Alexandra Jahn

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Academic Appointments

Assistant Professor, Department of Atmospheric and Oceanic Sciences, CU Boulder **since 01/2015**

Fellow, Institute of Arctic and Alpine Research, CU Boulder **since 01/2015**

Project Scientist 1, CGD, National Center for Atmospheric Research (NCAR) **2012 to 2014**

Advanced Study Program Postdoctoral Fellow, CGD, NCAR **2010 to 2012**

University Education

PhD, Department of Atmospheric & Oceanic Sciences at McGill University, Montreal, Canada **2010**

Diplom, Department of Meteorology at the Free University of Berlin, Germany **2004**
German Master of Science equivalent, includes undergraduate studies

Exchange student, Atmospheric Sciences, University of Washington, Seattle, USA **2001/02**

Fellowships ($244,500 total to Jahn)

Christine Mirzayan science & Technology Policy Fellowship, National Academies **2012**
$8500 in support.

Advanced Study Program Postdoctoral Fellowship at NCAR **2010 to 2012**
Proposal-based fellowship for two years of self-directed postdoctoral research. $150,000 in support.

PhD Fellowship from the German National Academic Foundation **2006 to 2008**
Proposal-based PhD fellowship from the German National Academic Foundation (Studienstiftung des deutschen Volkes). Supports 0.2% of German PhD students. $55,000 in support.

Fulbright Travel Award and Exchange Fellowship from FU Berlin **2001 to 2002**
For studies at the University of Washington in Seattle, USA. $15,000 in support.

Student Merit Fellowship from the German National Academic Foundation **2001 to 2004**
The German National Academic Foundation supports 0.3% of German university students. $16,000 in support.

Funded proposals ($786,664 directly to Jahn, $1,639,571 total)

NSF, 2018–2021 *Timing and Paleoceanographic Impacts of the Onset of Arctic-Baffin Bay Throughflow* PI: A. Jennings (CU), co-PIs: A. Jahn, J. Andrews (CU), J. Sepulveda(CU), T. Marchitto (CU). Total funding of $668,325 to CU, of that $133,666 to Jahn.

NSF, 2016–2019: *Collaborative Proposal: Carbon Isotope and geotracer-enabled Transient Climate Evolution of the Deglacial Ocean (C-iTRACE-O).* PI: A. Jahn, co-PI: Z. Liu, Total funding $559,995, of that $301,994 to Jahn at CU.

NSF, 2015–2019: *Collaborative Proposal: Assessing the simulated Arctic freshwater system in CMIP5 models, the CESM large ensemble, and forced simulations.* PI: A. Jahn, co-PIs: M. Holland and B. Tremblay, Total funding $411,251, of that $351,004 to Jahn at CU.

Supercomputer grants awarded (8.55 million core hours total)

NCAR-CISL, 2018–2021, 1.3 million core hours on NSF's Cheyenne supercomputer for the project *"Paleoceanographic Impacts of the Onset of Arctic-Baffin Bay Throughflow."*, PI: A. Jahn.

NCAR-CISL, 2018–2019, 1.7 million core hours on NSF's Cheyenne supercomputer for the project *"Carbon Isotope and geotracer-enabled ocean simulations for present-day and the Last Glacial Maximum."*, PI: A. Jahn.

NCAR-CISL, 2017, 5,000 core hour classroom allocation on NSF's Cheyenne supercomputer, to teach students in "Introduction to Physical Oceanography" how to use a supercomputer. PI: A. Jahn.

NCAR-CISL, 2017–2018, 1 million core hours on NSF's Cheyenne supercomputer for the project *"Mechanisms leading to synchronous snowline depression throughout the northern North Atlantic during the Late Holocene"*. PI: G. Miller, co-PI: A. Jahn.

NCAR-CISL, 2016–2018, 1.5 million core-hours on core-hours on NSF's Yellowstone supercomputer for the project *"Carbon Isotope and geotracer-enabled ocean simulations for present-day and the Last Glacial Maximum."*, A. Jahn.

NCAR-CISL, 2016, 10,000 core hour classroom allocation on NSF's Yellowstone supercomputer, to teach students in "Introduction to Physical Oceanography" how to use a supercomputer. PI: A. Jahn.

NCAR-CISL, 2015–2017, 2.5 million core hours on NSF's Yellowstone supercomputer for the project *"Mechanisms leading to synchronous snowline depression throughout the northern North Atlantic during the Late Holocene"*. PI: G. Miller, co-PI: A. Jahn.

NCAR-CISL, 2015–2018, 400,000 core hours on NSF's Yellowstone supercomputer for the project *"Using Arctic freshwater tracers to assess changes and variability of the Arctic freshwater budget"*. PI: A. Jahn.

Refereed Publications

30 total published, 9 first authored, 2 first authored by mentees.

h-index = 17, ResearcherID:C-6545-2008

$\underline{1}$ = student or postdoc officially advised by Jahn

$\underline{2}$ = student or postdoc informally advised by Jahn

Published/in press

30. Eyring, V., P. Cox, G. Flato, P. Gleckler, G. Abramowitz, P. Caldwell, W. Collins, B. Gier, A. Hall, F. Hoffman, G. Hurtt, **A. Jahn**, C. Jones, S. Klein, J. Krasting, L. Kwiatkowski, R. Lorenz, E. Maloney, G. Meehl, A. Pendergrass, R. Pincus, A. Ruane, J. Russell, B. Sanderson, B. Santer, S. Sherwood, I. Simpson, R. Stouffer, M. Williamson (**2019**), Taking climate model evaluation to the next level, in press, *Nature Climate Change*.

29. Smith, A.[1], **Jahn, A.** (**2019**), Definition differences and internal variability affect the simulated Arctic sea ice melt season, *Cryosphere*, 13, 1–20, doi:10.5194/tc-13-1-2019.

28. Zhong, Y.[1], **Jahn, A.**, G.H. Miller, A. Geirsdottir (**2018**), Asymmetric Cooling of the Atlantic and Pacific Arctic during the Past Two Millennia: A Dual Observation-Modeling Study, 45, *Geophys. Res. Lett.*, doi:10.1029/2018GL079447.

