

# Curriculum vitae with track record (for researchers)

**Role in the project**   Project manager    Project participant

## Personal information

First name, Surname:	Sandven, Stein		
Date of birth:	12.03.1952	Sex:	M
Nationality:	Norwegian		
Researcher unique identifier(s) (ORCID, ResearcherID, etc.):	Orcid: 0000-0002-8023-5779 Cristin-person-ID: 60785		
URL for personal website:	<a href="https://www.nersc.no/staff/stein-sandven">https://www.nersc.no/staff/stein-sandven</a>		

## Education

Year	Faculty/department - University/institution - Country
1979 (dissertation defended)	Cand real. <i>University of Bergen, Geophysical Institute, Norway</i>

## Positions - current and previous

*(Academic sector/research institutes/industrial sector/public sector/other)*

Year	Job title – Employer - Country
2016-	Senior scientist/Nansen Environmental and Remote Sensing Center/Norway
2010-2015	Director at Nansen Environmental and Remote Sensing Center/Norway
2005-2022	Adjunct professor - at UNIS/Norway

## Project management experience

*(Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)*

Year	Project owner - Project - Role - Funder
1991-present	S. Sandven has been coordinator of more than 60 research projects funded by EU, ESA, RCN, industry and others. The most recent and relevant of these projects are: Three networking projects 2019-2022 funded by Svalbard Strategic Grant related to Svalbard research coordination and workshops INTAROS H2020 – Integrated Arctic Observation System 2016-2022: 49 partners and a budget of 15.5 MEURO CAPARDUS – Capacity Building in Arctic Standardisation development, H2020:2020-2023: 9 partners and a budget of 2.0 MEURO

	<p>UAK: Useful Arctic knowledge – partnership for research and education. Project 2018 – 2022 under INTPART to develop long-term collaboration between Norway, USA and Canada in Arctic research and education. Budget: 5 MNOK.</p> <p>A follow-up project, UAK-2, will go from 2023 to 2028, budget of 12 MNOK.</p> <p>ESA Climate Change Initiative – Sea ice (European Space Agency). Coordinator of a project with 12 partners and a budget of 1.8 MEURO (2012-2015 Phase 1) and 2.2 MEURO (2015-2018 Phase 2)</p> <p>SONARC - Development of sea ice monitoring and forecasting system to support safe operations and navigation in Arctic Seas. (Research Council of Norway Norway-Russia) 5 MNOK (2015-2018)</p> <p>ICE MOTION - High resolution sea-ice motion from Synthetical Aperture Radar using pattern tracking and Doppler shift (Research Council of Norway Romforsk) 3,5 MNOK 2015-2018</p> <p>SIDARUS – Sea ice downstream services for Arctic and Antarctic Users and Stakeholders – (EU FP7 – Space) , 6 partners, 2011-2014, budget 2.5 MNOK</p> <p>MAIRES – Monitoring Arctic Land and Sea ice using Russian and European satellites (EU FP7 Space), 6 partners, 2011 – 2014, budget 3 MEURO</p> <p>CryoSat sea ice validation and process studies (Norwegian Space Centre and PRODEX), 2008-2010 and 2011-2012.</p>
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### Supervision of students

(Total number of students)

Master's students	Ph.D. students	University/institution - Country
6	7	From 1991 to 2018: most of them from University of Bergen

### Other relevant professional experiences

(E.g. institutional responsibilities, organisation of scientific meetings, membership in academic societies, review boards, advisory boards, committees, major research or innovation collaborations, other commissions of trust in public or private sector)

Year	Description - Role
2010-2015	Director of Nansen Environmental and Remote Sensing Center
1981-2022	Extensive experience in national and international R&I projects and network activities with focus on the Arctic. From 1981 he has been working on more than 100 research projects, of which he has been coordinator of more than 60. From 1995 he has been coordinator of 19 EU projects, more than 20 projects under European Space Agency/Norwegian Space Agency and more than 25 projects under the Research Council of Norway. He has coordinated a series of sea ice and climate projects for offshore companies working in Arctic waters. The companies included Statoil/Equinor, Total, Shell, Shtokman Development AG and Gaz de France de Suez. From 2005 to present he holds an adjunct professor position at UNIS, where he has been teaching in sea ice and polar oceanography. 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 ( <a href="https://sios-svalbard.org/">https://sios-svalbard.org/</a> ). From 2011 to 2018 he was the science leader of the ESA CCI sea ice project. CCI is a major European initiative to develop, validate and produce climate data sets from satellite data. In 2015 he was co-author of the report “Klima i Norge 2100” and in 2019 he was co-author of the report “Climate in Svalbard”, both for the Environmental Agency in Norway. In 2016 he established and was responsible for the interdisciplinary course “Shipping in the Arctic” at UNIS until 2022. From 2017 to 2022 his main responsibility and fulltime job was to coordinate the H2020 project Arctic Integrated Observation System (INTAROS) with 49 partners from 20 countries. As coordinator of INTAROS, he worked with the major organisations, programmes and projects related to Arctic observing systems in Europe, North America and Asia. From 2019 he was also coordinator the H2020 project CAPARDUS – Capacity – building in Arctic standardization development. From 2018 to 2022 he was member of the national reference group for Horizon Europe in the Research Council of Norway.
2002-2008	Member of ESA CryoSat CalVal Science and Advisory Group
2007- 2018	Elected chair of Arctic Regional Ocean Observing System (Arctic ROOS) under EuroGOOS.
From 2008	Member of Norwegian Academy of Science for Polar Research
From 2010	Member of Norwegian Academy of Technical Sciences.
2016 – 2019	Member of Scientific Advisory Board of the Japanese research programme “Arctic Challenge for Sustainability 2015-2020 (ArcS)
2018-2023	Member of the the advisory board for the Norwegian NORSOOP project coordinated by NIVA.

