ITMZ; sponsored by the shipping company Laeisg GmbH)

Monday, 26 March 2018

08:00 – 08:15 Registration

08:30 – 09:45 Opening and honors
Wolfgang Schareck, University of Rostock, Rector
Ulf Karsten, University of Rostock
Eva-Maria Pfeiffer, DGP Chairwoman
Hans-W. Hubberten, DGP Vice Chairman

History of Polar Research

Conveners: Jörn Thiede, Erki Tammiksaar

09:45 – 10:00 Jörn Thiede (Köppen Laboratory, Institute of Earth Sciences, Saint Petersburg State University) – Wladimir Köppen, Alfred Wegener, and Milutin Milankovitch: their impact on modern paleoclimate research and the revival of the Milankovitch hypothesis

10:00 – 10:15 Hartwig Gernandt (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research) – German permanent research facilities in Antarctica – a 40 years record

10:15 – 10:45 Coffee break

10:45 – 11:00 Diedrich Fritzsche (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research) – Walther Bruns, Gründer der „Aeroarctic“ – ein vergessener Pionier der Deutschen Polaforschung
11:00 – 11:15 \textit{Mechthild Opel, W. Opel} – A new take on Johann August Miertsching

11:15 – 11:30 \textit{Cornelia Lüdecke (University of Hamburg)} – Historische technische Innovationen für die Arktisforschung

11:30 – 11:45 \textit{Erki Tammiksaar (Estonian University of Life Sciences University of Tartu)} – Schiff oder Schlitten? Über die Eroberung der Pole

11:45 – 12:00 \textit{Barbara Schennerlein (DGP AK Geschichte der Polarforschung)} – Land ohne Frauen?

\textbf{Polar Biology}

Conveners: Ulf Karsten, Julia Regnery

12:00 – 12:15 \textit{Vasiliy Povazhnyi (Arctic and Antarctic Research Institute, Otto-Schmidt Laboratory for Polar and Marine Research), K. von Juterzenka, I. Kryukova} – Towards the deeper understanding of the Laptev Sea biological productivity in the framework of the German-Russian research projects

12:15 – 12:30 Kerstin Jerosch (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), L. Beierlein, I. Schloss, R. Sahade, M.L. Quartino, H. González, G. Ferreyra, D. Abele – Long-term multidisciplinary research along a gradient of high latitudes to track climate change: from station-based studies to new observatory concepts

12:30 – 13:30 Lunch


14:00 – 14:15 \textit{Bánk Beszteri (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), S. Pinkernell, M. Kloster, U. Postel, G. Kauer, U. John, K. Valentin, G. Glöckner} – Collection-based diatom research: collection imaging to biogeography and microevolution in the Southern Ocean

14:15 – 14:30 \textit{Justine Alice Thébault (Justus Liebig University Gießen)} – Bioaccumulation and maternal transfer of mercury in fur seals from the Southern Ocean: influence of intrinsic factors and feeding ecology inferred from stable isotopes
14:30 – 14:45  
Sven Thatje (University of Southampton), L. Marsh – In hot and cold water of the Southern Ocean: differential life-history traits are key to success of hydrothermal yeti crab

14:45 – 15:00  
Osama Mustafa (ThINK – Thuringian Institut of Sustainability and Climate Protection), H.-U. Peter, M.-C. Rümmler, C. Pfeifer, J. Maercker – Mapping Antarctic wildlife by use of Unmanned Aerial Vehicles

15:00 – 15:15  

15:15 – 15:30  
Nadine Determeyer-Wiedmann (Heinrich Heine University Düsseldorf), S. Ott – Life strategies on photobiology and metabolite profile of genetic indentical photobionts of two different lichen species

15:30 – 16:00  
Coffee break

16:00 – 16:45  
Short presentations of posters (chairpersons H. Kassens, G. Heinemann)

16:45 – 18:00  
Poster session (Atrium ITMZ)

19:30 – 21:00  
Public talk at the University of Rostock (Aula)  
Polarmeere im Wandel: Was wissen wir über die Tiefsee – Antje Boetius (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research)

