

# Aleksi Nummelin

## Curriculum Vitae, August 2017

Email: [aleksi.nummelin@jhu.edu](mailto:aleksi.nummelin@jhu.edu) Skype: aleksi.nummelin Web: [pages.jh.edu/~anummel1/](http://pages.jh.edu/~anummel1/)

### Education

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- 10/2016 PhD, climate dynamics and physical oceanography, Geophysical Institute, University of Bergen.  
Thesis: The Arctic Ocean in A Fresh and Warm Future  
Supervisors: Prof. C. Li, Prof. L. H. Smedsrud and Dr. B. Risebrobakken
- 4/2012 Master of Science (major: geophysics, minors: meteorology, methodological sciences), Department of Physics, University of Helsinki.  
Thesis: [Convection in the Greenland Sea: model and observations.](#)  
Supervisor: Prof. B. Rudels
- 6/2010 Bachelor of Science (major: geophysics, minors: physics, meteorology), Department of Physics, University of Helsinki.  
Thesis: Denmark Strait Overflow  
Supervisor: Prof. B. Rudels

### Work Experience

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- 1/2017– Postdoctoral Fellow, Earth & Planetary Sciences, Johns Hopkins University
- 8/2016-12/2016 Scientist, Geophysical Institute, University of Bergen
- 8/2012–8/2016 PhD research focusing on model simulations and data analysis of ocean circulation changes under freshwater forcing. University of Bergen  
Supervisors: Camille Li, Lars Henrik Smedsrud, Bjørg Risebrobakken
- 5/2009–8/2012 Research assistant, Finnish Meteorological Institute (FMI). Analysis of MITgcm model results and writing a scientific article. Analysis of CTD data and Argo data, and GOTM model results. Participation in FMI's Argo activities in the Baltic Sea. Supervisors: Dr. Tapani Stipa, Prof. Bert Rudels and Dr. Jari Haapala
- 7–8/2008 & 5–6/2007 Summer intern, Finnish Institute of Marine Research. Analysis of MITgcm model results for project report. Supervisor: Dr. Tapani Stipa

### Research & Teaching Experience

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- 7/2015 Lecturer in *A Changing Arctic* -course as part of the International Summer School (ISS) at University of Oslo, Norway
- 1–6/2014 Graduate Student Trainee with Professor Bruno Tremblay, Department of Atmospheric and Oceanic Sciences, McGill University, Canada
- 2013–2015 Teaching assistant in following courses *numerical modelling, data-analysis in meteorology and oceanography, dynamical meteorology, and seminar in atmospheric sciences*, University of Bergen, Norway
- 1–5/2012 Teaching assistant, *introduction to oceanography*, University of Helsinki, Finland
- 7–8/2011 P418/2 research cruise on board F/S Poseidon. CTD Rosette and Underway CTD work including post-processing of the CTD and lowered ADCP data. Chief scientist: Dr. K. Latarius, University of Hamburg, Germany.
- 6–8/2010 M82-1 research cruise on board F/S Meteor. Primarily CTD Rosette and mooring work including post-processing of the shipborne ADCP and CTD data. Chief scientist: Prof. D. Quadfasel, University of Hamburg, Germany.

## Supervision

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- 2015–2016 Co-supervisor, MSc thesis, Musa Ssemujju: Monsoon in North East Bangladesh
- 2014 Co-supervisor, MSc thesis, Emilie Otilde Lotsberg: A view on possible regime shifts in the North Atlantic subpolar gyre in the mid 1920s and 1990s