## Track record

As of January 2023:

Total registered works in ORCID: 126.

Total registered research results Cristin: 257

Total number of registered publications in the NERSC publication database: 78

In addition to peer review publication he has produced a number of technical reports, project deliverables.

A list of up to *ten* publications in major national or international peer-reviewed journals, peer-reviewed conference proceedings, peer reviewed book chapters and/or monographs

- **Sandven S.**, G. Spreen, G. Heygster, F. Girard-Ardhuin, S. L. Farrell, W. Dierking and R. A. Allard. Sea ice remote sensing – recent developments in methods and climate data sets. Submitted to Survey in Geophysics, 2023.
- **Sandven S.**, et al., INTAROS Final Synthesis report, 69 pp. Published in Zenodo, 01 September 2022, <https://doi.org/10.5281/zenodo.7033824>
- **Sandven et al.**, Roadmap for sustainable Arctic Observing System, 35 pp, published on Zenodo 30 August 2022, <https://doi.org/10.5281/zenodo.7033845>
- **Sandven S.** and R. Higgins: Observing the Arctic - Technologies and methods demonstrated in the H2020 INTAROS project - Integrated Arctic Observing System. 72 pp. Published in Zenodo 21 December 2021. <https://doi.org/10.5281/zenodo.5796212>
- Starkweather, S., et al., Sustaining Arctic Observing Networks’ (SAON) Roadmap for Arctic Observing and Data Systems (ROADS). **ARCTIC**, VOL. 74, SUPPL. 1 (2021) P. 56 – 68 <https://doi.org/10.14430/arctic74330>

- Johannessen, O. M., L. P. Bobylev, E. V. Shalina, **S. Sandven**: Sea ice in the Arctic – Past, present and Future., 575 pp, Springer Polar Sciences, © Springer Nature Switzerland AG 2020. <https://doi.org/10.1007/978-3-030-21301-5>
- Smith GC, Allard R, Babin M, Bertino L, Chevallier M, Corlett G, Crout J, Davidson F, Delille B, Gille ST, Hebert D, Hyder P, Intrieri J, Lagunas J, Larnicol G, Kaminski T, Kater B, Kauker F, Marec C, Mazloff M, Metzger EJ, Mordy C, O’Carroll A, Olsen SM, Phelps M, Posey P, Prandi P, Rehm E, Reid P, Rigor I, **Sandven S**, Shupe M, Swart S, Smedstad OM, Solomon A, Storto A, Thibaut P, Toole J, Wood K, Xie J, Yang Q and the WWRP PPP Steering Group (2019): *Polar Ocean Observations: A Critical Gap in the Observing System and Its Effect on Environmental Predictions From Hours to a Season*. Front. Mar. Sci. 6:429. doi: 10.3389/fmars.2019.00429
- Lee CM, Starkweather S, Eicken H, Timmermans M-L, Wilkinson J, **Sandven S**, Dukhovskoy D, Gerland S, Grebmeier J, Intrieri JM, Kang S-H, McCammon M, Nguyen AT, Polyakov I, Rabe B, Sagen H, Seeyave S, Volkov D, Beszczynska-Möller A, Chafik L, Dzieciuch M, Goni G, Hamre T, King AL, Olsen A, Raj RP, Rossby T, Skagseth Ø, Sjøiland H and Sørensen K (2019): *A Framework for the Development, Design and Implementation of a Sustained Arctic Ocean Observing System*. Front. Mar. Sci. 6:451. doi: 10.3389/fmars.2019.00451
- O.M. Johannessen, **S. Sandven**, I.P. Chunchuzov & R.A. Shuchman (2019). Observations of internal waves generated by an anticyclonic eddy: a case study in the ice edge region of the Greenland Sea, Tellus A: Dynamic Meteorology and Oceanography, 71:1, 1-12. <https://doi.org/10.1080/16000870.2019.1652881>
- Hanssen-Bauer, I., E.J. Førland, I. Haddeland, H. Hisdal, S. Mayer, A. Nesje, J.E.Ø. Nilsen, **S. Sandven**, A.B. Sandø, A. Sorteberg and B. Ådlandsvik (2015) Klima i Norge 2100 – Kunnskapsgrunnlag for klimatilpasning oppdatert 2015. <https://www.miljodirektoratet.no/globalassets/publikasjoner/m406/m406.pdf>

If applicable:

Other outputs of relevance (e.g. datasets, software, non peer-reviewed publications): A total of **234**

Experiences from major research communication, dissemination or outreach activities and/or invited presentations in public conferences.

- (1) Organised 3 – 6 meetings per year, mainly project meetings. Since 2016 also organised sessions at EGU, AGU and ESA conferences.
- (2) Presentations given at 4 – 8 conferences and workshops per year, of which 2- 4 were invited.