

*Curriculum Vitae*

Julian J Schanze

Research Associate, Earth & Space Research  
 2101 Fourth Ave., Suite 1310, Seattle WA 98121-2350  
 Office: +1 (206) 726 0501 x170, Fax: +1 (206) 726-0524, jschanze@esr.org

My research focuses on the use remote sensing to observe and analyze ocean processes from global scales to small scales. For this, I seek to combine satellite remote sensing data with *in-situ* measurements to improve our understanding of the ocean and climate system. In particular, I am interested in the transfer of heat, salt and momentum in the global ocean.

**EDUCATION**

- 2007-2012      Doctor of Philosophy in Physical Oceanography, Massachusetts Institute of Technology - Woods Hole Oceanographic Institution Joint Program in Physical Oceanography, Massachusetts, USA  
 Thesis:            The Production of Temperature and Salinity Variance and Covariance: Implications for Mixing  
 Thesis Advisor:   Raymond W. Schmitt  
 Committee:        Terrence M. Joyce, Carl Wunsch, Lisan L. Yu.
- 2003-2007      Master of Science in Oceanography (First Class Honours), University of Southampton, National Oceanography Centre, Southampton, UK  
 Thesis:            Large-Scale Ocean Circulation in the Southwest Indian Ocean from Satellite-Derived Gravity and Altimetry  
 Advisors:          Paolo Cipollini, Graham D. Quartly & Helen M. Snaith
- 2006             Summer Student Fellowship at the University of Bremen Center for Marine Environmental Sciences (MARUM), Bremen, Germany  
 Work:              Acoustic methane seepage quantification model design, experiments and deep-sea application  
 Advisor:           Aneta Nikolovska
- 2005             2-month Student Internship at the Max-Planck Institute for Marine Microbiology, Bremen, Germany  
 Work:              Visualization of gas-liquid mass transfer and wake structure of rising bubbles using pH-sensitive PLIF  
 Advisor:           Arzhang Khalili

**HONORS, DISTINCTIONS and AWARDS**

- 2007             John Raymont Memorial Prize for top performance on M.Sc. oceanography degree  
 2007             Summer Student Fellowship, University of Bremen (MARUM), Germany  
 2005-2007      University of Southampton MOcean degree: Best in year award  
 2004             University of Southampton MOcean degree: Top 5% in year award

**BACKGROUND**

German Citizen, H1-B visa status

Languages:        German (native), English (like native), French (conversational), Spanish (basic), Italian (basic), Latin (reading)

**SKILLS**

- Programming: MATLAB (proficient), FORTRAN (advanced), C (basic)
- IT: Hardware and networking, Linux/Unix, Microsoft Windows and Office, LaTeX, web design including HTML, Flash, PHP and MySQL
- Practical: Oceanographic boat work and sampling including CTD and LADCP work, small boat handling, AAUS certified scientific diver, advanced first aid responder, CPR certified, Class D driver's license
- Cruises: R/V Knorr cruise KN209-01: Salinity Processes in the Upper Ocean Regional Study, September 6 – October 9 2012, Woods Hole, MA, USA to Ponta Delgada, Azores, Portugal: Lowered and shipboard ADCP data acquisition and data processing
- R/V Endeavor cruise EN522: Salinity Processes in the Upper Ocean Regional Study, March 15 – April 15 2013, Narragansett, RI, USA to Narragansett, RI, USA: Thermosalinograph and surface salinity sampler data acquisition and data processing

**TEACHING EXPERIENCE**

- Fall Semester 2010: Teaching Assistant for MIT/WHOI Course 12.747: “Modeling, Data Analysis and Numerical Techniques”. Instructors: David M. Glover, William J. Jenkins, and Scott C. Doney

**PEER-REVIEWED PUBLICATIONS**

- Schanze, J.J. and R.W. Schmitt (2013), Estimates of Cabeling in the Global Ocean, *Journal of Physical Oceanography* **43**, doi:10.1175/JPO-D-12-0119.1).
- Allen, A. N., Schanze, J. J., Solow, A. R. and Tyack, P. L. (2013), Analysis of a Blainville's beaked whale's movement response to playback of killer whale vocalizations, *Marine Mammal Science*, doi: 10.1111/mms.12028.
- Schanze, J.J., Schmitt, R.W. and L.L. Yu (2010), The global oceanic freshwater cycle: A state-of-the-art quantification, *Journal of Marine Research* **68 (3-4)**, 569-595.
- Lagerloef, G., Schmitt, R., Schanze, J. and H.-Y. Kao (2010), The Ocean and the Global Water Cycle, *Oceanography* **23(4)**, 82-93.
- Stöhr, M., Schanze, J. and A. Khalili (2009), Visualization of gas-liquid mass transfer and wake structure of rising bubbles using pH-sensitive PLIF, *Experiments in fluids* **47(1)**, 135-143.

**MONOGRAPHS**

- Schanze, J.J. (2012), The Production of Temperature and Salinity Variance and Covariance: Implications for Mixing, *Ph.D. Thesis, MIT-WHOI Joint Program in Physical Oceanography*, Woods Hole, MA.
- Schanze, J.J. (2007), Large-scale Ocean Circulation in the Southwest Indian Ocean from Satellite-Derived Gravity and Altimetry, *Master of Oceanography Thesis*, Southampton University, UK.

**SELECT CONFERENCE CONTRIBUTIONS**

- Schanze, J.J. and R.W. Schmitt (2012), The Production of Temperature and Salinity Variance and Covariance: Implications for Mixing, *oral presentation at 2012 AGU Fall Meeting*, San Francisco, CA.
- Schanze, J.J. and R.W. Schmitt (2012), Buoyancy Fluxes and Cabeling in the Global Ocean, *poster presented at 2012 AGU Ocean Sciences Meeting*, Salt Lake City, UT.
- Schanze, J.J., Schmitt, R.W. and L.L. Yu (2010), The Global Oceanic Freshwater Cycle: A Best-Estimate Quantification, *poster presented at 2010 AGU Ocean Sciences Meeting*, Portland, OR.
- Nikolovska, A., and J.J. Schanze (2007), Acoustic methane seepage quantification model design, experiments and deep sea application, *paper presented at Oceans 2007*, Aberdeen, UK.