

PERSONAL INFORMATION

Family name: JANSEN
First name: Eystein
Nationality: Norwegian
Date of birth: 28.02.1953
Gender: Male
Title: Professor, Academic Director
URL for Website:



CAREER PATH

A major goal has been to integrate knowledge of the various sub-systems of the Earth System to tackle major knowledge challenges related to the development of the Earth's climate and how Earth System dynamics and sub-system interactions between ocean, atmosphere, cryosphere and land surface have operated in the past, and may operate in the future. Based on a background in marine geology, geochemistry and paleoceanography, a main path has been to mobilize interdisciplinary teams of excellent scientists to tackle such first order challenges. This involves integrating empirical evidence with dynamical modeling of the Earth System. This approach has led to several initiatives and scientific breakthroughs:

- In several papers, e.g. in Nature, first documentation of the emergence of ice ages and Northern Hemisphere glaciation on both sides of the Atlantic, and the role of the oceans in transforming the planet to an ice-house planet with repeated glacial periods. These were based on central activity within the international Ocean Drilling Program.
- Developing theories and producing empirical evidence documenting the major shift in glaciation around 1 million years ago, and how ice sheet erosion of the land surface as well as ocean circulation may have transformed the response of the globe to changes in the Earth's orbit to produce longer and more extensive ice ages.
- Understanding the dynamics of abrupt climate changes and how ocean circulation, sea ice and ice sheet changes have interacted in producing abrupt climate changes with global impact, occurring within a few decades, published in leading journals such as in the Nature and Science family of journals and through an ERC Synergy Grant, ice2ice. A follow-up is documenting that current changes in the Arctic are as abrupt as those that occurred in the past during glacial periods.
- Through global science programmes, initiating and leading an international phase of obtaining records of ocean circulation changes at high temporal resolution in order to be able to compare past with modern and future changes. Several key papers on high latitude changes in both hemispheres and how these are linked in the Earth System published in leading journals.
- The initiative to establish the Bjerknes Centre for Climate Research combined groups working on past climates, carbon cycle, modern and future climates, in particular through the development and use of Earth System models. The Centre is now a world leading centre in climate research comprising 250 scientists from 39 nations.
- A recent development is to integrate Earth System science with the human dimension through the SapienCE Centre for Early Human Behaviour. Here archaeologists, neuroscientists, behavioural scientists and climate scientists integrate to understand the emergence of modern human behaviour in the form of advanced technologies, innovations and cultural symbols 100.000 to 50.000 years ago in Southern Africa.

EDUCATION

1984: PhD Marine geoscience, Univ. of Bergen, Norway
1981: MSc Earth science, University of Bergen, Norway

CURRENT POSITIONS

2019 – Member of the Scientific Council, European Research Council
2018 – Academic Director Academia Europaea, Bergen Knowledge Hub
2017 - Vice Director SapienCE Centre of Excellence for Early Human Behaviour, Univ. Bergen

1993 - Professor Earth science/paleoclimatology, Univ. Bergen
2003 - Adjunct research professor, Norwegian Research Centre (NORCE), Bergen
2012 - Member of the Executive committee for the European Climate Research Alliance (ECRA)
2015 – Member of the Board Norwegian Meteorological Institute

PREVIOUS POSITIONS OF RELEVANCE FOR NOMINATION

2000 – 2013: Founding Director Bjerknes Centre for Climate Research
1985 – 1993: Associate professor Earth science/paleoclimatology, Univ. Bergen
1989: Visiting scientist Lamont Doherty Earth Observatory, Columbia University, USA
1987: Visiting scientist Christian Albrechts Univ. Kiel, Germany

COMMISSION OF TRUST

2015-2019: Member of the Earth System Science panel for ERC Advanced Grants.
2003-2009: Co-chair of CLIVAR-PAGES intersection panel, World Climate Research Program
2003-2009: Member of PAGES Scientific Steering Committee, International Geosphere/Biosphere Program
2004-2011: Member of the program board for the Norwegian climate research program
2006-2010: Member of Steering Committee for the European Science Foundation Euromarc Program
1989-1994: Member of the Ocean Drilling Program Ocean History Panel 1989-1994

EXPERIENCE IN THE PROVISION OF SCIENTIFIC ADVICE AT NATIONAL, EUROPEAN AND INTERNATIONAL LEVEL

- Lead author IPCC 5th Assessment Report, and the Summary for Policy Makers/Technical Summary author team, 2013.
- Co-ordinating lead Author IPCC 4th Assessment Report and participant in the IPCC Plenary with governments to adopt the report and the Summary for Policymakers, 2007.
- Dissemination of science-based climate change knowledge at the global climate change negotiations (UNFCCC) COP Meetings in Paris 2015, Durban 2013, Copenhagen 2009.
- Speaker at several conferences organised by national and European organisations, such as the EU Commission on Science Diplomacy
- Expert consultant for Norwegian prime minister Jens Stoltenberg and the Norwegian Ministers of Climate and Environment and Global Development on understanding climate change and on climate policies.
- Organiser of national and international seminars on Science Advice for Policy as part of Academia Europaea outreach activities of disseminating SAPEA reports under the EU Commission's Science Advice Mechanism.
- Organising seminars on international conferences to connect Universities to the UN 2030 Agenda on the Societal Development Goals.
- Member of Scientific Advisory Boards at: IBS Centre for Climate Physics, S Korea; Bert Bolin Centre, Stockholm, Sweden; Centre for Marine Geosciences (MARUM), Bremen, Germany; IC3 Centre for Climate Research, Barcelona, Spain.
- Member of evaluation panels for German Marine Research; Alfred Wegener Inst. for Polar and Marine Research; Danish Pioneer Centres.

