

KEVIN C. GUAY

Director of IT
Bigelow Laboratory for Ocean Sciences
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EDUCATION

Hobart College, Geneva, NY 2012
Bachelor of Science in Computer Science
Bachelor of Arts in Environmental Studies
Minor in Geoscience

University of Queensland, Brisbane, QLD, Australia Fall 2010
Marine Biology and Terrestrial Ecology

PROFESSIONAL EXPERIENCE

Director of IT – *Bigelow Laboratory for Ocean Sciences, East Boothbay, ME* 01/2017 - present
Software Engineer 07/2015 - 01/2017

- Develop, manage, and deploy web application to streamline administrative tasks
- Deploy, configure, and manage servers and IT infrastructure
- Manage IT personal, infrastructure, and day-to-day operations
- Communicate with staff regarding IT needs

Research Assistant II – *Woods Hole Research Center, Falmouth, MA* 07/2014 - 07/2015
Research Assistant I 06/2012 - 07/2014

- Acquire, process, and analyze remote sensing (satellite) data and synthesize findings in peer-reviewed publications
- Manage research projects both within the WHRC and among other organizations
- Create maps and figures for publication and presentations using GIS software (e.g. ArcMap and QGIS) and the R programming language
- Create and manage databases (SQL and PostgreSQL) to track of remote sensing data
- Use supercomputers (e.g. NASA's Advanced Supercomputer: Pleiades) to process big data using parallel programming

Engineer Assistant II (Intern) – *Woods Hole Oceanographic Institution, Falmouth, MA* Summer 2011
Winter 2011

- Used spectroscopy to study oxidation coatings on coastal marine sediment
- Designed and built a micro-controller for an instrument to study hydrothermal plumes

Teaching Assistant – *Hobart and William Smith Colleges (HWS), Geneva, NY* 2010 - 2011

Research Assistant – *HWS, Geneva, NY* 2009 - 2010

iPhone Software Developer (Intern) – *iPhone Think Tank, Marlton, NJ* 2009 - 2010

Web Developer (Intern) – *Tech Commandos, Marlton, NJ* Summer 2009
Summer 2008

Web Developer – *Lift Gates Unlimited, Mansfield, MA* 2008 - 2009

Web Developer (Volunteer) – *Global Partnerships for Health and Education, Rehoboth, MA* 2007 - 2009

TECHNICAL SKILLS

LANGUAGES (SELECT): R, MatLab, Python, Java, C, Objective-C, HTML, CSS, PHP, Javascript, SQL, PostgreSQL

PROGRAMS (SELECT): Photoshop, Lightroom, Eclipse, Xcode, ArcGIS, QGIS, GDAL, Shell, unix programs (e.g. emacs)

OPERATING SYSTEMS: Windows, Mac OS X, Ubuntu, Debian, Red Hat (and CentOS), and other Linux distributions

PEER-REVIEWED PUBLICATIONS

- Hobbie, J.E., G.R. Shaver, E.B. Rastetter, J.E. Cherry, S.J. Goetz, **K.C. Guay**, W.A. Gould, G.W. Kling. 2017. Ecosystem responses to climate change at a Low Arctic and a High Arctic long-term research site. *Ambio*. doi:10.1007/s13280-016-0870-x
- Myers-Smith, I.H., S.C. Elmendorf, P.S.A. Beck, M. Wilking, M. Hallinger, D. Blok, K.D. Tape, S.A. Rayback, M. Macias-Fauria, B.C. Forbes, J.D.M. Speed, N. Boulanger-Lapointe, C. Rixen, E. Lévesque, N.M. Schmidt, C. Baittinger, A.J. Trant, L. Hermanutz, L.S. Collier, M.A. Dawes, T. Lantz, S. Weijers, R.H. Jørgensen, A. Buchwal, A. Buras, A.T. Naito, V. Ravolainen, G. Schaepman-Strub, J. Wheeler, S. Wipf, **K.C. Guay**, D.S. Hik, and M. Vellend. 2015. Climate sensitivity of shrub growth across the tundra biome. *Nature Climate Change*. Accepted.
- Boelman, N.T., L. Gough, J.C. Wingfield, S.J. Goetz, A. Asmus, H.E. Chmura, J.S. Krause, J.H. Perez, S.K. Sweet, **K.C. Guay**. 2014. Greater shrub dominance alters breeding habitat and food resources for migratory songbirds in Alaskan arctic tundra. *Global Change Biology*. doi:10.1111/gcb.12761
- Epstein, H.P., U.S. Bhatt, M.K. Raynolds, D.A. Walker, P.A. Bieniek, C.J. Tucker, J. Pinzon, H. Zeng, G.J. Jia, **K.C. Guay**, S.J. Goetz. 2014. Tundra Greenness. In Arctic Report Card: Update for 2014. NOAA. Retrieved from http://www.arctic.noaa.gov/reportcard/tundra_greenness.html
- Guay, K.C.**, P.S.A. Beck, L.T. Berner, S.J. Goetz, A. Baccini, W. Buermann. 2014. Vegetation productivity patterns at high northern latitudes: a multi-sensor satellite data assessment. *Global Change Biology*. doi:10.1111/gcb.12647

PUBLISHED DATASETS

- Guay, K.C.**, P.S.A. Beck, and S.J. Goetz. 2014. Long-Term Arctic Growing Season NDVI Trends from GIMMS 3g, 1982-2012. Data set.. Available on-line from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, USA. doi:10.3334/ORNLDAAC/1275

EXTRACURRICULAR & VOLUNTEER

Science Fair Judge – <i>Falmouth Public Schools, Falmouth, MA</i>	2013
EMT – <i>HWS Emergency Medical Service, HWS, Geneva, NY</i>	2010 - 2012
Tutor – <i>America Reads, Geneva, NY</i>	2010 - 2011
President – <i>Outdoor Recreation Adventure Program, HWS, Geneva, NY</i>	2009 - 2011
Trip Leader – <i>Pre-Orientation Outdoor Adventure Program, HWS, Geneva, NY</i>	2011 & 2009

CERTIFICATIONS

Wilderness First Responder— <i>SOLO Schools, Conway, NH</i>	01/2010 - 01/2014
Wilderness Emergency Medical Technician— <i>SOLO Schools, Conway, NH</i>	01/2011 - 06/2012
New York Emergence Medical Technician Basic (EMT-B) – <i>Finger Lakes EMS, Geneva, NY</i>	06/2010 - 06/2012