CURRICULUM VITAE

Kathleen Beth Dohan
President, Senior Scientist

Earth and Space Research
2101 Fourth Ave., Suite 1310, Seattle, WA 98121
Email: kdohan@esr.org
(206) 726-0501 x 120

Relevant Experience

Kathleen Dohan is the Principal Investigator for the OSCAR surface current project (www.esr.org/oscar_index.html). She develops, validates, and maintains the existing OSCAR system and is a part of the International Ocean Vector Winds Science Team. OSCAR currents are widely used and are available from the NASA Physical Oceanography Distributed Active Archive Center (podaac.jpl.nasa.gov). OSCAR has had approximately 20 million views or accesses per year at the PO.DAAC, with users from 77 countries. It is the only US global surface current product.
Dohan's research career has involved studying momentum transfer processes in turbulent ocean mixed layers. A main research objective of the OSCAR project is to improve the generation of surface currents by ocean vector winds, and in doing so further our understanding of the mechanisms behind the transfer of momentum between the atmosphere and the ocean through the planetary boundary layer.

Research interests

Surface circulation; upper ocean physics and internal waves; wind-driven motions and momentum transfer; near-inertial oscillation dynamics; turbulent mixed layers; internal wave/turbulence interaction; Antarctic Circumpolar Deep Water pathways.

Education

Ph.D. University of Alberta, Applied Mathematics 2004, "Internal Wave Generation from a Turbulent Mixed Region"
B.Sc. Simon Fraser University, Honours Mathematics, Physics Minor 1997

Professional Experience

Earth and Space Research, Dec. 2007–present. Senior Scientist. President since Sep. 2015.
University of California, San Diego, Mechanical and Aerospace Engineering Postdoc 2007
Scripps Institution of Oceanography Physical Oceanography Postdoc 2004–2007

Most Recent Publications

Dohan, K. (2017). Ocean Surface Currents from Satellite Data, *J. Geophys. Res.- Oceans,* doi 10.1002/2017JC012961.

Lumpkin, R., G. Goni, and K. **Dohan**, (2017). Surface Currents, in "State of the Climate in 2016". *Bull. Amer. Meteor. Soc.*, 98 (8), S81–S84.

Lumpkin, R., G. Goni, and K. **Dohan**, (2016). Surface Currents, in "State of the Climate in 2015". Bull. Amer. Meteor. Soc., 97 (8) S82-S84.

Dohan, K., Goni, G. and R. Lumpkin, (2015). Surface Currents, in "State of the Climate in 2014". Bull. Amer. Meteor. Soc., 96, S76-82, doi: http://dx.doi.org/10.1175/2015BAMSStateoftheClimate.1

Dohan, K., Kao, H-Y, Lagerloef, and G.S.E. Lagerloef (2015) The Freshwater Balance Over the North Atlantic SPURS Domain from Aquarius Satellite Salinity, OSCAR Satellite Surface Currents, and Some Simplified Approaches, *Oceanography*, 28 (1), 46-55.

Lumpkin, R. Goni, G. and K. **Dohan** (2014). Surface Currents, in "State of the Climate in 2013". *Bull. Amer. Meteor. Soc.*, 95, S65–S67. doi: http://dx.doi.org/10.1175/2014BAMSStateoftheClimate.1

Dohan, K and G.S.E. Lagerloef, "20 Year Trends in the Surface Circulation" Proceedings '20 Years of Progress in Radar Altimetry', 24-29 September 2012, Venice, Italy (ESA Special Publication SP-710, February 2013). doi 10.5270/esa.sp-710.altimetry2012.

Lumpkin, R., G. Goni, and K. **Dohan**, (2013). Surface Currents, in "State of the Climate in 2012". Bull. Amer. Meteor. Soc., 94, S62-S65, doi: http://dx.doi.org/10.1175/2013BAMSStateoftheClimate.1.

Lee, T., G. Lagerloef, M. M. Gierach, H.-Y. Kao, S. Yueh, and K. **Dohan** (2012), Aquarius reveals salinity structure of tropical instability waves, *Geophys. Res. Lett.*, 39, L12610, doi:10.1029/2012GL052232.

R. Lumpkin, G. Goni, and K. **Dohan**, (2012). Surface Currents, in "State of the Climate in 2011". Bull. Amer. Meteor. Soc., 93, S75-78

Dohan, K. and R. E. Davis (2011). Mixing in the Transition Layer During Two Storm Events. *Journal of Physical Oceanography*, 41, 42–66.

Dohan, K., and N. Maximenko, (2010). Monitoring ocean currents with satellite sensors. *Oceanography*, 23 (4), 94-103. IPRC-749.

Dohan, K., Lagerloef, G., Bonjean, F., Centurioni, L., Cronin, M., Lee, D., Lumpkin, R., Maximenko, N., Uchida, H., (2010). Measuring the global ocean surface circulation with satellite and in situ observations. Proceedings of the "OceanObs'09: Sustained Ocean Observations and Information for Society" Conference (Vol. 2), Venice, Italy, 21-25 September 2009, Hall, J. Harrison, D. E., and Stammer, D., Eds., *ESA Publication WPP-306*,2010.

Graduate and Postdoctoral Advisors

Graduate Advisor

• Bruce R. Sutherland, Department of Physics, University of Alberta

Postdoctoral Advisors

• Russ E. Davis, Physical Oceanography Research Division, Scripps Institution of Oceanography

• Paul F. Linden, Mechanical & Aerospace Engineering, University of California San Diego

Synergistic and Service Activities

The user base for OSCAR is broad, including climate scientists, fisheries management, rescue missions, and the boating community, with thousands of individual user downloads a month. OSCAR currents are routinely used in outreach presentations (www.esr.org/outreach index.html) and is part of the educational Ocean Motion website (oceanmotion.org). Ongoing member of the PO.DAAC (Physical Oceanography Distributed Active Archive) Users Working Group, starting March 2011. Member of the Globcurrent Science Team since 2014. Surface Currents Expert for the Ocean Observations Panel for Climate (OOPC).