

# **Curriculum Vitae**

## **Qiang Wang**

### **Personal**

Male, 1977

### **Contact**

Alfred Wegener Institute Helmholtz Center for Polar and Marine Research (AWI)

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### **Employment**

since 2018 Permanent Senior Scientist, Alfred Wegener Institute, Bremerhaven, Germany

2007 -2017 Project Research Scientist, Alfred Wegener Institute, Bremerhaven, Germany

### **Education**

2004-2007 *PhD* in natural science (oceanography), Alfred Wegener Institute & University of Bremen, Bremerhaven/Bremen, Germany

2000-2003 *Master*, physical electronics, Fudan University, Shanghai, China

1996-2000 *Bachelor*, illuminating engineering & light sources, Fudan University, Shanghai, China

### **Research Interests**

- High latitude ocean and sea-ice dynamics: Environment change in the Arctic Ocean, Arctic-midlatitude linkage, North Atlantic ocean circulation, ice shelf-ocean interaction and sea level change, Antarctic Bottom Water production
- Development of FESOM (the Finite Element/volumE Sea ice-Ocean Model)

### **Professional Experience**

Editor for Geoscientific Model Development (GMD) (2018 -)

Visiting professor, Hohai University, Nanjing, China (2019 -)

### **Supervised students and employed scientists**

Current: Wenhao Zhang (PhD)

Previous: Claudia Wekerle (PhD), Xuezhu Wang (PhD), Dmitry Sein (Sci.), Natalia Tilinina (Sci.)

### **Summer School Lectures**

July 2018     UNESCO/IOC-ODC Training Course on Regional Ocean Forecast System, FIO, Qingdao. Circulation forecast model in coastal regions: An introduction to unstructured-mesh variable resolution modelling.

June 2017     UNESCO/IOC-ODC Training Course on Development of Coupled Regional Ocean Models, FIO, Qingdao. Unstructured-mesh ocean modelling: principle and applications.

July 2009     The 5<sup>th</sup> Sino-German Summer School, Ocean University of China, Qingdao. Ocean and coastal region modelling with the Finite Element method.

## Research Grant

ZUWEISS: *1,5°C-Ziel Und der Westantarktische EISchild (1.5°C limit and the western Antarctic ice sheet)*. BMBF project. participant, Mar. 2017 – Feb. 2019.

NATMAP: *Amending North Atlantic Model Biases to Improve Arctic Prediction*. A project in the framework of ERA.NET Plus Rus. Funding number: 363. participant, July 2016 – June 2018.

Agulhas-II | *Regional and Global Relevance*. A project in the BMBF SPACES Program (Science Partnerships for the Assessment of Complex Earth System Processes). Funding number: 03F0750B. PI, July 2016 – June 2018.

Agulhas | *Regional and Global Relevance*. A project in the BMBF SPACES Program (Science Partnerships for the Assessment of Complex Earth System Processes). Funding number: 03G0835B. PI, July 2013 – June 2016.

## Expedition Experience

02.01-06.04.2005 ANT-XXII/3 Polarstern, Cape Town – Punta Arenas, CTD and CFC sampling

## Peer-reviewed Publications

H-index 19, M-index 1.6

### submitted

Wang, Q. et al. (2019) Intensification of the upward trend in the ocean heat transport to the Arctic Ocean through Fram Strait induced by sea ice decline, submitted

Zhang, W. et al. (2019) Mechanisms Driving the Interannual Variability of the Bering Strait Throughflow, J. Geophys. Res.-Oceans, submitted

Mu, L. et al. (2019) Towards a data assimilation system for seamless sea ice prediction based on the AWI Climate Model, Journal of Advances in Modeling Earth Systems, submitted

### 2019

Sidorenko, D. and Goessling, H. F. and Koldunov, N. V. and Scholz, P. and Danilov, S. and Barbi, D. and Cabos, W. and Gurses, O. and Harig, S. and Hinrichs, C. and Juricke, S. and Lohmann, G. and Losch, M. and Mu, L. and Rackow, T. and Rakowsky, N. and Sein, D. and Semmler, T. and Shi, X. and Stepanek, C. and Streffing, J. and Wang, Q. and Wekerle, C. and Yang, H. and Jung, T. (2019) Evaluation of FESOM2.0 coupled to ECHAM6.3: Pre-industrial and HighResMIP simulations, Journal of Advances in Modeling Earth Systems, accepted