27. **Jahn, A. (2018)**, Reduced probability of ice-free summers for 1.5 °C compared to 2.0 °C warming, *Nature Climate Change*, 8, 409–413 doi:10.1038/s41558-018-0127-8.

26. Zhu, J., Z. Liu, E. Brady, B. Otto-Bliesner, S. Marcott, J. Zhang, X. Wang, J. Nusbaumer, T. Wong, **A. Jahn**, D. Noone (**2017**), Investigating the direct meltwater effect in terrestrial oxygen-isotope paleoclimate records using an isotope-enabled Earth system model, *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL076253.

25. Pendleton, S.L., G. Miller, R. A. Anderson, S. E. Crump, Y. Zhong[1], **A. Jahn**, A. Geirsdottir (**2017**), Episodic Neoglacial expansion and rapid 20th Century retreat of a small ice cap on Baffin Island, Arctic Canada, *Climate of the Past*, 13, 1527–1537, doi:10.5194/cp-2017-27.

24. Zhang, J., Z. Liu, E. C. Brady, **A. Jahn**, K. Lindsay, D. W. Oppo, P. U. Clark, S. A. Marcott (**2017**), Asynchronous warming and δ^{18}O evolution of deep Atlantic water masses during the last deglaciation, *Proc Natl Acad Sci USA*, doi:10.1073/pnas.1704512114.

23. Sanderson, B. , Y. Xu, C. Tebaldi, M. Wehner, B. O'Neill, **A. Jahn**, A. Pendergrass, F. Lehner, W. Strand, L. Lin, R. Knutti, and J.-F. Lamarque (**2017**), Community Climate Simulations to assess avoided impacts in 1.5 °C and 2 °C futures, *Earth Syst. Dynam.*, 8, 827–847, doi:10.5194/esd-8-827-2017.

22. Zhu, J., Z. Liu, E. Brady, B. Otto-Bliesner, J. Zhang, D. Noone, R. Tomas, J. Nusbaumer, T. Wong, **A. Jahn**, C. Tabor (**2017**), Reduced ENSO Variability at the LGM Revealed by an Isotope-enabled Earth System Model, *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL073406.

21. Otto-Bliesner, B. L., **A. Jahn**, R. Feng, E. C. Brady, A. Hu, M. Löfverström (**2017**), Amplified North Atlantic warming in the late Pliocene by changes in Arctic gateways, *Geophys. Res. Lett.*, 44, doi:10.1002/2016GL071805.

20. **Jahn, A.**, J. E. Kay, M.M. Holland, and D. M. Hall (**2016**), How predictable is the timing of a summer ice-free Arctic?, *Geophys. Res. Lett.*, 43, 9113–9120, doi:10.1002/2016GL070067.

19. Notz, D., **A. Jahn**, M. Holland, E. Hunke, F. Massonnet, J. Stroeve, B. Tremblay, and M. Vancoppenolle (**2016**), The CMIP6 Sea-Ice Model Intercomparison Project (SIMIP): Understanding sea ice through climate-model simulations, *Geophys. Mod. Develop.*, 9, 3427–3446, doi:10.5194/gmd-9-3427-2016.

18. Otto-Bliesner, B., E. Brady, J. Fasullo, **A. Jahn**, L. Landrum, S. Stevenson, N. Rosenbloom, A. Mai, G. Strand (**2016**), Climate Variability and Change since 850 C.E.: An Ensemble Approach with the Community Earth System Model (CESM), *Bull. Am. Meteorol. Soc.*, 97(5), 735–754, doi:https://doi.org/10.1175/BAMS-D-14-00233.1.

17. Ilicak, M., H. Drange, Q. Wang, R. Gerdes, Y. Aksenov, D. Bailey, M. Bentsen, A. Biastoch, A. Bozec, C. Böning, C. Cassou, E. Chassignet, A. C. Coward, B. Curry, G. Danabasoglu, S. Danilov, E. Fernandez, P. G. Fogli, Y. Fujii, S. M. Griffies, D. Iovino, **A. Jahn**, T. Jung, W. G. Large, C. Lee, C. Lique, J. Lu, S. Masina, A. J. G. Nurser, C. Roth, D. S. y Mélia, B. L. Samuels, P. Spence, H. Tsujino, S. Valcke, A. Voldoire, X. Wang, S. G. Yeager (**2016**), An assessment of the Arctic Ocean in a suite of interannual CORE-II simulations. Part III: Hydrography and fluxes, *Ocean Modelling*, 100, 141–161, doi:10.1016/j.ocemod.2016.02.004.

16. Wang, Q., M. Ilicak, R. Gerdes, H. Drange, Y. Aksenov, D. A Bailey, M. Bentsen, A. Biastoch, A. Bozec, C. Böning, C. Cassou, E. Chassignet, A. C. Coward, B. Curry, G. Danabasoglu, S. Danilov, E. Fernandez, P. G. Fogli, Y. Fujii, S. M. Griffies, D. Iovino, **A. Jahn**, T. Jung, W. G. Large, C. Lee, C. Lique, J. Lu, S. Masina, A.J. G. Nurser, B. Rabe, C. Roth, D. S. y Mélia, B. L. Samuels, P. Spence, H. Tsujino, S. Valcke, A. Voldoire, X. Wang, S. G. Yeager (**2016**), An assessment of the Arctic Ocean in a suite of interannual CORE-II simulations. Part I: Sea ice and solid freshwater, *Ocean Modelling*, 99, 110–132, doi:10.1016/j.ocemod.2015.12.008.

15. Wang, Q., M. Ilicak, R. Gerdes, H. Drange, Y. Aksenov, D. A Bailey, M. Bentsen, A. Biastoch, A. Bozec, C. Böning, C. Cassou, E. Chassignet, A. C. Coward, B. Curry, G. Danabasoglu, S. Danilov, E. Fernandez, P. G. Fogli, Y. Fujii, S. M. Griffies, D. Iovino, **A. Jahn**, T. Jung, W. G. Large, C. Lee, C. Lique, J. Lu, S. Masina, A.J. G. Nurser, B. Rabe, C. Roth, D. S. y Mélia, B. L. Samuels, P. Spence, H. Tsujino, S. Valcke, A. Voldoire, X. Wang, S. G. Yeager (**2016**), An assessment of the Arctic Ocean in a suite of interannual CORE-II simulations. Part II: Liquid freshwater, *Ocean Modelling*, 99, 86–109, doi:10.1016/j.ocemod.2015.12.009.

