

Zackary I Johnson

Contact Information

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Professional Preparation

Massachusetts Institute of Technology, Civil and Environmental Engineering, B.S. (1994)
Duke University, Botany (Marine Photosynthesis), PhD (2000)
Massachusetts Institute of Technology, Postdoc in Marine Microbial Ecology, (2000-2004)

Appointments

2012- Arthur P. Kaupe Assistant Professor of Molecular Biology, Duke University
2009- Assistant Professor, Division of Marine Science & Conservation, Duke University
2005-2009 Assistant Professor, Department of Oceanography, University of Hawaii

Five Relevant Publications

Hunt DE, Lin Y, Church MJ, Karl DM, Izzo LK, Tringe SG and **Johnson ZI** (2013) The relationship between abundance and specific activity of bacterioplankton in open ocean surface waters. *Applied and Environmental Microbiology* 79(1) 177-184 DOI: 10.1128/AEM.02155-12

Lin Y, Gazsi K, Lance VP, Larkin A, Chandler J, Zinser ER, and **Johnson ZI** (2013) In situ activity of a dominant *Prochlorococcus* ecotype (eHL-II) from rRNA content and cell size. *Environmental Microbiology*. DOI:10.1111/1462-2920.12135

Johnson ZI et al. (2006) Niche partitioning among *Prochlorococcus* ecotypes along ocean-scale environmental gradients. *Science* 311, 1737-1740.

Johnson Z, RT Barber, J Marra, RR Bidigare, R Goericke, C Trees (2002) Photosynthetic Physiology and Forcing in the Arabian Sea, 1995. *Deep-Sea Research I* 49, 415-436.

Rocap G, Larimer F, Lamerdin J, Malfatti S, Chain P, Ahlgren N, Arellano A, Coleman M, Hauser L, Hess W, **Johnson Z**, Land M, Lindell D, Post A, Regala W, Shah M, Shaw S, Steglich C, Sullivan M, Ting C, Tolonen A, Webb E, Zinser E, Chisholm S (2003) Genome divergence in two *Prochlorococcus* ecotypes reflects oceanic niche differentiation. *Nature* 424, 1042-1047.

Five Additional Publications

Johnson ZI, Shyam R, Ritchie AE, Mioni C, Lance VP, Murray JW, Zinser ER (2010) The effects of iron- and light-limitation on phytoplankton communities of deep chlorophyll maxima of the Western Pacific Ocean. *Journal of Marine Research* 68 (2).

Johnson Z (2004) Development and application of the background irradiance gradient – single turnover fluorometer (BIG- STf). *Marine Ecology Progress Series* 283, 73-80.

Coale K, many others, and **Johnson Z** (2004) Southern Ocean Iron Enrichment Experiment (SOFEX): Carbon Cycling in Antarctic Waters. *Science* 304, 408-414.

Johnson ZI and RT Barber (2003) Analysis and interpretation of the reduction of quantum yield of photosynthesis at low irradiances. *Photosynthesis Research* 75, 85-95

Johnson ZI and P Howd (2000) Marine Photosynthetic Performance Forcing and Periodicity for the Bermuda Atlantic Time Series, 1989-1995, *Deep Sea Research I* 47(8), 1485-1512.

Sample Synergistic Activities

- 2012-ongoing *Applied and Environmental Microbiology*, Editorial Board member
- 2012,2014 Session Convener: AGU/ASLO/TOS Ocean Sciences
- 2012,2014 ASLO Multicultural Program & NSF Ocean Sciences Postdoctoral Research Fellowships (OCE-PRF) Broadening Participation Faculty Mentor
- Ongoing Served multiple NSF Oceanography, DOE biological energy, DOE graduate funding review panels: ~50 adhoc reviews per year for various journals and funding agencies (NSF, DOE, NASA and NOAA)
- 2013-ongoing Development of smartphone applications for geoscience education: Johnson ZI, and DW Johnston (2013), Smartphones: Powerful Tools for Geoscience Education, *Eos, Transactions American Geophysical Union*, 94(47), 433-434.

Collaborators and Other Affiliations

Collaborators and Co-Editors: Ginger Armbrust (University of Washington), Robert Bidigare (University of Hawaii Manoa), Thais Bittar (University of Georgia), Susan Brown (University of Hawaii Manoa), Shawn Campagna (University of Tennessee Knoxville), Matt Church (University of Hawaii Manoa), William Cochlan (San Francisco State University), Jennifer DeBruyn (University of Tennessee Knoxville), Sara Ferron (University of Hawaii Manoa), Zheng Gao (Shandong Agricultural University), Mario Giordano (Universita Politecnica delle Marche), Charles Greene (Cornell University), Pat Halpin (Duke University), Wolfgang Hess (University of Freiburg), David Ho (University of Hawaii Manoa), D Hu (Chinese Academy of Sciences), Dana Hunt (Duke University), Mark Huntley (Cornell University), N Jiao (Xiamen University), David Johnston (Duke University), David Karl (University of Hawaii Manoa), Martin Keller (Oak Ridge National Laboratory), Veronica Lance (NASA), Gary LeClerc (University of Tennessee Knoxville), Yajuan Lin (Duke University), I Luo (Xiamen University), Elizabeth Mann (Skidaway), Adrian Marchetti (University of North Carolina), Cecile Mioni (University of California Santa Cruz), Jeff Morris (Michigan State University), James Murray (University of Washington), Doug Nowacek (Duke University), Hans Paerl (University North Carolina), Matteo Palmucci (Universita Politecnica delle Marche), Andy Read (Duke University), Donald Redalje (University of Southern Mississippi), Astrid Schnetzer (North Carolina State University), J Sun (Xiamen University), Martin Szul (University of Tennessee Knoxville), J Tian (Ocean University of China), Susannah Tringe (DOE), Diana Varela (University of Victoria), Guangyi Wang (University of Hawaii Manoa), P Wang (Tongji University), Steven Wilhelm (University of Tennessee Knoxville), W Yan (Xiamen University), Q Yang (Ocean University of China), D Yaun (Chinese Academy of Sciences), Robert Zhang (Xiamen University), Erik Zinser (University of Tennessee Knoxville)

Graduate Advisor: Richard T Barber (Duke University)

Postdoctoral Sponsor: Sallie W Chisholm (MIT)

Thesis Advisor and Recent Postgraduate-Scholars Sponsor (12 total) : Carli Bober (high school teacher), Courtney Colwell (NOAA), Maria de Oca (present), Carolyn Doherty (present), Heather Hennehan (Duke University), Veronica Lance (NASA), Alyse Larkin (present), Yajuan Lin (present), Sarah Loftus (present), Anna Ritchie (industry), Thais Bittar (University of Georgia), Caitlyn Zimmerman (NOAA)