Rahaman, H. and Srinivasu, U. and Panickal, S. and Durgadoo, J. V. and Griffies, S. M. and Ravichandran, M. and Bozec, A. and Cherchi, A. and Volodire, A. and Sidorenko, D. and Chassignet, E. P. and Danabasoglu, G. and Tsujino, H. and Getzlaff, K. and Ilicak, M. and Bentsen, M. and Long, M. C. and Fogli, P. G. and Farneti, R. and Danilov, S. and Marsland, S. J. and Valcke, S. and Yeager, S. G. and Wang, Q. (2019) An assessment of the Indian Ocean mean state and seasonal cycle in a suite of interannual CORE-II simulations, Ocean Modelling, accepted

Scholz, P., Sidorenko, D., Gurses, O., Danilov, S., Koldunov, N., Wang, Q., Sein, D., Smolentseva, M., Rakowsky, N., and Jung, T.: Assessment of the Finite VolumE Sea Ice Ocean Model (FESOM2.0), Part I: Description of selected key model elements and comparison to its predecessor version, Geosci. Model Dev., accepted

Wang, Q., Wang, X., Wekerle, C., Danilov, S., Jung, T., Koldunov, N., Lind, S., Sein, D., Shu, Q., Sidorenko, D. (2019). Ocean heat transport into the Barents Sea: Distinct controls on the upward trend and interannual variability, Geophysical Research Letters, 46, DOI: 10.1029/2019GL083837, accepted.

Muilwijk, Morven and Ilicak, Mehmet and Cornish, Sam B. and Danilov, Sergey and Gelderloos, Renske and Gerdes, Rüdiger and Haid, Verena and Haine, Thomas W. N. and Johnson, Helen L. and Kostov, Yavor and Kovács, Tamás and Lique, Camille and Marson, Juliana M. and Myers, Paul G. and Scott, Jeffery and Smedsrød, Lars H. and Talandier, Claude and Wang, Qiang (2019) Arctic Ocean response to Greenland Sea wind anomalies in a suite of model simulations, J. Geophys. Res.-Oceans, 124, 6286-6322.

Shu, Q., Wang, Q., Su, J., Li, X. and Qiao, F. (2019). Assessment of the Atlantic water layer in the Arctic Ocean in CMIP5 climate models, Climate Dynamics, 53, 5279–5291.

Gürses, Ö., Kolatschek, V., Wang, Q., and Rodehacke, C. B. (2019) Brief communication: A submarine wall protecting the Amundsen Sea intensifies melting of neighboring ice shelves, The Cryosphere, 13, 2317–2324.

Rackow, T., Sein, D. V., Semmler, T., Danilov, S., Koldunov, N. V., Sidorenko, D., Wang, Q. and Jung, T. (2019). Sensitivity of deep ocean biases to horizontal resolution in prototype CMIP6 simulations with AWI-CM1.0, Geosci. Model Dev., 12, 2635-2656.

Koldunov, N., Danilov, S., Sidorenko, D., Hutter, N., Losch, M., Goessling, H., Rakowsky, N., Scholz, P., Sein, D., Wang, Q. and Jung, T. (2019). Fast EVP solutions in a high-resolution sea ice model, Journal of Advances in Modeling Earth Systems, 11, 1269-1284.

Wang, S., Wang, Q., Shu, Q., Scholz, P., Lohmann, G. and Qiao, F. (2019). Improving the Upper-ocean Temperature in an Ocean Climate Model (FESOM 1.4): Shortwave Penetration vs. Mixing Induced by Non-breaking Surface Waves, Journal of Advances in Modeling Earth Systems, 11, 545-557.

Wang, Q., Marshall, J., Scott, J., Meneghelli, G., Danilov, S. and Jung, T. (2019). On the feedback of ice-ocean stress coupling from geostrophic currents in an anticyclonic wind regime over the Beaufort Gyre. J. Phys. Oceanogr., 49, 369-383.

Wang, Q., Wekerle, C., Danilov, S., Sidorenko, D., Koldunov, N., Sein, D., Rabe, B. and Jung, T. (2019). Recent sea ice decline did not significantly increase the total liquid freshwater content of the Arctic Ocean. J. Climate, 32, 15-32.

## **2018**

Wang, Q., Wekerle, C., Danilov, S., Koldunov, N., Sidorenko, D., Sein, D., Rabe, B. and Jung, T. (2018). Arctic Sea Ice Decline Significantly Contributed to the Unprecedented Liquid Freshwater Accumulation in the Beaufort Gyre of the Arctic Ocean. Geophysical Research Letters, 45, 4956-4964.