14. **Jahn, A.**, K. Lindsay, X. Giraud, N. Gruber, B. L. Otto-Bliesner, Z. Liu, and E. C. Brady (**2015**), Carbon isotopes in the ocean model of the Community Climate System Model (CESM), *Geophys. Mod. Develop.*, 8, 2419–2434, doi:10.5194/gmd-8-2419-2015.

13. Swart, N. C. J. C. Fyfe, E. Hawkins, J. E. Kay and **A. Jahn** (**2015**), Influence of internal variability on Arctic sea-ice trends, *Nature Climate Change*, 5, 86–89, doi:10.1038/nclimate2483.

12. Tilmes, S., **A. Jahn**, J. E. Kay, M. M. Holland, J-F. Lamarque (**2014**), Can regional climate engineering save the summer Arctic Sea Ice?, *Geophys. Res. Lett.*, 41(3), doi:10.1002/2013-GL058731.

11. **Jahn, A.** and M. M. Holland (**2013**), Implications of Arctic sea ice changes for North Atlantic deep convection and the meridional overturning circulation in CCSM4-CMIP5 simulations, *Geophys. Res. Lett.*, 40, 6, 1206–1211, doi:10.1002/grl.50183.

10. **Jahn, A.**, Y. Aksenov, B. A. de Cuevas, R. Gerdes, S. Häkkinen, E. Hansen, C. Herbaut, M.-N. Houssais, M. Karcher, C. Lique, A. Nguyen, P. Pemberton, L. de Steur , D. Worthen, and J. Zhang (**2012**), Arctic freshwater - How robust are model simulations?, *J Geophys Res-Oceans*, 117, doi:10.1029/2012JC007907.
9. **Jahn, A.**, K. Sterling, M. M. Holland, J. E. Kay, J. A. Maslanik, C. M. Bitz, D. A. Bailey, J. Stroeve, E. C. Hunke, W. H. Lipscomb, D. A. Pollak[2] (**2012**), Late 20th century simulation of Arctic sea ice and ocean properties in the CCSM4, *Journal of Climate*, 25(5), 1431–1452, doi:10.1175/JCLI-D-11-00201.1.
8. Vavrus, S., M. M. Holland, **A. Jahn**, D. A. Bailey, J. A. Maslanik, and B. Blazey (**2012**) Simulation of the 21st century Arctic climate in the CCSM4, *Journal of Climate*, Vol. 25(8), 2696–2710, doi:10.1175/JCLI-D-11-00220.1.
7. Jochum, M., **A. Jahn**, S. Peacock, D. Bailey, J. Fasullo, J. Kay, S. Levis, and B. Otto-Bliesner (**2012**), True to Milankovitch: Glacial Inception in the new Community Climate System Model, *Journal of Climate*, 25(7), 2226–2239, doi:10.1175/JCLI-D-11-00044.1.
6. Proshutinsky, A., Y. Aksenov, J. Clement-Kinney, R. Gerdes, E. Golubeva, D. Holland, G. Holloway, **A. Jahn**, M. Johnson, E. Popova, M. Steele, and E. Watanabe (**2011**), Recent advances in Arctic Ocean studies employing models from the Arctic Ocean Model Intercomparison Project, *Oceanography*, 24(3), 102–113, doi:10.5670/oceanog.2011.61.
5. Kay, J. E., M. M. Holland, and **A. Jahn** (**2011**), Interannual to Multidecadal Arctic Sea Ice Extent Trends in a Warming World, *Geophys. Res. Lett.*, 38, L15708, doi:10.1029/2011GL048008.
4. **Jahn, A.**, B. Tremblay, R. Newton, M. M. Holland, L. A. Mysak, and I. A. Dmitrenko (**2010**), A tracer study of the Arctic Ocean's liquid freshwater export variability, *J Geophys Res-Oceans*, 115, C07015, doi:10.1029/2009JC005873.
3. **Jahn, A.**, B. Tremblay, L. A. Mysak, and R. Newton (**2010**), Effect of the large-scale atmospheric circulation on the variability of the Arctic Ocean freshwater export, *Climate Dynamics*, 34, 201–222, doi:10.1007/s00382-009-0558-z.
2. Tjallingii, R., M. Claussen, J.-B. W. Stuut, J. Fohlmeister, **A. Jahn**, T. Bickert, F. Lamy, and U. Röhl (**2008**), Coherent high- and low-latitude control of the northwest African hydrological balance, *Nature Geoscience*, 1, 670–675, doi:10.1038/ngeo289.
1. **Jahn, A.**, M. Claussen, A. Ganopolski, and V. Brovkin (**2005**), Quantifying the effect of vegetation dynamics on the climate of the Last Glacial Maximum, *Climate of the Past*, 1, 1–7, doi:10.5194/cp-1-1-2005.

Submitted

Gu, S.[2], Z. Liu, **A. Jahn**, J. Rempfer, J. Zhang, F. Joos (2019), Neodymium isotopes in the ocean model of the Community Earth System Model (CESM1.3), under review at *Journal of Advances in Modeling Earth Systems*.

England, M.[2], **Jahn, A.**, L. Polvani (2019), Non-uniform contribution of natural variability to recent Arctic sea-ice loss, under review at *J. Climate*.

Gu, S.[2], Z. Liu, J. Lynch-Stieglitzc, **A. Jahn**, J. Zhang, K. Lindsay, L. Wu, Assessing the Ability of Zonal δ^{18}O Contrast in Benthic Foraminifera to Reconstruct Deglacial Evolution of Atlantic Meridional Overturning Circulation, submitted to *Earth and Planetary Science Letters*.

In preparation

DeRepentigny, P.[1], B. Tremblay, R. Newton, S. Pfirman, **A. Jahn**, Future sea-ice decline will bring the Arctic nations closer together, in preparation for *Earth's Futures*.

Laiho, R.[1], **Jahn, A.**, Emergence of forced trends in Arctic Freshwater fluxes, in preparation for *Nature Communications*.

