

**Category**

SH Social Sciences and Humanities & AC Atmosphere, Climate

**Session Number**

SH-8

**Session Title**

Data science for polar environments – discovery, rescue, and mining

**Session Description**

This session brings together two communities who recover and interpret historic information, the users of environmental data and the community applying new data mining methodologies to that data. While observational data near the poles are still sparse, the quantity of data from historical records, satellite observations, reanalyses and climate models is growing constantly. To improve our understanding of the complete climate system, it will be critical to take full advantage of the recent data available and to link it to historical reference data.

Contributions on improving understanding and modeling of the Polar climate system through data rescue, data mining and machine learning methods are welcome. Studies that develop and implement new data-mining methods for climate diagnosis in the atmosphere, ocean or cryosphere are encouraged, but submissions that integrate information from multiple components of the climate system are particularly welcome. Historic records are vital for a better understanding of changes in Polar environment such as climate, landscape, flora and fauna. Recent advances in image and data processing, digitizing, and crowd sourcing allow placing this information in a better spatio-temporal context. Abstracts from historians, humanities and GIS researchers dealing with the recovery, visualization, and interpretation of information from indigenous narratives, log-books, maps and diaries are welcome.

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