Sein, D. V., Koldunov, N. V., Danilov, S., Sidorenko, D., Wekerle, C., Cabos, W., Rackow, T., Scholz, P., Semmler, T., Wang, Q. and Jung, T. (2018). The Relative Influence of Atmospheric and Oceanic Model Resolution on the Circulation of the North Atlantic Ocean in a Coupled Climate Model, Journal of Advances in Modeling Earth Systems, 10, 2026-2041.

Sidorenko, D., Koldunov, N., Wang, Q., Danilov, S., Goessling, H., Gurses, O., Scholz, P. and Sein, D., E. Volodin, C., Wekerle, T., Jung (2018). Influence of a Salt Plume Parameterization in a Coupled Climate Model, Journal of Advances in Modeling Earth Systems, 10, 2357-2373.

Biastoch, A., Sein, D., Durgadoo, J., Wang, Q., Danilov, S. (2018). Modelling the eddying Agulhas system - nesting vs. multi-resolution unstructured meshes. Ocean Modelling, 121, 117-131.

Wang, Q., Wekerle, C., Danilov, S., Wang, X. and Jung, T. (2018). A 4.5 km resolution Arctic Ocean simulation with the global multi-resolution model FESOM 1.4, Geosci. Model Dev., 11, 1229-1255.

## **2017**

Sein, D., Koldunov, N., Danilov, S., Wang, Q., Sidorenko, D., Fast, I., Rackow, T., Cabos, W. and Jung, T. (2017). Ocean modeling on a mesh with resolution following the local Rossby radius, Journal of Advances in Modeling Earth Systems, 9, 2601-2614.

Wekerle, C., Wang, Q., von Appen, V., Danilov, S., Schourup-Kristensen, V., Thomas, J. (2017) Eddy-resolving simulation of the Atlantic Water circulation in the Fram Strait with focus on the seasonal cycle, J. Geophys. Res.-Oceans, 122, 8385-8405.

Danilov, S., Sidorenko, D., Wang, Q., and Jung, T. (2017). The Finite-volumE Sea ice–Ocean Model (FESOM2), Geosci. Model Dev., doi:10.5194/gmd-10-765-2017, 10, pp. 765-789.

Wekerle, C., Wang, Q., Danilov, S., Schourup-Kristensen, V., von Appen, V., Thomas, J. (2017) Atlantic Water in the Nordic Seas: locally eddy-permitting ocean simulation in a global setup, J. Geophys. Res.-Oceans, 122, pp. 914-940.

## **2016**

Wang, Q., Danilov, S., Jung, T., Kaleschke, L. and Wernecke, A. (2016). Sea ice leads in the Arctic Ocean: Model assessment, interannual variability and trends, Geophysical Research Letters, 43, pp. 7019-7027.

Wang, Q., Ilicak, M., Gerdes, R., Drange, H., Aksenov, Y., Bailey, D., Bentsen, M., Biastoch, A., Bozec, A., Böning, C., Cassou, C., Chassignet, E., Coward, A., Curry, B., Danabasoglu, G., Danilov, S., Fernandez, E., Fogli, P., Fujii, Y., Griffies, S. M., Iovino, D., Jahn, A., Jung, T., Large, W. G., Lee, C., Lique, C., Lu, J., Masina, S., Nurser, G., Rabe, B., Roth, C., Salas y Méliá, D., Samuels, B. L., Spence, P., Tsujino, H., Valcke, S., Voldoire, A., Wang, X. and Yeager, S. (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, pp. 110-132.

Wang, Q., Ilicak, M., Gerdes, R., Drange, H., Aksenov, Y., Bailey, D., Bentsen, M., Biastoch, A., Bozec, A., Böning, C., Cassou, C., Chassignet, E., Coward, A., Curry, B., Danabasoglu, G., Danilov, S., Fernandez, E., Fogli, P., Fujii, Y., Griffies, S. M., Iovino, D., Jahn, A., Jung, T., Large, W. G., Lee, C., Lique, C., Lu, J., Masina, S., Nurser, G., Rabe, B., Roth, C., Salas y Méliá, D., Samuels, B. L., Spence, P., Tsujino, H., Valcke, S., Voldoire, A., Wang, X. and Yeager, S. (2016). An assessment of the Arctic Ocean in a suite of interannual CORE-II simulations.

Part II: Liquid freshwater, Ocean Modelling, 99, pp. 86-109.