Citable Datasets

Zhong, Y[1], **Jahn, A.**, G.H. Miller, A. Geirsdottir (**2018**), Land use and volcanic forcing files for past2k CESM simulation, https://doi.org/10.5281/zenodo.1304427.

Blog posts and other non-refereed Publications (with links)

Corwin, L., Harvey, P., K., S., Graf, J., Ellingson, E., Bhattacharya, A., Birsoy, B., Casagrand, J., Emery, N., Fillmann, C., Foley, T., Guild, N., **Jahn, A.**, Lee, M., Pao, L., Power, J., and Chasteen, S. (2017), Course-based Undergraduate Research Experiences: Advancing CU Boulder's Strategic Goals, *CU Academic Futures white paper* (link).

A. Jahn (2017), Die Zukunft des Arktischen Meereises, *Invited expert guest post for the German Year of the Ocean* (link).

A. Jahn (2016), How predictable is the first ice-free Arctic summer?, *Guest Blogpost at Carbon-Brief* (link).

Massonnet, F., and **A. Jahn** (2012), Observational needs for sea ice models: Short note, *CliC white paper* (link).

Jahn, A. (2010), Modeling the variability of the liquid freshwater export from the Arctic Ocean, *PhD thesis*, 194 pages, McGill University, Canada (link).

Jahn, A. (2005), Theories and Modeling of Glacial-Interglacial Cycles and Glacial Inception, *Center for Climate and Global Change Research (C2GCR) Report No. 2005-1*, 57 pages, McGill University, Montreal (link).

Jahn, A. (2004), Atmosphere-Vegetation Feedback in the Climate System of the Last Glacial, *Diplom thesis*, 129 pages, Free University of Berlin, Germany (link).

Teaching Activities

Courses taught at CU-Boulder

ATOC4500/7500-002: Numerical methods and modeling, Spring 2018, newly developed 3 credit methods course, cross-listed undergraduate and graduate course, with 19 students, instructor FCQ: 5.59, Course FCQ: 5.06.

ATOC5051: Introduction to Physical Oceanography, Fall 2016 & 2017 & 2018, 3 credit required core graduate course for ATOC students, 9 & 13 & 9 students. Instructor FCQs: 5.9 & 5.15 & 5.22, Course FCQ: 5.6 & 4.92 & 5.11

ATOC1060: Our changing environment, Spring 2015 & Spring 2017, 3 credit introduction to climate course for non-science majors, in 2017 with weekly recitations, with 100 & 106 students (2015 & 2017). Instructor FCQs: 4.3 & 5.3, Course FCQ: 4.3 & 4.8

ATOC6020: Climate Modeling, 1 credit seminar, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2019, with the topics statistical methods for ensemble simulations (fall 2016), scientific writing (spring 2017), scientific networking (fall 2017), career planning (spring 2018), research tools (fall 2018), for 2–4 students.

ATOC6020: Career Development, 1 credit seminar, Fall 2018. One of two faculty advisors for a seminar with 18 graduate students on career development, initiated and largely led by a graduate student.

ATOC6020: Science Communication, 1 credit seminar, Spring 2018. Faculty advisor for a seminar with 15 students on science communication, initiated and led by three graduate student.

Other teaching activities

2018, Invited summer school lecturer, lectures on Arctic sea ice change and Arctic climate projections, International Polar Climate Summer School in Nanjing, China.

2017, TRESTLE scholar, participant in the Transforming Education, Stimulating Teaching and Learning Excellence (TRESTLE) initiative during the fall 2017 semester, designing research experiences for undergraduates in the classroom.

2017, Invited guest lecturer on Paleoclimate, Academy of Livelong Learning in Denver in the class "Our Biosphere: Past and future".

2017, Invited summer school lecturer, lectures on Climate Modeling, Arctic sea ice projections, and Sea ice model assessment, "Connaught Summer Institute in Arctic Science: Atmosphere, Cryosphere, and Climate" in Alliston, ON, Canada.

2016, Participant in the Early Career Geoscience Faculty workshop , participant in the cutting-edge early career geoscience faculty workshop in Maryland, MD, in June 2016, learning about active teaching techniques and about managing, mentoring, and advising students

2016, TRESTLE scholar, participant in the ATOC Transforming Education, Stimulating Teaching and Learning Excellence (TRESTLE) initiative during the spring and fall 2016 semester, designing learning and course objectives for the ATOC curriculum and developing group activities.

2015-2018, Faculty Teaching Excellence Program (FTEP) trainings at CU, on Graduate advising and lab agreements, Authority, leadership, and action in tense moments in the classroom, Inverting the classroom, Managing your career, Teaching large classes, Doing It All: The First Seven Years, Effective use of clickers for student engagement & learning, Writing Effective Clicker Questions, Preparing a Teaching Portfolio for Review and Tenure, Understanding your FCQ Course Evaluation Data, Leading Class Discussion: Increasing Student Engagement, The Scholarship of Teaching and Learning.

2014, Teaching methods workshop at NCAR, participant in a two day teaching methods workshop at NCAR, which was taught by the Teaching program staff from CU Boulder

2013–2014, UCAR Science Education Program Staff (SPARK,) gave several dozen of the public tours at the National Center for Atmospheric Research (NCAR), to visitors, K-12 student groups, and community groups.

2012, Facilitator in the NCAR Research Experience Teacher's Institute, facilitating the online six-week long course "Earth System Science: A Climate Change Perspective" and working with the teachers on their class modules on aspects of climate change during the three-week long in-residence part of the program.

2011, Guest lecturer on Polar climate at Howard University, in the graduate level class ATMOS 201 in the Department for Physics and Astronomy at Howard University, USA.

2010, Science lecturer at NCAR Girl Scout day

2007-2008, Graduate-level course and workshops on science teaching, enrolled in a 3-credit graduate course on science education at McGill University and participated in two one-day workshops on effective science teaching.