## Publications

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- Nummelin A., M. Ilicak, Recent evolution of the ocean component of the Norwegian Earth System Model, in preparation
- Lambert E., **Nummelin A.**, P. Pemberton, and M. Ilicak, Tracing the imprint of runoff variability on Arctic water mass transformation, in preparation
- Jensen, M. F., **Nummelin, A.**, Nielsen, S. B., Sadatzki, H., Sessford, E., Risebrobakken, B., Andersson, C., Voelker, A., Roberts, W. H. G., and Born, A., A spatio-temporal reconstruction of sea-surface temperatures in the North Atlantic during Dansgaard-Oeschger events 5–8, *Clim. Past Discuss.*, doi: 10.5194/cp-2017-103, in review
- Schemm, S., **A. Nummelin**, N.G. Kvamstø, and Ø. Breivik (2017), The Ocean Version of the Lagrangian Analysis Tool LAGRANTO. *J. Atmos. Oceanic Technol.*, 34, 1723–1741, doi:10.1175/JTECH-D-16-0198.1
- Nummelin, A.**, C. Li, and P. J. Hezel (2017), Connecting ocean heat transport changes from the midlatitudes to the Arctic Ocean, *Geophys. Res. Lett.*, 44, doi:10.1002/2016GL071333.
- Nummelin A.**, M. Ilicak, C. Li, and L. H. Smedsrud (2016), Consequences of future increased Arctic runoff on Arctic Ocean stratification, circulation, and sea ice cover, *J. Geophys. Res. Oceans*, 120, doi:10.1002/2015JC011156
- Nummelin A.**, C. Li, and L. H. Smedsrud (2015), Response of Arctic Ocean stratification to changing river runoff in a column model, *J. Geophys. Res. Oceans*, 120, 2655–2675, doi:10.1002/2014JC010571
- Rudels B., M. Korhonen, G. Budéus, A. Beszczynska-Möller, U. Schauer, **A. Nummelin**, D. Quadfasel, and H. Valdimarsson, (2012) The East Greenland Current and its impacts on the Nordic Seas: observed trends in the past decade *ICES J. Mar. Sci.* 69(5):841-851. doi:10.1093/icesjms/fss079
- Roiha P., A. Westerlund, **A. Nummelin**, and T. Stipa (2010) Ensemble forecasting of harmful algal blooms in the Baltic Sea, *J. Mar Systems*, Vol. 83, Issues 3–4. doi:10.1016/j.jmarsys.2010.02.015

## Selected Presentations

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- Consequences of Future Increased Arctic Runoff on Arctic Ocean Stratification, Circulation, and Sea Ice Cover*, oral presentation in Ocean Sciences Meeting 2016, February, 2016 in New Orleans, USA.
- Arctic Ocean water masses under changing river runoff*, 2014, invited talk at the annual meeting of the Norwegian Geophysical Society, Oslo, Norway.
- Arctic Ocean water masses under changing river runoff*, oral presentation in Ocean Sciences Meeting, 2014 in Honolulu, USA.

## Outreach

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- 2013 & 2015 Presentations in Forskningsdagene UNG, youth science night, Bergen
- 2013– Contributing author, <http://www.scisnack.com/> science blog

## Computing Skills

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- Programming Python, Matlab, Ferret, R, Fortran 77/95, Java, HTML(5), and shell scripting
- Numerical models Norwegian Earth System Model, 1DICE atmosphere–sea ice–ocean column model, GOTM 1-D turbulence model and MITgcm

## Instrumentation

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Shipboard equipment (CTD, ADCP, Moorings) and remote control and modification of Argo floats

## Language Skills

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<b>Finnish</b>	<i>Native</i>	<b>English</b>	<i>Excellent</i>
<b>Norwegian</b>	<i>Fluent</i>	<b>Swedish</b>	<i>Fluent</i>
<b>French</b>	<i>Basics</i>		

## Service

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2015–	Reviewer for Journal of Physical Oceanography, Journal of Geophysical Research: Oceans, Geophysical Research Letters, and Climate Dynamics
1/2016	Organizing committee member, annual meeting of the Bjerknes Centre for Climate Research
10/2012–9/2015	Organizing committee member, Geophysical Institute Colloquium
6/2013–1/2014	Head of the organizing committee, ResClim modelling workshop