EXPERIENCE IN PUBLIC COMMUNICATION OF SCIENCE

- Public lectures on the relationship between natural changes in the Earth System and the ongoing and future climate changes nationally (about 10/year), and in China, India, Poland, Sweden, Denmark, USA.
- Numerous national media appearances and debates on the relationship between natural changes in the Earth System and the ongoing and future climate changes, as well as media appearances in India, South Africa, UK, EU-wide media and Sweden.
- Dissemination of IPCC assessment reports to numerous media outlets globally.

FELLOWSHIPS AND AWARDS

Fellowships

- British Council to work at the University of Cambridge
- Kiel University, Germany
- Research Council of Norway to work at Columbia University, USA

Recognitions and Academy memberships

- Member of the Norwegian Academy for Science and Letters (1998)
- Member of the Norwegian Academy for Technological Sciences (2005)
- Member of the Norwegian Academy for Polar Research (2006)
- Member of Academia Europaea (2012)
- Group leader geoscience Norwegian Academy for Science and Letters (2018-)

Awards/prizes

- As coordinating Lead Author of IPCC AR 5 co-recipient of the Nobel Peace Prize to the IPCC (2007)
- Brøgger award for life-long achievements in Earth Science (highest recognition of Norwegian geologists) (2019)
- Meltzer Prize for research excellence (2019)

Major project awards

- Bjerknes Centre for Climate Research, Director – 10-year funding as Centre of Excellence 2003-2013, Research Council of Norway
- SapientCE Centre for Early Human Behaviour - 10-year funding as Centre of Excellence 2017-2027, Research Council of Norway
- ERC Synergy Grant ice2ice, Corresponding PI, European Research Council 2014-2019

SUPERVISION AND MENTORING

- Main advisor to 26 students for MSc degrees and 16 students for PhD degrees. In addition 3 students currently in PhD program
- Former PhD students and post docs have gone into senior positions both in the private sector, primarily energy industry, environmental agencies and research, including professors at Norwegian and European universities, and directors of research in research institutes.

OTHER ASSIGNMENTS

- Regular reviewer for proposals from national funding agencies in USA, Canada, UK, France, Germany, the Netherlands, Sweden, Poland, Switzerland, EU Framework Programmes
- Regular reviewer for Nature, Science and leading specialist journals
- Regular consultant for promotions and tenure: e.g Royal Society membership, Tenure at MIT, Columbia University, Penn State Univ., Stockholm University, Bremen University, AWI

SELECTED PUBLICATIONS

About 200 peer reviewed publications

Citations (Google scholar): 34500

H-Index: 67(Google Scholar)

A full publication list with citations can be found at:

<https://scholar.google.com/citations?user=YnmZaSwAAAAJ&hl=en>

(authors who were PhD students and Post docs supervised at time of publication in blue)

E Jansen, JH Christensen, T Dokken, KH Nisancioglu, BM Vinther, Emilie Capron, C Guo, MF Jensen, PL. Langen, RA Pedersen, S Yang, M Bentsen, HA Kjær, **H Sadatzki**, **E Sessford**, M Stendel, in press: Past perspectives on the present era of abrupt Arctic climate change, *Nature Climate Change*, in press.

H. Sadatzki, T. M. Dokken, S. M. P. Berben, F. Muschitiello, R. Stein, K. Fahl, L. Menviel, A.I Timmermann and E. Jansen, 2019. Sea ice variability in the southern Norwegian Sea during glacial Dansgaard–Oeschger climate cycles. *Science Advances* 2019; 5:eeau6174

MW Miles, DV Divine, T Furevik, E Jansen, M Moros, AEJ Ogilvie, 2014: A signal of persistent Atlantic multidecadal variability in Arctic sea ice. *Geophysical Research Letters* 41 (2), 463-469.

Masson-Delmotte, V., M. Schulz, A. Abe-Ouchi, J. Beer, A. Ganopolski, J.F. González Rouco, E. Jansen, K. Lambeck, J. Luterbacher, T. Naish, T. Osborn, B. Otto-Bliesner, T. Quinn, R. Ramesh, M. Rojas, X. Shao and A. Timmermann, 2013: Information from Paleoclimate Archives. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 383–464, doi:10.1017/CBO9781107415324.013.

