PEER-REVIEWED JOURNAL ARTICLES


[18] T. W. N. Haine* and T. Martin* (2017), The Arctic-Subarctic sea ice system is entering a seasonal regime: Implications for future Arctic amplification, Scientific Reports, 7, 4618, doi:10.1038/s41598-017-04573-0 (* authors with equal contributions)


NON-PEER REVIEWED ARTICLES

T. Martin, M. Steele, and J. Zhang (2014), Arctic Ocean Sea Ice Loss: Modeling the effect on Wind-to-Ocean Momentum Transfer, Witness the Arctic, Fall 2014 issue 3, invited contribution

THESIS


T. Martin, Räumliche und Zeitliche Variabilität der Arktischen Meereisdrift (Spatial and temporal variability of Arctic sea ice drift), Diploma thesis, University of Kiel, Institut für Meereskunde, Kiel, 2003

BOOK CHAPTERS


PRESENTATIONS

INVITED TALKS

T. Martin, Sea ice: Buffer or Amplifier of Air-Sea Exchange?, Institute for Marine Research, University of Hamburg, Hamburg, Germany, 26 April 2018

T. Martin, Controls of open ocean deep convection: A model perspective, guest of Thomas Stocker, University of Bern, Bern, Switzerland, 23–24 April 2018

T. Martin, Blue vs. white ocean: frontiers in ice-ocean modelling, DLR Conference on Climate Change (in collaboration with the United Nations Office for Space Affairs (UNOOSA)), Cologne, Germany, 17–19 April 2018

T. Martin, The role of sea ice in high-latitude ocean-atmosphere interaction, GEOMAR Helmholtz Center for Ocean Research, Kiel, Germany, 27 May 2014

T. Martin, How sea ice moderates atmosphere-ocean exchange thereby timing climate variability, Nansen Environmental and Remote Sensing Center, Bergen, Norway, 25 April 2013

T. Martin, Sea ice deformation and the ice thickness distribution: How novel observations can help to improve models, AGU Fall Meeting, San Francisco, CA, USA, 3–7 December 2012

T. Martin and A. Adcroft, Interactive Icebergs in a coupled GCM: A new player in modeling ice-ocean interactions, The MIT Joint Program on the Science and Policy of Global Change, Massachusetts Institute of Technology (MIT), Cambridge, MA, USA, 22 May 2009

T. Martin and A. Adcroft, The impact of interactive icebergs on the ocean and sea ice in a global climate model, CAOS Colloquium, New York University (NYU), Courant Institute, New York, NY, USA, 11 March 2009
T. Martin, Interactive Icebergs in a Global Climate Model: Effects on Ocean and Sea Ice, and Airborne observation of ridged sea ice, University of Delaware, Department of Geography, Newark, DE, USA, 24 October 2008

T. Martin, On the ability of large-scale models to reproduce sea ice drift and ridging in the Arctic, Geophysical Fluid Dynamics Laboratory, Princeton, NJ, USA, 24 May 2007

T. Martin, Drift and Deformation of Arctic Sea Ice: Findings from Observations and Modelling, ZMAW seminar, Max Planck Institute for Meteorology, Hamburg, Germany, 8 March 2006

**Conference Talks**


T. Martin, M. Tsamados, and D. L. Feltham, Changing summer sea ice roughness modifies momentum transfer into the Arctic Ocean, EGU General Assembly, Vienna, Austria, 12–17 April 2015


T. Martin, J. Hutchings, S. Hendricks, A. Lawson, and C. Geiger, Towards bridging the gap between regional-scale ridging models and local ice motion and thickness measurements, IGS Sea Ice Symposium, Tromsø, Norway, 31 May–4 June 2010


T. Martin, Three Approaches to Sea Ice Ridge Modelling in the Arctic, IGS Symposium on Sea Ice, Dunedin, New Zealand, 5–9 December 2005

T. Martin and T. Martin, Anomalies of Sea Ice Transports in the Arctic, IGS Symposium on Sea Ice, Dunedin, New Zealand, 5–9 December 2005

**Conference Posters**

T. Martin, J. Harlaß, and A. Biastoch, North Atlantics response to Greenland melting: Role of atmospheric feedbacks and mesoscale ocean dynamics, EGU General Assembly, Vienna, Austria, 7-12 April 2019

T. Martin, J. Harlaß, N. Fried, and A. Biastoch, Enhanced Greenland melting: Effect of mesoscale ocean dynamics, EGU General Assembly, Vienna, Austria, 8–13 April 2018

T. Martin and A. Biastoch, Enhanced Greenland melting: Effect of mesoscale ocean dynamics, PalMod International Open Science Conference, Vienna, Austria, 7–8 April 2018

T. Martin and T.W. N. Haine, Does the Arctic Amplification peak this decade?, EGU General Assembly, Vienna, Austria, 23-28 April 2017


T. Martin, M. Steele, and J. Zhang, Contrasting effects of sea ice thinning and retreat on Arctic Ocean momentum influx, EGU General Assembly, Vienna, Austria, 28 April–2 May 2014
T. Martin, M. Steele, and J. Zhang, Trends in Arctic Ocean Momentum Influx and the Role of Optimal Sea Ice Concentration, Ocean Sciences Meeting, Honolulu, HI, USA, 23–28 February 2014