2006, Teaching assistant for "Introduction into Ocean Sciences" at McGill University

Students and Postdocs Advised

Postdocs (1)

- Yafang Zhong (co-advised with G. Miller & A. Geirsdottir) (2016–2018)

Graduate students (4)

- Patricia DeRepentigny, awarded Canadian NSERC & FRQNT PhD fellowships (2017–present)
- Abigail Smith (previously Ahlert), awarded NSF graduate fellowship (2015–present)
- Rory Laiho (2015–present)
- Aaron Schroeder (2017)

Undergraduate students (1)

- Kerrie Dochen, physics major, research internship, now at Ball Aerospace (2017–2018)

Dissertation Committee member, informal co-advisor, and host for visitors

Students informally co-advised (4)

- Mark England (Columbia University), PhD student with Lorenzo Polvani (2017–present)
- Jennifer Dentith (University of Leeds), PhD student with Ruza Ivanovic (2016–present)
- Sifan Gu (Univ. Wisconsin Madison), PhD student with Zhengyu Liu (2016–2018)
- Daniel Pollak, SOARS undergraduate student at NCAR with Marika Holland (2010)

Dissertation Committee member at CU (4)

- Meghan Helmberger, PhD student in Geography (2018–present)
- Sean Horvath, PhD student in Civil, Environmental & Architectural Engr. (2018–present)
- Michael Drew Cameron, PhD student in Atmospheric and Oceanic Sciences (2017–present)
- Michael Stone, PhD candidate in Atmospheric and Oceanic Sciences (2016–present)

Host of visitor to research group (1)

- Clara Burgard, PhD student with Dirk Notz at MPI Hamburg, 2 month visit (2018)

Community Service

Science Reqs. Advisory Panel for NCAR's next supercomputer, **since 12/2018**

Co-lead of one of the WCRP-Polar Climate Predictability Initiatives **since 10/2018**

Co-Lead of the theme "Improve knowledge and understanding of past polar climate variations (100+ years)", http://www.climate-cryosphere.org/wcrp/pcpi/themes/836-past-polar-climate.

Expert reviewer for IPCC reports: **2018**

Reviewed chapters in special IPCC reports (Global Warming of 1.5 °C; Ocean and Cryosphere in a Changing Climate).

US-CLIVAR Paleo AMOC Task Team member, **since 07/2018**

https://usclivar.org/amoc/organization/task-team-5-paleo-amoc.

External reviewer for scientific promotion and hiring decisions **2018**

Lead convenor and session chair at POLAR2018, **2018**

Lead convenor and session chair of the session "Sea ice Modeling and Prediction", Davos, Switzerland.

Advisory Board member for the DOE project HiLAT-RASM **since 01/2018**

Co-organizer of Polar prediction and SIMIP workshop, Germany **2016–2017**

Organizer of CliC SSG annual meeting, Boulder, USA, 2015.

Lead convenor for a session at IUGG 2015, **2015**

Lead convenor for the session "Evaluation of the Cryosphere in CMIP5 Models" at IUGG 2015. Prague, Czech Republic, 2015.

Organizer of the first SIMIP workshop **2014**

I organized the first SIMIP workshop with the topic "Sea ice in Large Scale sea ice models" for 35 scientists in Reading, UK in September 2014.

Co-chair of SIMIP for CMIP6 **since 2014**

One of two co-chairs of the WCRP endorsed diagnostic Sea ice Model Intercomparison Project (SIMIP) for CMIP6. https://www.wcrp-climate.org/modelling-wgcm-mip-catalogue/cmip6-endorsed-mips-article/1056-modelling-cmip6-simip.

Co-chair of Sea ice and Climate Modeling Forum **since 2014**

The aim of the Forum for Sea ice and Climate Modeling is to bring together sea ice model developers to foster the improvement of sea ice models. SIMIP is a project that came out of this forum. http://www.climate-cryosphere.org/activities/groups/seaicemodeling.

CliC steering committee member **2014 to 2018**

Steering Committee member for WCRP-CliC (Climate and Cryosphere).

Co-convenor for a session at the 2012 IPY conference, **2012**

Co-convenor and co-chair of the session on "Diminishing snow and ice" at the 2012 IPY conference in Montreal, Canada.

Proposal reviewer for NSF **since 2011**

Reviewer of Arctic and Paleo science proposals for NSF.

Co-chair for a session at the 2011 IUGG conference, **2011**

Co-chair of "Future state of the Arctic and potential impact" at the 2011 IUGG conference in Melbourne, Australia.

Organizer of the annual NCAR girl scout day **2011**

I was one of two organizers of the 2011 NCAR girl scout day, which was attended by 50 girl scouts and 10 volunteers.

Member of the IUGG Advisory Group of Young Scientists **2010 to 2011**

IAPSO representative in the Advisory Group of Young Scientists of IUGG, which developed recommendations for IUGG to better include early career scientists.

Member of the Thompson Lecture Series organizing committee **2010 to 2012**

One of five members of the Thompson Lecture Series committee, which invites and hosts two prominent scientists per year to NCAR.

Panel member for NSF **2010**

Panel member of a NSF proposal review committee.

Organizer of a two-day APECS career development workshop **2009 to 2010**

I was the main organizer of a two-day APECS (Association for Polar Early Career Scientists) career development workshop for 110 students (budget of 50,000 Euro) before the IPY conference in Oslo, Norway.

Organizer of an APECS career panel **2009**

Organizer and initiator of an APECS panel discussion on polar careers for 50 early career polar scientists during the MOCA-2009 conference "Our changing planet" in Montreal, Canada.

Reviewer for journal articles **since 2008**

Reviewer for the GRL, Nature journals, JGR-Oceans, Clim. Past, Geophys. Model Development, J. of Marine Systems, J. of Climate, Clim. Dyn., Cryosphere, Ocean Modeling, Scientific Reports, J. of Atmos. and Oceanic Techn, and others.

Member of the executive committee of student organizations **1999 to 2009**

President and Vice-President of different student organizations at McGill University and the Free University of Berlin

Scientific Presentations

Invited Scientific Presentations (34 total)

Assessing the predictability and probability of a summer ice-free Arctic

11/2018: Keynote before the ESSS Poster Conference hosted by the Department of Atmospheric and Oceanic Sciences department at CU Boulder, Boulder, USA.
11/2018: Seminar in the Atmospheric Science department seminar series at Colorado State University, Fort Collins, USA.
10/2018: Seminar in the INSTAAR seminar series at CU Boulder, Boulder, USA.

Boundary forced predictability and the challenges of internal variability
08/2018: Talk at the NSF-funded CESM Polar Modeling Workshop at NCAR, Boulder, USA.

