

Joseph T. Jurisa

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Education:

2012 PhD, Oceanography, Rutgers, The State University of New Jersey
2006 B.S., Marine Science with a Physical Oceanography concentration and
 minor in Mathematics, University of South Carolina

Employment:

2012-present Post-doctoral scholar, College of Earth, Ocean, and Atmospheric
 Sciences, Oregon State University. Advisor: Dr. Jonathan Nash
2006-2012 Graduate research assistant, Institute of Marine and Coastal Sciences,
 Rutgers, The State University of New Jersey. Advisor: Dr. Robert Chant
2004-2006 Undergraduate research assistant, Dr. Richard Styles, Department of
 Geological Sciences and Marine Science Program, University of South
 Carolina.
2002-2004 Undergraduate research assistant, Dr. Björn Kjerfve, Department of
 Geological Sciences and Marine Science Program, University of South
 Carolina.

Publications:

Jurisa JT, JD Nash, JN Moum, and LF Kilcher (under review). Controls on turbulent mixing in a strongly stratified and sheared tidal plume. Submitted to *Journal of Physical Oceanography*

Jurisa JT and J Nash (in prep). The relevance of frontal mixing to the evolution of an energetic tidal river plume. To be submitted to *Journal of Geophysical Research*

Styles R, Borgianini S, Brodie R, and **JT Jurisa** (2014). Application of a particle transport model in the vicinity of a river tidal boundary. *Journal of Coastal Sciences*, **1(2)**, 1-10

Jurisa JT and RJ Chant (2013). Impact of offshore winds on a coupled buoyant river plume/estuarine system. *Journal of Physical Oceanography*, **43**, 2571-2587.

Jurisa JT and RJ Chant (2012). The coupled Hudson River estuarine-plume response to variable wind and river forcings. *Ocean Dynamics*, **62**, 771-784.

Chant RJ, J Wilkin, W Zhang, B-J Choi, E Hunter, R Castelao, S Glenn, **JT Jurisa**, O Schofield, R Houghton, J Kohut, T Frazer, M Moline (2008). Dispersal of the Hudson River Plume in the New York Bight: Synthesis of Observational and Numerical Studies During LaTTE. *Oceanography*, **21**(4), 148-161.

Selected Professional Meetings and Presentations:

Jurisa, JT and J Nash, 2014. Frontal Growth and internal wave formation in the Columbia River plume. Eastern Pacific Ocean Conference. Mt. Hood, OR, September 17-20, 2014. Poster Presentation.

Jurisa, JT and J Nash, 2014. Mixing in a highly energetic tidal river plume front. Ocean Science Meeting. Honolulu, HI, February 23-28, 2014. Oral Presentation.

Jurisa, JT, 2014. Does frontal mixing in a tidal river plume matter? CEOAS Physics of Oceans and Atmospheres Seminar Series.

Jurisa, JT, 2013. Does frontal mixing matter? 2013 Workshop on River Plume Mixing. Mt. Hood, OR, October 2-4, 2013. Oral Presentation.

Jurisa, JT and RJ Chant, 2012. Impact of offshore winds on a buoyant river plume system. Physical Oceanography Dissertation Symposium (PODS), Kauai, HI . Oral Presentation

Jurisa, JT and RJ Chant, 2012. Impact of offshore winds on a buoyant river plume system. CEOAS Physics of Oceans and Atmospheres Seminar Series.

Jurisa, JT and RJ Chant, 2012. The structure of a buoyant plume subjected to offshore winds. Physics of Estuaries and Coastal Seas Meeting, New York, NY. Poster Presentation

Jurisa, JT and RJ Chant, 2012. The mixing and structure of a buoyant plume subjected to offshore winds. Ocean Sciences Meeting, Salt Lake City, UT. Oral Presentation

Jurisa, JT and RJ Chant, 2011. Mixing in a buoyant river plume subjected to offshore winds: A salinity coordinate analysis. Coastal and Estuarine Research Federation Meeting, Daytona Beach, FL. Oral Presentation

Jurisa, JT and RJ Chant, 2010. Impact of cross-shelf winds on a buoyant plume. Physics of Estuaries and Coastal Seas Meeting, Colombo, Sri Lanka. Oral Presentation

Jurisa, JT and RJ Chant, 2010. The response of a buoyant estuarine plume to cross-shelf winds. Ocean Sciences Meeting, Portland, OR. Poster Presentation

Jurisa, JT, RJ Chant, and E Hunter, 2008. Two modes of down-shelf freshwater flows on the New Jersey shelf. Ocean Sciences Meeting, Orlando, FL. Oral Presentation

Jurisa, JT, R Styles, R Brodie and S Borgianini, 2006. Discharge, tidal propagation and currents near an upriver tidal boundary. Ocean Sciences Meeting, Honolulu, HI. Poster Presentation

Activities/Skills

- Numerical modeling of coastal and estuarine flows using the Regional Ocean Modeling System (ROMS)
- Data analysis and interpretation of geophysical data with MATLAB
- Deployment and maintenance of RDI, Sontek, and Nortek acoustic current profilers
- Deployment and maintenance of SeaBird and RBR CTD's.

Relevant Research and Field Experience

Fall 2004	Tidal ADCP and CTD survey and ADCP mooring deployment in North Inlet/Winyah Bay National Estuary Research Reserve, South Carolina.
Summer 2005	ADCP mooring deployments in Pee Dee and Waccamaw Rivers/Winyah Bay, South Carolina
Fall 2005	Tidal ADCP, CTD survey and ADCP and ADV mooring deployment in North Inlet/Winyah Bay National Estuary Research Reserve, South Carolina.
Summer 2009	Estuarine and Coastal Fluid Dynamics summer course at University of Washington's Friday Harbor Laboratory. ADCP and CTD mooring deployments and surveys in Upright Channel near Friday Harbor, Washington. Instructors: Drs. Rocky Geyer and Parker MacCready.
Summer 2010	ADCP and CTD mooring deployment, tidal ADCP, CTD, and dye mixing surveys in the James River, Virginia
Fall 2010	ADCP and CTD mooring deployment, Delaware Bay/River.
Winter 2010	R/V Sharp research cruise. Along bay axis survey of water and sediment properties, Delaware Bay.
Spring 2011	ADCP and CTD mooring deployment, Delaware Bay/River.

Professional Service/Synergistic Activities

- Coordinator of the 2013 Workshop on River Plume Mixing. October 2-4, 2013, Mt. Hood, OR.
- Coordinator of the CEOAS Physics of Oceans and Atmospheres seminar series. Fall 2012 – Summer 2013.
- Reviewer for *Journal of Physical Oceanography*, *Journal of Geophysical Research - Oceans*, *Journal of Fluid Mechanics*, *Ocean Dynamics*, *Ocean Modelling*, *Geophysical Research Letters*, National Science Foundation

Professional Organizations:

American Geophysical Union
Estuarine Research Federation

Teaching:

2014	Guest Lecturer – Fluid Earth (Fall)
2010-2011	Part-time Lecturer – Introduction to Oceanography
2009	Lecturer – Ocean Science Inquiry (Spring)
2007	Teaching Assistant – Physical Oceanography (Fall)

Community Outreach:

- Wave tank and density driven flow demonstrations during the public open house for annual Ag Field Day/Rutgers Day (2007-2012)
- Water density and internal waves project and demonstration for the 4th and 5th grade classes at Jefferson Elementary School, Corvallis OR (December 2014).