Tuesday, 27 March 2018

08:00 – 08:15  
Registration

**Polar Social Sciences**

Conveners: Renate Treffeisen, Franz Tessensohn

08:30 – 08:45  
Ingo Heidbrink (Old Dominion University, Dept. of History) – Recent changes in Antarctic tourism and their consequences for selected historical sites

08:45 – 09:00  
Vera A. Lobova (Yugra State University) – Arctic region: human and social factors

09:00 – 09:15  
Daria Mishina (University of Lapland) – Arctic tourist taxation or Arctic charity
Cool Classes

Conveners: Renate Treffeisen, Franz Tessensohn

09:15 – 09:30  Monika Kallfelz (Natural History Museum of the Palatinate – POLLICHIA Museum) – Die Versauerung der Polarmeere als Kontext in der Schule

09:30 – 09:45  Enn Kaup (Department of Geology at Tallinn University of Technology / Estonian Polar Club, Tallinn), M. Hunt, V. Raidla, K. Savomägi, H. Uppin, M. Varvas – Polar knowledge contest and polar expedition for high school students of Estonia

09:45 – 10:00  Rainer Lehmann (Freie Waldorfschule Hannover-Bothfeld), C. Wüthrich – Ornithogenic tundra and nutrient flux – focus on final secondary-school examination

Permafrost and Periglacial Habitats

Conveners: Christian Knoblauch, Lars Arne Meier

10:00 – 10:15  Evgeny Abakumov (Department of Applied Ecology, Faculty of Biology, Saint Petersburg State University) – Characterization of soil organic matter of Arctic and Antarctic by 13-C NMR and electron spin resonance spectroscopy

10:15 – 10:45  Coffee break

10:45 – 11:00  Isabel Prater (Chair of Soil Science, TU Munich), F. Hrbacek, L.A. Meier, C. Braun, D. Nyvlt, C.W. Mueller – Vegetation patches determine the fate of soil organic matter on islands in maritime Antarctica

11:00 – 11:15  Vyacheslav Polyakov (Department of Applied Ecology, Faculty of Biology, St. Petersburg State University), K. Orlova, E. Abakumov – Soil humic substances of selected soils of Lena Delta River landscapes: elemental and molecular composition

11:15 – 11:30  Tim Eckhardt (Institute of Soil Science / University of Hamburg), C. Knoblauch, L. Kutzbach, G. Simpson, E.-M. Pfeiffer – Partitioning growing season net ecosystem exchange of CO2 into photosynthesis, autotrophic and heterotrophic respiration in the Siberian tundra

Atmosphere and Ocean

Conveners: Günther Heinemann, Andreas Preußer

11:30 – 11:45  Hartmut H. Hellmer (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), T. Hattermann, S. Ryan, M. Schröder – The Filchner Trough / Filchner Ice Shelf cavity system
11:45 – 12:00  Maren Richter (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), W.-J. von Appen, C. Wekerle – On the Formation of the East Greenland Current in Fram Strait

12:00 – 12:15  Stefanie Arndt (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), N. Stoll, S. Paul, C. Haas – Vertical snow structures from in-situ and remote sensing measurements

12:15 – 12:30  Aliaksandra Kazlova (University of Bremen), G. Spreen – Changes in sea ice deformation and impact of wind forcing

12:30 – 13:30 Lunch

DFG SPP 1158 Antarctic Research
Response to Environmental Change
Convener: Bank Beszteri

13:30 – 14:00  Daniel R. Dietrich (University of Constance, Human and Environmental Toxicology) – Does environmental change affect polar microbial communities?

14:00 – 14:15  Christian Bock (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), F.C. Wermter, B. Maus, H.-O. Pörtner, W. Dreher – In vivo observations of OWA induced pH changes in the brain of polar cod Boreogadus saida


14:30 – 14:45  Burkhard Becker (University of Cologne), B. Büdel, U. Karsten – Biological soil crust algae in the polar regions – biodiversity, genetic diversity and ecosystem resilience under global change scenarios

14:45 – 15:00  Lars Arne Meier (University of Tübingen), P. Krauze, I. Prater, T. Scholten, D. Wagner, C.W. Mueller, P. Kühn – How does climate change affect soils and their microbial communities on James Ross Island, maritime Antarctica? Results from an Environmental Simulation Experiment