Observed recent Arctic sea ice change, Arctic climate projections
05/2018: Talks/lectures at the International Polar Climate Summer School in Nanjing, China.

Assessing the prediction uncertainty of Arctic sea ice and ocean projections
05/2018: Seminar at in the Global Modeling and Assimilation Office seminar series at NASA Goddard, Maryland, USA.

Simulated Arctic sea ice and ocean change
04/2018: Keynote talk at the Arctic System Change workshop at NCAR, Boulder, USA.

Positive feedbacks from Arctic Ocean Sea Ice
11/2017: Talk at the CU Center for the Study of Origins Symposium on "The Coldest Centuries in 8000 Years: The Little Ice Age Causes and Human Consequences.", Boulder, USA.

Understanding and reducing errors in sea ice projections from global climate models
10/2017: Keynote talk at the workshop on improved satellite retrievals of sea-ice concentration and sea-ice thickness for climate applications in Hamburg, Germany.

Climate Modeling, Arctic sea ice projections, Sea ice Model Assessment
07/2017: Talks/lectures at the Connaught Summer Institute in Arctic Science: Atmosphere, Cryosphere, and Climate, Alliston, ON, Canada.

The Sea Ice Model Intercomparison project
06/2017: Talk at the CLIVAR/CliC/SCAR Southern Ocean Regional Panel 12th session, Boulder, USA.

Isotope modeling
05/2017: Talk at the Proxy System modeling and data assimilation in paleosciences workshop, Louvain-la-Neuve, Belgium.

Climate Science and Climate Projection
05/2017: Talk at the CU Climate and Health workshop, Boulder, USA.

Impacts of Arctic freshwater on AMOC
03/2017: Seminar in the Cryospheric and Polar Processes Seminar at NSIDC, Boulder, USA.

Influence of internal variability on Arctic sea ice simulations
02/2017: Talk at the Santa Fe Climate Conference, NM, USA.

Challenges for assessing sea ice simulations from climate models against observations
01/2017: Talk at the 2017 AMS meeting in Seattle, WA, USA.

Isotope modeling with the CESM
08/2016: Talk at the 2016 CESM tutorial at NCAR, Boulder, USA.

Using large ensemble simulations to assess Arctic sea ice simulations and predictability
06/2016: Talk in the Large Ensemble session at the 2016 CESM workshop, Breckenridge, USA.

How predictable is the timing of a summer ice-free Arctic?
05/2016: Talk at the SEARCH SSC meeting in Boulder, USA.
04/2016: Talk at the Institute for Meteorology at the Free University of Berlin, Germany.

Internal variability limits the predictability of a summer ice-free Arctic
12/2014: Talk at the fall AGU meeting in San Francisco, USA.

Using models to study Arctic climate variability and change
01/2014: Seminar at the Institute for Arctic and Alpine research (INSTAAR) in Boulder, USA.

Carbon isotopes in the CESM
08/2013: Talk at the "Isotopes of Carbon, Water, and Geotracers in Paleoclimate Research" conference in Bern, Switzerland.

Large Scale Modeling Data Needs

06/2013: Plenary talk at the CliC Sea ice Modeling & Observing workshop in Tromso, Norway.

Global Impacts of Arctic sea-ice changes

04/2012: Talk at the International Polar year (IPY) conference in Montreal, Canada.

Assessing future changes in the Arctic Ocean

04/2012: Seminar in the Dept. of Atmospheric & Oceanic Sciences, McGill University, Canada.

01/2012: Seminar at the Alfred Wegener Institute for Polar & Marine Science (AWI), Germany.

09/2011: Seminar in the Dept. of Physics & Astronomy at Howard University, Washington DC, USA.

The Polar Regions: An area of active research for decades to come

06/2011: Talk at the IUGG conference in Melbourne, Australia.

Variability and change in the Arctic Ocean

04/2011: Seminar at Woods Hole Oceanographic Institution, USA.

03/2011: Seminar in the Dept of Environment and Geography, University of Manitoba, Canada.

A tracer study of the Arctic Ocean's liquid freshwater export variability

09/2010: Seminar in the CGD seminar series at NCAR, Boulder, USA.

06/2010: Seminar at the Alfred Wegener Institute for Polar & Marine Science (AWI), Germany.

06/2010: Talk at the CMOS conference in Ottawa, Canada.

Contributed Scientific Presentations

(presenting author other than the first author indicated by *.)

Presentations where neither Jahn nor her direct advisees are presenting author are not listed

$\underline{}^{1}$ = student or postdoc officially advised by Jahn

Future Sea-Ice Decline Predicted to Bring the Arctic Nations Closer Together

12/2018: P. DeRepentigny[1], B. Tremblay, R. Newton, S. Pfirmann, **A. Jahn**, Poster at the 2018 AGU conference in Washington DC, USA.

11/2018: P. DeRepentigny[1], B. Tremblay, R. Newton, S. Pfirmann, **A. Jahn**, Poster at the ESSS Poster Conference at CU Boulder, Boulder, USA. *Won best overall poster award*

Arctic freshwater modeling work at CU Boulder

08/2018: **A. Jahn**, R. Laiho[1], P. DeRepentigny[1], Oral talk at the Arctic Freshwater Dynamics Workshop at Lamont-Doherty, New York, USA.

Arctic Sea Ice Melt Season Length in the CESM Large Ensemble

11/2018: A. Ahlert[1], **A. Jahn**, Poster at the ESSS Poster Conference at CU Boulder, Boulder, USA. *Won the poster award in the Snow and Ice category*

06/2018: A. Ahlert[1], **A. Jahn**, Poster at the POLAR2018 meeting, Davos, Switzerland

For Arctic summer sea ice, staying at 1.5 °C global warming matters

06/2018: **A. Jahn**, Talk at the POLAR2018 meeting, Davos, Switzerland

01/2018: **A. Jahn**, Talk at the PCWG meeting, Boulder, CO, USA

Will future sea-ice decline bring the Arctic Nations closer together?