Griffies, S. M., Danabasoglu, G., Durack, P. , Adcroft, A. , Balaji, V. , Böning, C. W. , Chassignet, E. P. , Curchitser, E., Deshayes, J. , Drange, H. , Fox-Kemper, B. , Gleckler, P. , Gregory, J. M. , Haak, H. , Hallberg, R. W. , Heimbach, P. , Hewitt, H. , Holland, D. , Ilyina, T. , Jungclaus, J. H. , Komuro, Y. , Krasting, J. , Large, W. G. , Marsland, S. J. , Masina, S. , McDougall, T. , Nurser, G. , Orr, J. , Pirani, A. , Qiao, F. , Stouffer, R. , Taylor, K. , Treguier, A. , Tsujino, H. , Uotila, P., Valdivieso, M. , Wang, Q., Winton, M. and Yeager, S. (2016). OMIP contribution to CMIP6: experimental and diagnostic protocol for the physical component of the Ocean Model Intercomparison Project, Geoscientific Model Development, 9, pp. 3231-3296.

Sein, D. V. , Danilov, S. , Biastoch, A. , Durgadoo, J. V. , Sidorenko, D. , Harig, S. and Wang, Q. (2016) . Designing variable ocean model resolution based on the observed ocean variability, Journal of Advances in Modeling Earth Systems, 8(2), pp. 904-916.

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

Tseng, Y. , Lin, H. , Chen, H. , Thompson, K. , Bentsen, M. , Böning, C. , Bozec, A. , Cassou, C. , Chassignet, E. , Chow, C. , Danabasoglu, G. , Danilov, S. , Farneti, R. , Fogli, P. , Fujii, Y. , Griffies, S. M. , Ilicak, M. , Jung, T. , Masina, S. , Navarra, A. , Patara, L. , Samuels, B. L. , Scheinert, M. , Sidorenko, D. , Sui, C. , Tsujino, H. , Valcke, S. , Voldoire, A. , Wang, Q. and Yeager, S. (2016) . North and equatorial Pacific Ocean circulation in the CORE-II hindcast simulations, Ocean Modelling, 104, pp. 143-170.

Danabasoglu, G. , Yeager, S. , Kim, W. , Behrens, E. , Bi, D. , Biastoch, A. , Bleck, R. , Böning, C. , Bozec, A. , Canuto, V. , Cassou, C. , Chassignet, E. , Coward, A. , Danilov, S. , Diansky, N. , Drange, H. , Farneti, R. , Fernandez, E. , Fogli, P. , Forget, G. , Fujii, Y. , Griffies, S. M. , Gusev, A. , Heimbach, P. , Howard, A. , Ilicak, M. , Jung, T. , Karspeck, A. , Kelley, M. , Large, W. G. , Leboissetier, A. , Lu, J. , Madec, G. , Marsland, S. J. , Masina, S. , Navarra, A. , Nurser, G. , Pirani, A. , Romanou, A. , Salas y Méria, D. , Samuels, B. L. , Scheinert, M. , Sidorenko, D. , Sun, S. , Treguier, A. M. , Tsujino, H. , Uotila, P. , Valcke, S. , Voldoire, A. , Wang, Q. and Yashayaev, I. (2016). North Atlantic simulations in Coordinated Ocean-ice Reference Experiments phase II (CORE-II). Part II: Inter-annual to decadal variability, Ocean Modelling, 97, pp. 65-90.

## 2015

Danilov, S and Q. Wang (2015) Resolving eddies by local mesh refinement, Ocean Modell., 93, 75-83. doi: 10.1016/j.ocemod.2015.07.006

Downes, S., Farneti, R., Uotila, P., Griffies, S., Marsland, S., Bailey, D. , Behrens, E. , Bentsen, M. , Bi, D. , Biastoch, A. , Böning, C., Bozec, A. , Canuto, V. , Chassignet, E. , Danabasoglu, G. , Danilov, S. , Diansky, N. , Drange, H. , Fogli, P., Gusev, A. , Howard, A. , Ilicak, M. , Jung, T., Kelley, M., Large, W. , Leboissetier, A. , Long, M. , Lu, J., Masina, S. , Mishra, A., Navarra, A. , Nurser, G., Patara, L. , Samuels, B. , Sidorenko, D. , Spence, P. , Tsujino, H. , Wang, Q. and Yeager, S. (2015) An assessment of Southern Ocean water masses and sea ice during 1988-2007 in a suite of interannual CORE-II simulations, Ocean Modell., Ocean Modelling, 94, pp. 67-94.