15:00 – 15:15  Matthew Toohey (GEOMAR Helmholtz Centre for Ocean Research Kiel), M. Sigl – Using polar ice cores to unveil the connections between global volcanism and climate variability

15:15 – 15:30  Thomas A. Ronge (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), W. Geibert, J. Lippold, F. Lamy, B. Schnetger, M. Prange, R. Tiedemann – Climate, CO₂ and ice sheets – A southern ocean perspective
15:30 – 16:00  Coffee break

Dynamics of Climate System Components

Convener: Silvia Henning

16:00 – 16:30  R. Reese, G.H. Gudmundsson, A. Levermann, Ricarda Winkelmann (Potsdam Institute for Climate Impact Research) – The far reach of ice-shelf thinning in Antarctica

16:30 – 16:45  Rolf Zentek (Environmental Meteorology, University of Trier), G. Heinemann – Verification of the regional atmospheric model CCLM with measurements in the Antarctic

16:45 – 17:00  Tim Carlsen (Leipzig Institute for Meteorology, Leipzig University), G. Birnbaum, A. Ehrlich, M. Schäfer, M. Wendisch – Parameterization of snow BRDF measurements in Antarctica

17:00 – 17:15  Mara Muchow (Institute of Oceanography, University of Hamburg), L. Kaleschke – Towards a lead width distribution for Antarctic sea ice: a case study for the Weddell Sea with high resolution Sentinel-2 images


17:30 – 17:45  C. Melsheimer, Gunnar Spreen (University of Bremen, Institute of Environmental Physics), Y. Ye, M. Shokr – Sea ice type distribution in the Antarctic from microwave satellite observations

17:45 – 18:00  Günther Heinemann (Environmental Meteorology, University of Trier), R. Zentek, L. Stulic, R. Timmermann, S. Paul, A. Preußer – Sea-ice production in the Weddell Sea by numerical simulation and remote sensing

19:00 – 22:00  Dinner at the restaurant "Alter Fritz" (sponsored by the Beer Manufacture Störtebeker)

Wednesday, 28 March 2018

08:00 – 08:15  Registration

Gateways to Lower Latitudes

Convener: Florian Leese

08:30 – 09:00  Oliver Huhn (Institute of Environmental Physics (IUP), Dept. Ozeanography, University of Bremen), T. Hattermann, P.E.D. Davis, E. Dunker, H.H. Hellmer, S. Østerhus, M. Rhein, M. Schröder, J.
Sültenfuß, K.W. Nicholls – Melting, re-freezing and subglacial runoff beneath Filchner-Ronne Ice Shelf from first noble gas measurements inside an ice shelf cavity

09:00 – 09:15 Svetlana Losa (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), M. Soppa, M. Losch, J. Oelker, T. Dinter, S. Dukkiewicz, A. Richter, V. Rozanov, J.P. Burrows, A. Bracher – The Antarctic phytoplankton diversity from space and by numerical modelling

09:15 – 09:30 Charlotte Havermans (University of Bremen), W. Hagen, C. Held, H. Auel – Predatory zooplankton on the move: likelihood of poleward range shifts and their consequences for Antarctic and Arctic food webs


09:45 – 10:00 N. Rybalka, J. Boy, R. Godoy, A. Tzvetkova, C. Roos, A. Noll, Thomas Friedl (Göttingen University, Department Experimental Phycology and Culture Collection of Algae, EPSAG) – Microalgae communities in Antarctic soils: changes along soil developmental stages and testing for geographical distribution


10:15 – 10:45 Coffee break

Development of the Continent

Convener: Sonja Berg

10:45 – 11:15 Benjamin Bomfleur (Palaeobotany Research Group, University of Münster) – A journey into the Triassic polar forests of Antarctica

11:15 – 11:30 Maximilian Zundel (University of Bremen), C. Spiegel, I. Dunkl, A.M. Grunow, F. Lisker – Tectonic and topographic development of the Elephant Island group, West Antarctica

11:30– 11:45 Martina Menneken (Freie Universität Berlin, Mineralogy-Petrology), T. John, A. Läufer, J. Berndt, J. Giese, M. Whitehouse – Timing of subduction of the Palaeo-Pacific Ocean in northern Victoria Land (Antarctica) inferred from zircon U-Pb ages