06/2018: P. DeRepentigny[1], B. Tremblay, R. Newton, S. Pfirmann, **A. Jahn**, Poster at the 23rd CESM workshop, Boulder, CO, USA

Scenario Uncertainty for Arctic Freshwater Projections

06/2018: R. Laiho[1], **A. Jahn**, Poster at the 23rd CESM workshop, Boulder, CO, USA

Assessing the impact of internal variability on comparisons of sea ice thickness with satellite derived products

06/2018: **A. Jahn**, K. Dochen[1], D. Hall, Talk at the POLAR2018 meeting, Davos, Switzerland

12/2017: **A. Jahn**, K. Dochen[1], D. Hall, Talk at the AGU fall meeting, New Orleans, USA

How the Timing of Melt and Freeze Onset Impacts Arctic Sea Ice Cover

12/2017: A. Ahlert[1], **A. Jahn**, Poster at the 11th Annual Earth System & Space Science Poster Conference, Boulder, CO, USA

08/2017: A. Ahlert[1], **A. Jahn**, Poster at the International Glaciological Society "Polar Ice, Polar Climate, Polar Change" Conference, Boulder, USA

What Models and Satellites Tell Us (and Don't Tell Us) About Arctic Sea Ice Melt Season Length

12/2017: A. Ahlert[1], **A. Jahn**, Talk at the AGU fall meeting, New Orleans, USA

Modeling North Atlantic Sea Ice and Circulation Changes during the Last 2ka

10/2017: Y. Zhong[1], G. Miller, **A. Jahn**, A. Geirsdottir, Talk at the ANATILS meeting, Boulder, CO, USA

A summer ice-free Arctic by the end of the 21st century? A question of future emissions

08/2017: **A. Jahn**, Talk at the International Glaciological Society meeting "Polar Ice, Polar Climate, Polar Change" in Boulder, USA

Assessing ocean circulation changes at the LGM using radiocarbon simulations with the iCESM

06/2017: A. Schroeder[1], **A. Jahn**, Poster at the CESM workshop in Boulder, CO, USA

05/2017: A. Schroeder[1], **A. Jahn**, Poster at the Proxy System modeling and data assimilation in paleosciences workshop, Louvain-la-Neuve, Belgium

Predictability of Arctic sea ice under different emission scenarios

03/2017: **A. Jahn**, Talk at the Polar Prediction workshop, Bremerhaven, Germany

A Past2K run with CESM

03/2017: Y. Zhong[1], G. Miller, **A. Jahn**, A. Geirsdottir, Talk at the CESM Paleoclimate WG meeting, Boulder, CO, USA

Detecting Changes in the Arctic Freshwater Budget

06/2018: R. Laiho[1], **A. Jahn***, Poster at the POLAR2018 conference, Davos, Switzerland

04/2018: R. Laiho[1], **A. Jahn**, Poster at the 48th International Arctic Workshop, Boulder, CO

12/2017: R. Laiho[1], **A. Jahn**, Poster at the 11th Annual Earth System and Space Science Poster Conference, Boulder, CO

06/2017: R. Laiho[1], **A. Jahn**, Poster at the 22nd CESM Workshop, Boulder, CO

02/2017: R. Laiho[1], **A. Jahn**, Talk at the 2017 winter CESM Polar Climate Working Group Meeting, Boulder, CO

Definitions Matter: Arctic Sea Ice Melt and Freeze Onset

06/2017: A. Ahlert[1], **A. Jahn**, Poster at the Community Earth System Model Workshop, Boulder, USA

03/2017: A. Ahlert[1], **A. Jahn**, Poster at the Polar Prediction Workshop, Bremerhaven, Germany

02/2017: A. Ahlert[1], **A. Jahn**, Talk at the Community Earth System Model Working Group Meetings, Boulder, USA

Assessing sea ice melt season characteristics in the CESM Large Ensemble

12/2016: A. Ahlert[1], **A. Jahn**, Poster at the 2016 Earth & Space Science Student Poster conference, Boulder, CO, USA.

11/2016: A. Ahlert[1], **A. Jahn**, Poster at the FAMOS workshop in Woods Hole, USA.

06/2016: A. Ahlert[1], **A. Jahn**, Poster at the 21st CESM Workshop, Breckenridge, USA.

The Journey to a New ATOC Major: What do we want our students to learn?

10/2016: Nigro, M.A., D. Brown, **A. Jahn***, N. Lovenduski, J.K. Lundquist, Poster at the 2016 TRESTLE Annual Meeting, Boulder, CO.

Sea ice simulations for the Last Millennium - the role of internal versus forced variability

06/2016: **A. Jahn**, Poster at the 21st CESM workshop in Breckenridge, USA

04/2016: **A. Jahn**, Poster at the EGU meeting in Vienna, Austria

Internal variability in the Arctic freshwater budget as simulated by the CESM Large Ensemble

02/2018: R. Laiho[1], **A. Jahn**, Talk at the Ocean Sciences meeting, Portland, USA
11/2016: R. Laiho[1], **A. Jahn**, Poster at the FAMOS workshop in Woods Hole, USA
06/2016: R. Laiho[1], **A. Jahn**, Poster at the 21st CESM workshop in Breckenridge, USA

Studies of the AMOC strength in future and paleo simulations with the CESM

05/2016: **A. Jahn**, M. Holland, B. Otto-Bliesner, Poster at the Workshop on Connecting Paleo and Modern Oceanographic Data to Understand AMOC over Decades to Centuries in Boulder, USA

How predictable is the timing of a summer ice-free Arctic?

11/2016: **A. Jahn**, J. Kay, M. Holland, D. Hall, Poster at the FAMOS workshop in Woods Hole, USA

04/2016: **A. Jahn**, J. Kay, M. Holland, D. Hall, Talk at the EGU meeting in Vienna, Austria

Influence of internal variability on sea ice predictability

02/2016: **A. Jahn**, J. Kay, M. Holland, D. Hall, Talk at the CESM PCWG winter meeting, Boulder, USA

12/2015: **A. Jahn**, J. Kay, M. Holland, D. Hall, Poster at the AGU fall meeting in San Francisco, USA

Investigating the mechanisms leading to synchronous snowline depression throughout the northern North Atlantic during the Late Holocene using the CESM

10/2015: **A. Jahn**, Talk at the ANATILS (Abrupt North Atlantic Transitions: Ice, Lakes, Sea) workshop in Boulder, USA

The Sea ice model intercomparison project for CMIP6

02/2015: **A. Jahn**, Talk at the CliC SSG meeting in Boulder, USA

02/2015: **A. Jahn**, Talk at the CESM Polar Climate WG meeting in Boulder, USA.

