

Curriculum Vitae for Stein Sandven

Address: [REDACTED]

E-mail: [REDACTED]

Born: [REDACTED]

Education: Cand real in physical oceanography, University of Bergen 1979.

Position: Senior scientist at Nansen Environmental and Remote Sensing Center,
Professor II at UNIS
Former director of Nansen Environmental and Remote Sensing Center (2010-2015)

Present responsibilities: Coordinator of the EU H2020 projects INTAROS (2016-2021) and CAPARDUS (2020-2022)

Started work career as research assistant at Geophysical Institute, University of Bergen 1979-1983. Worked with data analysis and polar oceanography. Visiting scientist at Dept. of Oceanography at Univ. of Washington, Seattle, USA in 1981-82. Worked with data collection, data analysis, software development for analysis of oceanographical data. Employed as scientist at NERSC when it was established as a research foundation in 1986. Senior scientist at NERSC from 1987 with responsibility for data collection and data analysis from the MIZEX and SIZEX projects in the Greenland and Barents Sea, which were implemented from 1983 to 1992.

From 1994 he was assistant director and leader of the Remote Sensing Group at NERSC. From 1995 he has generated several international and national research and application projects related to satellite remote sensing and polar oceanography. He has been leader or task leader of more than 70 research projects.

He has been instrumental in establishing the Arctic Regional Ocean Observing System (Arctic ROOS - www.arctic-roos.org) as one of the regional systems of EuroGOOS (www.eurogoos.eu). Arctic ROOS has now 20 member institutions from 10 countries. The objective of Arctic ROOS is to develop and implement operational monitoring and forecasting systems in the Arctic Ocean and adjacent seas. The systems are based on state-of-the-art remote sensing, in situ observations, numerical modelling, data assimilation and dissemination systems for products and services.

In the last two decades he has conducted a series of projects for offshore companies related to oil and gas exploration in Arctic waters. The companies included Statoil, Total, Shell, Shtokman Development AG and Gaz de France de Suez. From 2009 he has been involved in development of the Svalbard Integrated Observing System (SIOS) which was an EU research infrastructure preparatory phase project from 2010-2014. In 2018 SIOS was established as a legal entity located at in Svalbard with funding from the Research Council of Norway (<https://sios-svalbard.org/>).

Since 2006 he has been teaching students at UNIS in satellite remote sensing of sea ice and ocean processes. From 2016 he is responsible for the course "Shipping in the Arctic" at UNIS.

He has been coordinator of many Arctic research projects during the last 30 years, including 19 EU projects, 16 ESA projects and 20 projects under the Research Council of Norway. From 2011 to 2018 he was the science leader of the ESA CCI sea ice project (2012-2018). From 2017 his main responsibility and fulltime job is to coordinate the H2020 project Arctic Integrated Observation System (INTAROS), which runs from 2016 to 2021. INTAROS has 47 partners from 20 countries and a budget of 15.5 MEURO. As coordinator of INTAROS, he works with the major organisations, programmes and projects related to Arctic observing systems in Europe, North America and Asia. From 2020 to 2022 he is coordinator of the Coordination and Support Action CAPARDUS under H2020. Presently he is member of the

advisory boards for several new Arctic projects funded by EU and the Research Council of Norway.

Main fields of expertise and research activities:

Marine and polar remote sensing, polar and coastal oceanography, sea ice research with emphasis on remote sensing methodology. Scientific publications have addressed sea ice, oceanography and ocean acoustics in the Nordic Seas and the Arctic. Papers with focus on satellite remote sensing are dealing with sea ice observations with different types of sensors, sea ice classification, sea ice drift, and validation of sea ice remote sensing with in situ observations. More than 70 referee papers have been published with focus on ocean and sea ice process studies and development of operational observing systems for the Arctic using both satellite, in situ, and underwater sensors.

Supervision of students

Cand Sc./Master students

1990: Cand. Sc. Kathleen Geiger, UiB/NERSC
1991: Cand. Sc. Torill Hamre and Morten Stette, UiB/NERSC
1995: Cand Sc. Øyvind Elnan, UiB/NERSC
2007: M. Sc. Johan Wåhlin, Univeristy of Luleå/NERSC
2007: M. Sc. Oles Kit, UiB/NERSC
2012: M Sc. Ben Robson, UiB/NERSC

PhD students:

1994: Dr. Sc. Torill Hamre, UiB/NERSC
2000: Ph D. Andrey Bogdanov, St. Petersburg University / NIERSC.
2003: Dr. Ing. Maria Lundhaug, NTNU/NERSC.
2008: Alexandra Yarigina, St. Petersburg State University / NIERSC
2009: Dr. Sc. Natalia Zakhvatkina, St. Petersburg State University/NIERSC
2014: Dr. Sc. Marta Zygmuntowska, NERSC
2017: Stefan Muckenhuber, UNIS/UIB/NERSC

Membership

From 2002-2008: Member of ESA CryoSat CalVal Science and Advisory Group
From 2007 - 2018: Elected chair of Arctic Regional Ocean Observing System (Arctic ROOS).
From 2008: Member of Norwegian Academy of Science for Polar Research.
From 2009: Member of ESA – Russian Space Agency panel of Arctic Earth Observation
From 2010: Member of Norwegian Academy of Technical Sciences
From 2016-2019: Member of Scientific Advisory Board of the Japanese research programme “Arctic Challenge for Sustainability 2015-2020 (ArcS)

List of publications

See <https://www.nersc.no/staff/stein-sandven>