T. Martin, W. Park, and M. Latif, Two types of multi-centennial variability of the Southern Ocean deep convection: How sea ice tips the scale, EGU General Assembly, Vienna, Austria, 3–8 April 2011


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**CO-AUTHORED CONFERENCE CONTRIBUTIONS** *(presenting author underlined)*

E. Behrens, G. Rickard, O. Morgenstern, T. Martin, A. Osprey, and M. Joshi, Southern Ocean deep convection in global climate models: a driver of subpolar gyre strength and Drake Passage transport variability on decadal timescales, CLIVAR open science conf., Qingdao, China, 18–25 September 2016, *talk*

J. B. Pedro, T. Martin, E. J. Steig, M. Jochum, W. Park, and S. O. Rasmussen, Southern Ocean deep-convection as a driver of Antarctic warming events, IPICS 2nd open science conf., Hobart, Australia, 7–11 March 2016, *conference award winning poster*


N. Mengis, A. Oschlies, D. Keller, and T. Martin, Assessing the potential and side effects of ocean albedo modification in the Arctic, AGU Fall Meeting, San Francisco, CA, USA, 14-18 December 2015, *poster*

F. Reith, D. Keller, T. Martin, and A. Oschlies, Revisiting ocean carbon sequestration by direct injection: A global carbon budget perspective, AGU Fall Meeting, San Francisco, CA, USA, 14-18 December 2015, *poster*


J. B. Pedro, T. Martin, E. J. Steig, M. Jochum, and S. O. Rasmussen, Southern Ocean deep convection as a driver of millennial-scale Antarctic warming, XIX INQUA Congress 2015, Nagoya, Japan, 26 July–2 August 2015, *poster*

A. Reintges, T. Martin, W. Park, and M. Latif, Southern Ocean deep convection variability on multi-decadal to multi-centennial timescales, 26th IUGG General Assembly 2015, Prague, Czech Republic, 22 June–2 July 2015, *talk*

T. Haine and T. Martin, The arctic-subarctic sea ice system has entered the seasonal regime, 26th IUGG General Assembly 2015, Prague, Czech Republic, 22 June–2 July 2015, *talk*

T. Haine and T. Martin, The Arctic Sea Ice Seasonality Index, 3rd ICARP conference, 27–30 April 2015 *poster*

L. H. Smedsrud, T. Martin, and J. Debernard, Grease ice parameterization in sea-ice ocean models, EGU General Assembly, Vienna, Austria, 3–8 April 2011, *poster*


S. Hendricks, J. Hutchings, T. Martin, and others, Short Term Variability of Sea Ice Thickness in the Beaufort Sea, AGU Fall Meeting, San Francisco, CA, USA, 10–14 December 2008, *poster*
**WORKSHOP TALKS**

**T. Martin**, How to evaluate sea ice in coupled model simulations?, DRAKKAR/sea ice workshop, IGE, Grenoble, France, 25 January 2018

J. Harlaß, A. Biastoch, **T. Martin**, and K. Matthes, FOCI - A Flexible Ocean and Climate Infrastructure with Nesting Capability, DRAKKAR annual workshop, IGE, Grenoble, France, 22–24 January 2018


**T. Martin**, Sea ice ridging: Impact on the Arctic climate system and (un)constrained model parameters, 16th AOMIP and 1st FAMOS workshop, Woods Hole Oceanographic Institution, Woods Hole, MA, USA, 23–26 October 2012


**T. Martin** and A. Adcroft, Interactive Icebergs in a Coupled Global Circulation Model, 24th International Forum for Research into Ice Shelf Processes (FRISP), Bad Bederkesa, Germany, 21–24 June 2010


**T. Martin**, Representation of Ridges in Sea Ice Models, National Ice Center Sea Ice Modeling Workshop, Suitland, MD, USA, 6/7 September 2006

**T. Martin**, C. Haas, and N. Hughes, Results of WP3: Arctic Field Studies and Model Parameterisations, IRIS final and application workshop, Helsinki, Finland, 14/15 November 2005

**T. Martin**, Sea Ice Ridging in the Arctic: Approaches with a continuum sea ice model, Arctic Climate Workshop, Potsdam, Germany, 5–7 September 2005

**T. Martin**, Arctic Ridging, IRIS modelling and satellite image analysis workshop, Norrköping, Sweden, 25/26 October, 2004

**T. Martin** and N. Steiner, Using Deformation Energy for Ridge Formation in a Sea Ice Model, IRIS research and feedback workshop, Oban, Scotland, 20–22 August 2003

**WORKSHOP POSTERS**


May 23, 2019

K. Rollenhagen and T. Martin, Data Assimilation of Arctic Ice Drift Using Single Evolutive Interpolated Kalman Filter in a Sea Ice Model, OSIF SAF 2nd Workshop, Perros-Guirec, Brittany, France, 15–17 Mar 2005

C. v. Saldern and T. Martin, Statistical analysis of sea ice ridge parameters, Doktorandentag (PhD students day), Bremerhaven, Germany, 20–22 June 2004