Farneti, R., Downes, S., Griffies, S. M., Marsland, S. J., Behrens, E. , Bentsen, M. , Bi, D. , Biastoch, A. , Böning, C., Bozec, A. , Canuto, V. , Chassignet, E. , Danabasoglu, G. , Danilov, S. , Diansky, N. , Drange, H. , Fogli, P., Gusev, A. , Hallberg, R. W. , Howard, A. , Ilicak, M. , Jung, T. , Kelley, M. , Large, W. , Leboissetier, A. , Long, M. , Lu, J., Masina, S. , Mishra, A., Navarra, A., Nurser, G., Patara, L. , Samuels, B. , Sidorenko, D. , Tsujino, H. , Uotila, P., Wang, Q. and Yeager, S. (2015), An assessment of Antarctic Circumpolar Current and Southern Ocean meridional overturning circulation during 1958–2007 in a suite of interannual CORE-II simulations, Ocean Modell., 93, 84-120.

Danilov, S. , Wang, Q. , Timmermann, R. , Iakovlev, N. , Sidorenko, D. , Kimmritz, M. , Jung, T. and Schröter, J. (2015): Finite-Element Sea Ice Model (FESIM), version 2, Geosci. Model Dev., 8 , 1747-1761.

van Caspel, M. R. , Absy, J. M. , Wang, Q. , Hellmer, H. H. and Schröder, M. (2015) The Flow of Dense Water Plumes in the Western Weddell Sea Simulated with the Finite Element Ocean Model (FEOM). G. Lohmann , H. Meggers , V. Unnithan , D. Wolf-Gladrow , J. Notholt and A. Bracher (editors), In: Towards an Interdisciplinary Approach in Earth System Science, Heidelberg, Springer International Publishing.

Sidorenko, D., T. Rackow, T. Jung, T. Semmler, D. Barbi, S. Danilov, K. Dethloff, W. Dorn, K. Fieg, H. F. Goessling, D. Handorf, S. Harig, W. Hiller, S. Juricke, M. Losch, J. Schröter, D. Sein, Q. Wang (2015) Towards multi-resolution global climate modeling with ECHAM6-FESOM. Part I: Model formulation and mean climate, Climate Dynamics, 44, 757-780.

## 2014

Danilov, S., Wang, Q., Sidorenko, D., Timmermann, R., Wekerle, C., Haid, V. and Wang, X. (2014) Multiresolution modeling of large-scale ocean circulation, In: Seminar on Recent Developments in Numerical Methods for Atmosphere and Ocean Modelling, ECMWF Seminar Proceedings, 13, ECMWF, Reading, UK.

Griffies, S. et al. (2014) An assessment of global and regional sea level for years 1993-2007 in a suite of interannual CORE-II simulations, *Ocean Modell.* 78, 35-89.

Danabasoglu, G. et al. (2014) North Atlantic Simulations in Coordinated Ocean-ice Reference Experiments phase II (CORE-II). Part I: Mean States, *Ocean Modell.*, 73, 76-107.

Jung, T., S. Serrar, and Q. Wang (2014), The oceanic response to mesoscale atmospheric forcing, *Geophys. Res. Lett.*, 41, 1255-1260.

Wang, Q., Danilov, S., Sidorenko, D., Timmermann, R., Wekerle, C., Wang, X., Jung, T., Schroeter, J. (2014), The Finite Element Sea Ice-Ocean Model (FESOM) v.1.4: Formulation of an ocean general circulation model, *Geosci. Model Dev.*, 7, 663-693.

### **2013**

Wang, Q., Danilov, S., Hellmer, H., Sidorenko, D., Schröter, J., Jung, T. (2013), Enhanced cross-shelf exchange by tides in the western Ross Sea, *Geophys. Res. Lett.*, 40, 5735-5739.

Wekerle, C., Q. Wang, S. Danilov, T. Jung, and J. Schröter (2013), The Canadian Arctic Archipelago throughflow in a multiresolution global model: Model assessment and the driving mechanism of interannual variability, *J. Geophys. Res. Oceans*, 118, 4525–4541, doi:10.1002/jgrc.20330.

Scholz, P., Lohmann, G., Wang, Q. and Danilov, S. (2013). Evaluation of a Finite-Element Sea-Ice ocean model (FESOM) setup to study the interannual to decadal variability in the deep-water formation rates, *Ocean Dynamics*, 63, 347-370.

### **2012**

Wang, X., Wang, Q., Sidorenko, D., Danilov, S., Schröter, J. and Jung, T. (2012). Long-term ocean simulations in FESOM: evaluation and application in studying the impact of Greenland Ice Sheet melting, *Ocean Dynamics*, 62, 1471-1486.