11:45 – 12:00 R. Dziadek, Karsten Gohl (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), F. Ferraccioli, N. Kaul, C. Spiegel – Geothermal heat flux derived from airborne magnetic grids and
measured temperature gradients in the Amundsen Sea sector of West Antarctica

12:00 – 12:15  Theresa Schaller (TU Dresden), M. Scheinert, R. Pail, P. Zingerle, P. Abrykosov – The gravity field in Antarctica: geodetic modelling and geophysical inversion

12:15 – 12:30  Peter Busch (Institute of Planetary Geodesy, TU Dresden), M. Scheinert, C. Knöfel, L. Eberlein, M. Horwath, L. Schröder, A. Groh – Geodetic GNSS measurements to investigate the recent crustal deformation at the Antarctic Peninsula and in the Amundsen Sea Embayment, West Antarctica

12:30 – 13:30  Lunch

Atmosphere and Ocean

Conveners: Günther Heinemann, Andreas Preußer

13:30 – 13:45  Andreas Preußer (Environmental Meteorology, University of Trier), S. Willmes, K.I. Ohshima, G. Heinemann – Thin-ice thicknesses and ice production in Arctic polynyas between 2002 and 2017 as derived from thermal infrared and passive microwave remote sensing data

13:45 – 14:00  Arantxa Triana (University of Bremen), G. Heygster, C. Melsheimer, G. Spreen – Arctic-wide Total Water Vapour time series combining two passive microwave satellite algorithms

14:00 – 14:15  Svenja H.E. Kohnemann (Environmental Meteorology, University of Trier), G. Heinemann, D.H. Bromwich, O. Gutjahr – Extreme changes in Arctic winter warming since the beginning of the 21st century

14:15 – 14:30  Tymon Zieliński (Institute of Oceanology Polish Academy of Sciences), P. Pakszys, T. Petelski, P. Makuch, M. Cisek, P. Markuszewski, C. Ritter, R. Neuber, M. Mazzola, R. Traversi, M. Posyniak, K. Dziembor, K. Zieliński – Is the Arctic subject to increasing environmental stress in the summer season?


Climate History at the Poles

Conveners: Heidemarie Kassens, Nicola Koglin

Wagner, V. Wennrich, M. Werner – The project PLOT (Paleolimnological Transect) – overview and preliminary results on the preglacial to postglacial history of the Russian Arctic

15:00 – 15:15
Ekaterina Taldenkova (Lomonosov Moscow State University, Geographical Faculty), H.A. Bauch, R.F. Spielhagen, Ya. Ovsepyan, N. Chistyakova, A. Stepanova, S. Nikolaev, M. Segl – Past environmental variability of the Laptev Sea continental margin and Atlantic water advection to the Arctic during the last c.18 cal. kyrs

15:15 – 15:30
Bernhard Diekmann (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), R. Wang, H. Kühn, R. Gersonde, R. Tiedemann, G. Kühn – Land-Ocean interactions in the late glacial Bering Sea

15:30 – 16:00
Coffee break

16:00 – 16:45
Short presentations of posters (chairpersons H. Kassens, G. Heinemann)

16:45 – 18:00
Poster session (Atrium ITMZ)

18:00 – 20:00
Meetings of the DGP working groups (Arbeitskreise)
Physik-Hörsäle 1, 2, 3; Physik-Seminarräume 1, 2, 3

Thursday, 29 March 2018

08:00 – 08:15
Registration

Climate History at the Poles

Conveners: Heidemarie Kassens, Nicola Koglin

08:30 – 08:45
Zhihua Chen (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), M. Ju, S. Ge, Z. Tang, Y. Huang, R. Zhao, R. Tiedemann, L. Lembke-Jene – Retreats of ice sheet and ice shelf driven by warm water incursions in the Ross Sea since the Last Glacial Maximum

08:45 – 09:00
Johann P. Klages (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), G. Kuhn, C.-D. Hillenbrand, J.A. Smith, F.O. Nitsche, T. Frederichs, K. Grohl, L. Wacker – Did we find an ice-proximal location in the Amundsen Sea to finally reveal the last interglacial state of the West Antarctic Ice Sheet?

