

Dr. Eric DANIoux
French, 31 years old
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PROFESSIONAL EXPERIENCE

2011-. Post doctoral research associate at NWRA, Seattle. Working with Dr. Jonathan Lilly on inferring inertial waves/mesoscale eddies interactions properties from floaters data.

2008-2011. Post doctoral research assistant at Edinburgh University School of Mathematics. Working with Prof. Jacques Vanneste on the generation of inertia gravity waves by surface dynamics.

2008. Research assistant at Laboratoire de Physique des Océans, IFREMER, Brest. Working with Dr. Patrice Klein on the dynamics of the oceanic upper layers forced by the wind.

2002. Research assistant at University of Santiago de Compostela (Spain). Evaluating the performance of a regional weather forecast model using data assimilation.

EDUCATION

2007. Ph.D. in oceanology, meteorology and environment at Université de Bretagne Occidentale (France), with honors. Thesis: 3D propagation of inertial waves in a turbulent mesoscale eddy field, supervisor: Prof. P. Klein (Ifremer, Brest).

2003. Master Degree in oceanography, meteorology and environmental sciences at Université Paris VI (France), with honors. Master thesis: Comparison of quasi-geostrophic and shallow water models for the study of baroclinic instability, supervisor: Prof. X. Carton (Université de Bretagne Occidentale, Brest).

2003. Engineer in fluid mechanics and oceanography, graduated from ENSTA ParisTech (national institute for advanced technologies), Paris, one of the top 10 French engineering “grandes écoles”; studying mathematics, physics (solid and fluid mechanics) and computer sciences.

1998. Baccalauréat with good honours (“Mention Bien”), scientific specialization

PUBLICATIONS

Danioux, E., J. Vanneste, P. Klein and H. Sasaki, 2011: Spontaneous generation of inertia-gravity waves by surface-intensified turbulence, *Journal of Fluid Mechanics*, under review, *Journal of Fluid Mechanics*

Danioux, E., P. Klein, M. W. Hecht, N. Komori, G. Roulet, and S. Le Gentil, 2011: Emergence of wind-driven near-inertial waves in the deep ocean triggered by small-scale eddy vorticity structures, *Journal of Physical Oceanography*, 41(7), pp 1297-1307

Klein, P., J. Isern-Fontanet, G. Lapeyre, G. Roulet, E. Danioux, B. Chapron, S. Le Gentil, and H. Sasaki, 2009: Diagnosis of vertical velocities in the upper ocean from high resolution sea surface height, *Geophys. Res. Lett.*, 36, L12603, doi:10.1029/2009GL038359.

Danioux, E., P. Klein, and P. Rivière, 2008: Propagation of wind energy into the deep ocean through a fully turbulent mesoscale eddy field, *Journal of Physical Oceanography*, 38(10), pp 2224-2241

Danioux, E., and P. Klein, 2008: A resonance mechanism leading to wind-forced motions with a 2f frequency, *Journal of Physical Oceanography*, 38(10), pp 2322-2329

Danioux, E., 2007 3D propagation of inertial waves in a turbulent mesoscale eddy field (*Thesis*)

COMMUNICATIONS

June 2010. Europole Mer Conference, L'Aber Wrac'h, France. Generation of strong subsurface inertial vertical velocities in a turbulent (sub)mesoscale eddy field by a realistic wind forcing (poster)

May 2010. European Geophysical Union, Vienna, Austria. Generation of gravity waves by surface fronts. (poster)

February 2010. Ocean Sciences Meeting, Portland, Oregon. 3D propagation of near-inertial waves in a fully turbulent mesoscale eddy field. (oral presentation)

November 2008. University of Edinburgh. Wind-generated inertial waves in the ocean. (oral presentation)

June 2008. Wave-flow interactions meeting, University of Keele, UK. 3D propagation of inertial waves in an oceanic turbulent eddy field. (oral presentation)

March 2007. Université de Bretagne Occidentale. Ph.D. viva. Propagation en 3D d'ondes inertielles au sein d'un champ turbulent mésoéchelle. (oral presentation)

TEACHING

January 2010. An introduction to Geophysical Fluid Dynamics. Scottish Mathematical Sciences Training Centre. 2 hours lecture given to post-graduate students, via video-conferencing.

November 2009. Mathematical writing and LaTeX, 2 lectures and 3 tutorials, part of the Mathematics Computational & Communication skills course, given to 3rd year university students.