Wang, Q., Danilov, S., Fahrbach, E., Schröter, J. and Jung, T. (2012). On the impact of wind forcing on the seasonal variability of Weddell Sea Bottom Water transport, *Geophys. Res. Lett.*, 39 (L06603)

Timmermann, R., Wang, Q. and Hellmer, H. (2012). Ice shelf basal melting in a global finite-element sea ice/ice shelf/ocean model, *Annals of Glaciology*, 53 (60), doi:10.3189/2012AoG60A156

### **2011**

Sidorenko, D., Wang, Q., Danilov, S., Schröter, J. (2011). FESOM under Coordinated Ocean-ice Reference Experiment forcing, *Ocean Dynamics*, doi:10.1007/s10236-011-0406-7

### **2010**

Wang, Q., Danilov, S., Hellmer, H., Schröter, J. (2010). Overflow dynamics and bottom water formation in the western Ross Sea: The influence of tides, *J. Geophys. Res.*, 115, C10054, doi:10.1029/2010JC006189

### **2009**

Wang, Q., Danilov, S., Schröter, J. (2009). Bottom water formation in the southern Weddell Sea and the influence of submarine ridges: Idealized numerical simulations, *Ocean Modelling*, 28, 50-59. doi: 10.1016/j.ocemod.2008.08.003

Sidorenko, D., Danilov, S., Wang, Q., Huerta-Casas, A., Schröter, J. (2009). On computing transports in finite-element models, *Ocean Modelling*, 28, 60-65. doi: 10.1016/j.ocemod.2008.09.001

### **2008**

Danilov, S., Wang, Q., Losch, M., Sidorenko, D., Schroeter, J. (2008). Modeling ocean circulation on unstructured meshes: Comparison of two horizontal discretizations, *Ocean Dynamics*, 58, 365-374. doi: 10.1007/s10236-008-0138-5

Wang, Q., Danilov, S., Schröter, J. (2008). Comparison of overflow simulations on different vertical grids using the Finite Element Ocean circulation Model, *Ocean Modelling*, 20, 313-335. doi: 10.1016/j.ocemod.2007.10.005

Wang, Q., Danilov, S., Schröter, J. (2008). Finite element ocean circulation model based on triangular prismatic elements, with application in studying the effect of topography representation, *J. Geophys. Res.*, 113, C05015. doi: 10.1029/2007JC004482

## **Not peer-reviewed publications**

Danilov, S., Ringler, T. and Wang, Q. (2014) Large-scale ocean modelling on unstructured meshes, *Exchanges: newsletter of the Climate Variability and Predictability Programme (CLIVAR)*, Vol. 19(2), No. 65, 46-48.

Griffies, S. M. et al. (2013) An assessment of global and regional sea level in a suite of interannual CORE-II simulations: a synopsis , Exchanges: newsletter of the Climate Variability and Predictability Programme (CLIVAR), No.62, Vol.18 (2), pp. 11-15.

## Latest conference presentations

Wang, Q. , Wekerle, C. , Danilov, S. , Koldunov, N. , Sidorenko, D. , Sein, D. , Rabe, B. and Jung, T. (2018) Impacts of the Recent Sea Ice Decline on Arctic Ocean Freshwater Storage , FAMOS workshop, Bergen, October 2018.

Wang, Q. , Wekerle, C. , Danilov, S. , Koldunov, N. , Sidorenko, D. , Sein, D. , Rabe, B. and Jung, T. (2018) Impacts of Sea Ice Decline on Arctic Ocean Freshwater Storage: Insight from Global Multi-resolution Model Simulations , IMUM2018, Hamburg, September 2018.

Wang, Q. (2018) Unstructured-mesh ocean and climate modeling and applications in polar regions, Third Pole Environment workshop, Gothenburg, Sweden, September 2018.

Wang, Q. et al. (2018) Does the recent Arctic sea ice decline significantly modify the Arctic Ocean freshwater? Seminar in Hohai University, Nanjing, China, June 2018.

Wang, Q. (2018) Upper ocean changes in the Arctic Ocean induced by the recent sea ice decline, Seminar in Second Institute of Oceanography, Hangzhou, China, July 2018.

Wang, Q. et al. (2018) Liquid freshwater accumulation in the Beaufort Gyre is constrained by a sea ice-ocean stress feedback, Seminar in Ocean University of China, Qingdao, China, July 2018.