

JULIE L. MCCLEAN – BIOGRAPHICAL SKETCH

A. PROFESSIONAL PREPARATION

Monash University, Australia	Applied Mathematics and Marine Sciences	B.Sc. 1981
University of Sydney	Physical Oceanography	M.Sc. 1987
Old Dominion University	Physical Oceanography	Ph.D. 1993
Postdoc at Naval Postgraduate School,	Ocean Modeling and Analysis	1993-1995

B. APPOINTMENTS

2005- Present	Associate Research Oceanographer, Scripps Institution of Oceanography
2001-2005	Research Associate Professor, Naval Postgraduate School, Monterey CA.
1995-2001	Research Assistant Professor of Oceanography, Naval Postgraduate School.
1993-1995	Postdoctoral Research Associate, Naval Postgraduate School, Monterey.
1989-1993	Graduate Research Assistant: Old Dominion University, Norfolk, VA. 01/1989-

Awards/Honors and Memberships:

Outstanding Research Achievement Award, Department of Oceanography, NPS, 2000. Phi Kappa Phi
Outstanding Oceanography Ph.D. student, 1992.

Phi Kappa Phi Honor Society

Member: AMS, AGU, and the Oceanography Society

C. PUBLICATIONS

Five Most Relevant:

Ivanova, D.P., J. L. McClean, and E. C. Hunke: Interaction of oceanic temperature advection, surface heat fluxes and sea ice in the marginal ice zone during the North Atlantic Oscillation in the 1990s: A modeling study. *J. Geophys. Res.*, in press.

McClean, J.L., D.C. Bader, F.O. Bryan, M.E. Maltrud, J.M. Dennis, A.A. Mirin, P.W. Jones, Y.Y. Kim, D.P. Ivanova, M. Vertenstein, J.S. Boyle, R. L. Jacob, N. Norton, A. Craig, and P.H. Worley: 2011, A prototype two-decade fully-coupled fine-resolution CCSM simulation, *Ocean Modell.*, 39, 10-30, 2011. <http://dx.doi.org/10.1016/j.ocemod.02.011>.

Griesel, A., S.T. Gille, J. Sprintall, J. L. McClean, J. H. LaCase, and M.E. Maltrud, Isopycnal diffusivities in the Antarctic Circumpolar Current inferred from Lagrangian floats in an eddy ocean model, 2010, *J. Geophys. Res.*, C06006, <http://dx.doi.org/10.1029/2009JC005821>.

McClean, J.L., S. Jayne, M.E. Maltrud, D.P. Ivanova: 2008, The Fidelity of Ocean Models with Explicit Eddies. In "Eddy-Resolving Ocean Modelling", M. Hecht and H. Hasumi, Eds., *AGU Geophysical Monograph Series*, Volume 170, pp.149-163.

Prasad, T. G., J. L. McClean, E. C. Hunke, A. J. Semtner, and D. P. Ivanova, 2005, A Numerical Study of the Western Cosmonaut Polynya in a Coupled Ocean-Sea Ice Model. *J. Geophys. Res.*, 110,C10008, <http://dx.doi.org/10.1029/2004JC002858>.

Five Additional Publications:

Carman J.C., and J.L. McClean: 2011, Investigation of IPCC AR4 coupled climate model and North Atlantic mode water formation, *Ocean Modell.*, 40, 14-34, <http://dx.doi.org/10.1016/j.ocemod.2011.07.001>.

Lenn, Y.D., T. K. Chereskin, J. Sprintall, and J. L. McClean: 2011, Near-surface eddy heat and momentum fluxes in the Antarctic Circumpolar Current in Drake Passage, *J. Phys. Oceanogr.*, 41(7), 1385-1407, <http://dx.doi.org/10.1175/2007JCLI2060.1>.

Bryan, F.O, R. Thomas, J. Dennis, D. Chelton, N. G. Loeb, and J. L. McClean: 2010, Frontal scale air-sea interaction in high-resolution coupled climate models, *J. Clim.*, 23(23), 6277-6291, <http://dx.doi.org/10.1175/2010JCLI36645.1>.

Byrne, D. A., and J. McClean: 2008, Sea level anomaly signals in the Agulhas Current region, *Geophys. Res. Letts.*, 35, L13701, <http://dx.doi.org/10.1029/2008GL034584>.
McClean, J. L., D. P. Ivanova, and J. Sprintall, 2005, Remote origins of interannual variability in the Indonesian Throughflow region from data and a global POP simulation. *J. Geophys. Res.*, 110, C10013, <http://dx.doi.org/10.1029/2004JC002477>.

D. SYNERGISTIC ACTIVITIES

- Leadership role in DOE and NCAR fine resolution coupled climate simulations bringing together atmosphere, ocean, ice, and computational scientists.
- Participation in DOE planning meetings for future uses of terascale computing capability for climate simulations.
- Member, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR) steering committee, 2004 -2007.
- Subcontractor/IPA at LLNL: Provided ocean expertise to PCMDI.
- SIO graduate seminar class: “What Observationalists Need to Know about Modeling and Assimilation”.

E. COLLABORATORS AND CO-EDITORS

R. Allard (NRLSSC), B. Arbic (U. Mich), G. Bala (Indian Inst. Sci.), M. Batteen (NPS), F. Bryan (NCAR), D. Bader (LLNL), D. Byrne (NOAA), J. Carman (USNA), L. Centurioni (SIO), I. Cerovecki (SIO), P. Cessi (SIO), D. Chelton (OSU), T. Chereskin (SIO), W. Collins (LBL), K. Donohue (URI), J. Dennis (NCAR), P. Gleckler (LLNL), S. Gille (SIO), P. Hogan (NRLSSC), H. Hurlburt (NRLSSC), J. Hack (ORNL), M. Hendershott (SIO), N. Hogg (Cornell), E. Hunke (LANL), D. Ivanova (LLNL), S. Jayne (WHOI), P. Jones (LANL), J. La Case (U. Oslo), M. Maltrud (LANL), E. Metzger (NRLSSC), A. Mirin (LLNL), S. Piacsek (NRLSSC), B. Qui (U. Hawaii), L. Rainville (APL), R. Rood (U. Mich.), D. Rudnick (SIO), K. Sperber (LLNL), J. Sprintall (SIO), L. Thompson (UW), R. Watts (URI), Y. Lenn (Bangor U), A. Wallcraft (NRLSSC), C. Wolfe (SIO), P. Worley (ORNL).

Ph.D. Advisors: Drs. John Klinck (ODU) and Gabriel Csanady (ODU, retired)

Postdoctoral Advisor: Dr Albert Semtner (NPS, retired)

Advisees: (Total = 3) *M.S.*: Michael Lemon (NOAA), Jimmy Pelton (Horizon Marine), Ph.D Andrew Delman (SIO)

Postdoctoral: (Total = 5) Lianghua Shu (CTB/McGraw Hill), Prasad Thoppil (NRLSSC)

Last 5 years (Total =3): Detelina Ivanova (LLNL), Ivana Cerovecki (SIO), Alexa Griesel (U. Hamburg).