Uncertainty in predictions of Arctic sea ice

- 09/2014: Poster presentation at the Royal Society discussion meeting in Buckinghamshire, UK.

- 06/2014: Poster presentation at the CESM workshop in Breckenridge, USA.

Simulated carbon isotope distributions in the ocean model of the CESM

- 09/2014: Oral presentation in the CGD Research Reports seminar series at NCAR, USA.
- 06/2014: Oral presentation at the CESM workshop in Breckenridge, USA.
- 05/2014: Oral presentation at the 2nd PMIP3 meeting in Namur, Belgium.

The isotope enabled CESM

- 05/2014: Poster at the 2nd PMIP3 meeting in Namur, Belgium.
- 10/2012: Oral presentation at the AOMIP/FAMOS workshop in Woods Hole, USA.

Arctic sea ice in the CESM large ensemble

- 01/2014: Oral presentation at the Polar Climate WG winter meeting in Boulder, USA.

Carbon isotopes in the iCESM

- 12/2014: Poster presentation at the 2014 fall AGU meeting in San Francisco, USA.
- 03/2014: Oral presentation at the 2014 spring Paleo WG meeting in Boulder, USA.
- 02/2014: Poster at the 2014 AGU Ocean Sciences meeting in Honolulu, USA.
- 08/2013: Oral presentation at the 2013 CESM tutorial in Boulder, USA.
- 06/2013: Oral presentation at the CESM Paleo Climate WG meeting in Breckenridge, USA.
- 01/2013: Oral presentation at the CESM Ocean Modeling WG meeting in Boulder, USA.
- 11/2012: Oral presentation at the SynTraCe workshop in Providence, USA.
- 10/2012: Oral presentation in the CGD Research Reports at NCAR in Boulder, USA.

Implications of Arctic sea ice changes for North Atlantic deep convection and the MOC

- 02/2013: Oral presentation at the CESM Polar Climate WG meeting in Boulder, USA.

Data needs for sea ice models

- 02/2013: Oral presentation at the CliC Steering Committee Meeting in Potsdam, Germany.
- 11/2011: Oral presentation at the CliC sea ice workshop in Boulder, USA.

21st century Arctic September sea-ice extent: concentration, trends, and variability

- 04/2012: Poster at the IPY conference in Montreal, Canada.

How robust are model results of the seasonal cycle of Arctic freshwater export?

- 11/2011: Oral presentation at the AOMIP workshop in Woods Hole, USA.

Late 20th century simulation of Arctic sea-ice and ocean properties in the CCSM4

- 10/2011: Poster at the WCRP climate conference in Denver, USA,.
- 06/2011: Oral presentation at the IUGG conference in Melbourne, Australia.
- 03/2011: Poster at the Gordon Polar Marine Sciences Conference in Ventura, USA.
- 02/2011: Oral presentation at the CCSM Polar Climate WG meeting in Boulder, USA.

Seasonal cycle of the Fram Strait freshwater export: A model perspective

- 06/2011: Oral presentation at IUGG conference in Melbourne, Australia.
- 06/2010: Oral presentation at IPY Oslo conference in Oslo, Norway.
- 03/2010: Poster at the "State of the Arctic" conference in Miami, USA.

Future freshwater export from the Arctic according to GCM scenarios

- 10/2010: Oral presentation at the AOSB-ASOF Workshop on the integrated Arctic Ocean Observing System in Woods Hole, USA.

Comparison of the simulated Arctic freshwater export variability from different models

- 10/2010: Oral presentation at the 14th AOMIP workshop in Woods Hole, USA.

Arctic FW budget in the CCSM4 - a first look

- 07/2010: Oral presentation at the CESM Polar Climate WG meeting in Breckenridge, USA.

Changes in the freshwater export from the Arctic under doubling of CO_2

- 06/2010: Oral presentation at the IPY Oslo conference in Oslo, Norway.
- 03/2010: Poster at the "State of the Arctic" conference in Miami, USA.

Mentor panel discussions - an easy way to get people talking

- 06/2010: Poster at the IPY conference in Oslo, Norway.

Arctic freshwater export variability: A detailed model study

- 02/2010: Oral presentation at the CESM Polar WG meeting in Boulder, USA.
- 12/2009: Poster at the AGU fall meeting in San Francisco, USA.

Comparison of Arctic freshwater export variability from different models - A first look

- 10/2009: Oral presentation at the 13th AOMIP workshop in Woods Hole, USA.

Arctic freshwater pathways and freshwater export variability

- 07/2009: Oral presentation at the MOCA-09 conference in Montreal, Canada.
- 06/2009: Oral presentation at the CMOS conference in Halifax, Canada.

Effect of the large-scale atmospheric circulation on Arctic Ocean freshwater exchange

- 01/2009: Oral presentation at the 12th AOMIP workshop in Woods Hole, USA.
- 04/2008: Oral presentation at the EGU meeting in Vienna, Austria.
- 01/2008: Oral presentation at the CESM Polar Climate WG meeting in Boulder, USA.

Interannual variability in the Arctic Ocean freshwater balance

- 07/2007: Poster at the international sea ice summer school in Svalbard, Norway.
- 05/2007: Oral presentation at the CMOS/CGU/AMS conference in St. John's, Canada.

Freshwater storage changes in the Arctic Ocean

- 03/2007: Oral presentation at the McGill Graduate Student Research Symposium, Montreal, Canada.

Freshwater in the Arctic Ocean

- 09/2006: Oral presentation at the Bjerknes summer school on multidecadal climate variability and teleconnection dynamics in Bergen, Norway.
- 06/2006: Oral presentation in the polar research group at Lamont-Doherty Earth Observatory, Columbia University, New York, USA.

Contribution of vegetation dynamics to climate variations during MIS 3/2

- 06/2006: Poster at the CMOS conference in Toronto, Canada.

Quantifying the effect of vegetation dynamics on the climate of the LGM

- 06/2005: Oral presentation at the CMOS conference in Vancouver, Canada.

Last updated: January 2, 2019