**Seminar Talks**

T. Martin, Southern Ocean deep convection variability linking high and low latitudes, AWI/IUP Blockseminar, Alfred Wegener Institute, Bremerhaven, Germany, 20 June 2016

T. Martin, Arctic sea ice is entering the seasonal regime: implications for momentum transfer, Applied Physics Lab., University of Washington, Seattle, WA, USA, 3–7 August 2015

T. Martin, M. Latif, and W. Park, Southern Ocean forced multi-centennial climate variability and global impacts, School of Oceanography, University of Washington, Seattle, WA, USA, 13 February 2013

T. Martin, M. Latif, and W. Park, Multi-Centennial Climate Variability Controlled by Southern Ocean Deep Convection, Massachusetts Institute of Technology (MIT), EAPS, Cambridge, MA, USA, 19 October 2012

T. Martin, M. Latif, and W. Park, Multi-Centennial Climate Variability Controlled by Southern Ocean Deep Convection, Geophysical Fluid Dynamics Laboratory, Princeton, NJ, USA, 17 October 2012

T. Martin, M. Latif, and W. Park, Multi-Centennial Climate Variability Controlled by Southern Ocean Deep Convection, Alfred Wegener Institute, Bremerhaven, Germany, 11 September 2012

T. Martin, Recent trends in sea ice dynamics and their effect on the Arctic climate system, Applied Physics Lab., University of Washington, Seattle, WA, USA, 2 December 2011

T. Martin, R. Gerdes, and F. Kauker, On trends in Arctic sea-ice drift, Freunde der Polarmeere Seminar, Alfred Wegener Institute, Bremerhaven, Germany, 25 January 2011

T. Martin, On sea-ice deformation in the Arctic: Observing its mass balance and simulating its climate impact, from local to basin-wide scales, advancements and challenges, Polar Science Center, University of Washington, Seattle, WA, USA, 18 November 2010

T. Martin and M. Winton, Effects of sea-ice ridging in a coupled global circulation model, Freunde der Polarmeere Seminar, Alfred Wegener Institute, Bremerhaven, Germany, 2 August 2010


T. Martin, Issues of ice-ocean interaction in global climate models, FB-1 Seminar, IFM-GEOMAR, Kiel, Germany, 29 January 2009

T. Martin, Observed ridge parameters and sensitivity studies with an idealised ridge model, AWI/IUP Blockseminar, Alfred Wegener Institute, Bremerhaven, Germany, 28 July 2006

T. Martin, C. Haas, and R. Gerdes, Arctic sea ice drift and deformation in models and observations, general seminar, Department of Meteorology at Stockholm University (MISU), Stockholm, Sweden, 1 June 2006

T. Martin, Modellierung von Presseisrücken (Modeling of Pressure Ridges), Freitagsseminar der Klimawissenschaften, Alfred Wegener Institute, Bremerhaven, Germany, 27 May 2005

**Other Talks**

T. Martin, Beobachtung und Modellierung von Presseisrücken (Observation and modeling of pressure ridges), Promotionskolloquium (PhD defence), University of Bremen, Bremen, 11 May 2007

T. Martin, Klimawandel und dessen Folgen in der Arktis (Climate change and its impacts on the Arctic), Projekt Klimawandel und seine Folgen: Ein Netzwerk von Kooperationen zwischen Schulen und Forschungsinstituten (a network of co-operation between schools and research institutes), Robert-Bosch-Stiftung NaT-Working, Bad Malente, 26/27 February 2006 (invited)

T. Martin, Arctic Climate Change and its Feedbacks on Sea Ice, Northern Sea Route Meeting, Hamburger Schiffsbausversuchsanstalt (HSV A), Hamburg, 14 September 2005

T. Martin and J. Michels, Das AWI und seine DoktorandInnen, Helmholtz Juniors, konstituierende Sitzung, Berlin, 14/15 April 2005

T. Martin, Sea Ice: Ocean you can walk on, Gesellschaft für Biotechnologische Forschung (GBF), Dolt Doktorandenwochenende, Braunschweig, November, 2004 (best presentation award)

Abbreviations:

AGU American Geophysical Union
AMS American Meteorological Society
AOMIP Arctic Ocean Model Intercomparison Project
APLIS Applied Physics Laboratory Ice Station
CAOS Center for Atmosphere Ocean Science at New York University
EAPS Department of Earth, Atmospheric and Planetary Sciences at MIT
EGU European Geosciences Union
EM electro-magnetic
EU European Union
FAMOS Forum for Arctic Modeling and Observational Synthesis
GreenICE Greenland Arctic Shelf Ice and Climate Experiment
IGS International Glaciologica Society
IRIS Ice Ridging Information for Decision Making in Shipping Operations
IUGG International Union of Geodesy and Geophysics
MIS Marine Isotope Stage
OSI SAF Ocean and Sea Ice Satellite Application Facility
SEDNA Sea Ice Experiment, Dynamic Nature of the Arctic
SITHOS Sea Ice Thickness Observation System
SIZONet Seasonal Ice Zone Observing Network
ZMAW Zentrum für Marine und Atmosphärische Wissenschaften