09:00 – 09:15
Michael E. Weber (University of Bonn), C.J. Fogwill, M. DeCesare, N.R. Golledge, N. Gomez, P.U. Clark – Deglacial dynamics of the Antarctic Ice Sheet revised – Implications for future sea-level rise
09:15 – 09:30  
Sonja Berg (University of Cologne), M. Melles, W.-D. Hermichen, J. Rethemeyer, G. Kuhn – Environmental conditions in terrestrial East Antarctica during the last glacial – new evidence from mumiyo deposits

09:30 – 09:45  
Svetlana Grigoreva (Saint Petersburg State University), A. Boronina, A. Sukhanova, S. Popov, M. Kashkevich, V. Kashkevich, V. Martianov, V. Lukin – Subglacial flood investigations at the Dalk glacier area, Larsemann Hills, East Antarctica, on the data collected in 2017/2018 field season

09:45 – 10:00  
Anastasiia Sukhanova (Saint Petersburg State University), S. Grigoreva, A. Boronina, S. Popov, M. Kashkevich, V. Kashkevich, V. Martianov, V. Lukin – Geophysical survey for safety reasons at the Progress-Vostok logistic traverse, East Antarctica

**Geodynamic Processes**

Conveners: Christoph Gaedicke and Agnes Dakota Wansing

10:00 – 10:15  

10:15 – 10:45 Coffee break

10:45 – 11:00  
Gerhard Kuhn (Alfred-Wegener-Institut Helmholtz Centre for Polar and Marine Research), O. Eisen, C. Gaedicke, N. Koglin, A. Läufer, D. Franke, C. Hofstede, B. Biskaborn, E. Smith, R. Tiedemann, F. Wilhelms – Pre-site survey for deep geological drilling below Ekström Ice Shelf (Sub-EIS-Obs), Antarctica

11:00 – 11:15  
Joachim Jacobs (Department of Earth Science, University of Bergen), A. Läufer, M. Elburg, D. Damaske, A. Ruppel, G. Eagles, B. Opâs, W. Jokat, S. Estrada – Geodynamic evolution of East Antarctica revealed by integrating geology and geophysics in Dronning Maud Land

11:15 – 11:30  
Wilfried Jokat (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research), T. Altenbernd, W. Geissler, G. Eagles – India-Antarctic breakup: Constraints from new geophysical data

11:30 – 11:45  
Folker Pappa (Christian Albrechts University Kiel), J. Ebbing, F. Ferraccioli, W. van der Wal, B. Blank – A 3d integrated lithospheric model of Antarctica and its impact on GIA estimates

11:45 – 12:00  
Nikola Koglin (Federal Institute for Geosciences and Natural Resources (BGR)), K. Piepjohn – The Kulutingwak Formation – evidence for oceanic crust between Pearya and the Franklinian basin (Ellesmere Island, Canada)?
Mass Balance and Dynamics of Glacier Systems

Conveners: Johannes Fürst, Clemens Schannwell

12:00 – 12:15  Clemens Schannwell (University of Tübingen), N.E. Barrand, S.L. Cornford, D. Pollard – Dynamic response of Antarctic Peninsula Ice Sheet to collapse of Larsen C and George VI ice shelves

12:15 – 12:30  A. Richter, Mirko Scheinert (TU Dresden), S.V. Popov, A.A. Ekaykin, L. Schröder, M. Horwath, R. Dietrich, V.V. Lukin – Subglacial Lake Vostok: Combination and application of GNSS observations and satellite altimetry data

12:30 – 13:30  Lunch


13:45 – 14:00  Christoph Mayer (Bavarian Academy of Sciences and Humanities), J. Schaffer, T. Hattermann, D. Floricioiu, L. Krieger, P.A. Dodd, T. Kanzow – Large ice loss variability during the last two decades at Nioghalvfjerdsjorden Glacier, NE-Greenland

14:00 – 14:15  Wilfried Korth (Beuth University of Applied Sciences Berlin), T. Hitziger, U. Hofmann, K. Pavelka – Monitoring of surface ice height changes in Greenland

14:15 – 15:30  Meeting of the members of the DGP

15:30 – 16:00  Coffee break

16:00 – 16:30  Meeting of the members of the DGP

Friday, 30 March 2018

08:30  Excursions