P De Deckker, M Moros, K Perner, E Jansen, 2012: Influence of the tropics and southern westerlies on glacial interhemispheric asymmetry. *Nature Geoscience* 5 (4), 266-269

LLoyd, Jeremy; Moros, Matthias; Perner, Kerstin; Telford, Richard; Kuijpers, Antoon; Jansen, Eystein; McCarthy, David, 2011. A 100 year record of ocean temperature control on the stability of Jakobshavn Isbrae, West Greenland. *Geology* 39 (9): 867-870.

Waelbroeck, Claire; Paul, A; Kucera, M; Rosell-Melee, A; Weinelt, M; Schneider, R; Mix, AC; Abelmann, A; Armand, L; Bard, E; Barker, S; Barrows, TT; Benway, H; Cacho, I; Chen, MT; Cortijo, E; Crosta, X; de Vernal, A; Dokken, Trond Martin; Duprat, J; Elderfield, H; Eynaud, F; Gersonde, R; Hayes, A; Henry, M; Hillaire-Marcel, C; Huang, CC; Jansen, Eystein; Juggins, S; Kallel, N; Kiefer, T; Kienast, M; Labeyrie, L; Leclaire, H; Londeix, L; Mangin, S; Matthiessen, J; Marret, F; Meland, M; Morey, AE; Mulitza, S; Pflaumann, U; Pisias, NG; Radi, T; Rochon, A; Rohling, EJ; Saffi, L; Schafer-Neth, C; Solignac, S; Spero, H; Tachikawa, K; Turon, JL. Constraints on the magnitude and patterns of ocean cooling at the Last Glacial Maximum. *Nature Geoscience* 2009 ;Volum 2.(2) s. 127-132

Jansen, Eystein; Overpeck, J.T.; 9, co-authors, 2007. Chapter 6: Paleoclimate. In: *Solomon, S.; Qin D.; Manning M.; Chen Z.; Marquis M.; Averyt K.B.; Tignor M.; Miller H.L. (Eds.) Climate Change 2007 - The physical Basis - Working Group I Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, ISBN 978-0-521-88009-1.

Kleiven, Helga Flesche; Jansen, Eystein; Fronval, T.; Smith, T.M., 2002. Intensification of Northern Hemisphere glaciations in the circum Atlantic region (3.5-2.4 Ma) ice-rafted detrius evidence. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 184(3-4), p. 213-223.

Jansen, Eystein; Fronval, T.; Rack, F.; Channell, J.E.T., 2000. Pliocene-Pleistocene ice rafting history and cyclicity in the Nordic Seas during the last 3.5 Myr. *Paleoceanography*, 15(6), p. 709-721.

Dokken, T. M.; Eystein Jansen, 1999. Rapid changes in the mechanism of ocean convection during the last glacial period. *Nature* 401, p. 458-461.

Watson, A.J.; Messias, M.J.; Fogelquist, E.; Van Scoy, K.A.; Johannessen, Truls; Oliver, K.I.C; Stevens, D.P.; Rey, Fransisco; Tanhua, T.; Olsson, Anders; Carse, F.; Simonsen, K.; Ledwell, J.R.; Jansen, Eystein; Cooper, D.J.; Kruepke, J.A.; Guilyardi, E., 1999. Mixing and convection in the Greenland Sea from a tracer-release experiment. *Nature* 401 (6576), p. 902-904.

Fronval, T.; Jansen, Eystein 1996. Rapid changes in ocean circulation and heat flux in the Nordic seas during the last interglacial period. *Nature* 383, p. 806-810.

Fronval, Torben; Jansen, Eystein; Bloemendal, Jan; Johnsen, Sigfus, 1995. Oceanic evidence for coherent fluctuations in Fennoscandian and Laurentide ice sheets on millennium timescales. *Nature* 364, p. 443-446.

Berger, W. H.; Jansen, Eystein, 1994. Mid-Pleistocene Climate Shift: The Nansen Connection. In: *Johannessen O.M. et al. (Eds.) Geophysical Monograph*, 84, p. 295-311.

Raymo, M. E.; Hodell, D.; Jansen, Eystein, 1992. Response of deep ocean circulation to initiation of Northern Hemisphere glaciations. *Paleoceanography*, 7, p. 645-672.

Veum, T.; Jansen, Eystein; Arnold, M.; Beyer, I.; Duplessy, J.C., 1992. Water mass exchange between the North Atlantic and the Norwegian Sea during the past 28,000 years. *Nature* 356, p. 783-785.

Jansen, Eystein; Sjøholm, J., 1991. Reconstruction of glaciation over the past 6 million years from ice-borne deposits in the Norwegian Sea. *Nature* 349, p. 600-604.

Jansen, Eystein; Veum, T., 1990. Evidence for two step deglaciation and its impact on North Atlantic deep-water circulation. *Nature* 343, p. 612-616.

Jansen, Eystein; Befring, S.; Bugge, T.; Eidvin, T.; Holtedahl, H.; Sejrup, H.P., 1987. Large submarine slides on the Norwegian continental margin: sediments, transport and timing. *Marine Geology*, 78, p. 77-107.