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## Arctic Frontiers Science 2018 Call for Papers

Arctic Frontiers Science 2018 takes place Tuesday 23 January until Thursday 25 January 2018 and will address the following topics:

- AQUACULTURE IN THE HIGH NORTH IN TIMES OF CHANGE
- THE NEW ARCTIC IN THE GLOBAL CONTEXT
- RESILIENT ARCTIC SOCIETIES AND INDUSTRIAL DEVELOPMENT
- CIRCUMPOLAR SAFETY, SEARCH AND RESCUE COLLABORATION

On behalf of the Arctic Frontiers Science Committees, we have great pleasure in inviting you to submit one or more abstracts to any of the four topics.

We kindly ask you to do so in accordance with the instructions provided on the [Call for Papers](#) page.

Abstract submission closes on Tuesday 19 September 2017, 23:59, European time.

### The New Arctic in the Global Context

The rapid changes taking place in the Arctic due to global climate change — e.g., the retreat of sea ice, a warming surface ocean and warming air masses — affect the physical and biogeochemical systems and ecosystems in the Arctic, but they also have the potential to influence weather and climate in mid-latitudes. The impacts of severe weather phenomena on commerce and infrastructure can be significant. It is therefore crucial to develop methods and tools to predict when and how changes in the Arctic will both affect the high latitudes but also densely populated regions such as Europe, Asia, and North America. Several projects and initiatives – such as the [APPLICATE](#), [MOSAIC](#), [Nansen Legacy](#), [N-ICE2015](#), [GreenEdge](#) and [BAYSYS](#) projects and the Year of Polar Prediction (YOPP) – are underway with the aim to better understand polar climate and ecosystem processes, to understand and forecast weather and environmental changes in the Arctic, how these affect global ocean and atmospheric circulation, ecosystems, and what are future societal impacts and requirements both in the Arctic and mid-latitudes.

The sessions from this call will highlight insights gained from recent research covering:

- **Observations** – sea-ice changes and decline, snow changes, ocean warming and circulation, atmospheric circulation and weather, ecosystem changes, observing system design
- **Modelling** – assessment and development of weather and climate models, interdisciplinary model approaches.
- **Prediction** – from weather forecast to seasonal and subseasonal prediction and climate projections.
- **User engagement** – bringing together the forecast community, end users of polar prediction products, and communities in the Arctic that might be influenced by weather and environmental changes.

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- **Linkages to mid-latitudes** – how Arctic climate change influences weather and climate across the Northern Hemisphere.

We welcome abstracts from studies where these topics are being explored including new results, contributions from international projects with focus in the Arctic, and cross-disciplinary approaches that involve natural and social sciences.

**Scientific committee members:**

**Marcus Rex, Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, Potsdam, Germany (lead)**

Thomas Jung, Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, Bremerhaven, Germany

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