
Amy L. Kukulya

Senior Oceanographic Engineering Technician, Applied Ocean Physics and Engineering Department
Woods Hole Oceanographic Institution, Woods Hole, MA 02543-1549
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Research Interests:

Uncrewed underwater systems; biological surveys with underwater vehicles; bathymetric underwater mapping; development and field testing of ocean systems and their practical applications. Professional communicator with science/technology industries and the public.

Education:

B.S.: Rutgers University, 1999, Environmental Policy.
American University: 1998 Summer Semester, Seville, Spain.

Professional Experience:

Woods Hole Oceanographic Institution, Woods Hole, Massachusetts (June 2001-present).

Research Technician , AOP&E Department (June 2001-February 2006)

Engineering Technician III (February 2006-July 2008)

Senior Engineering Technician (August 2008-present)

- Autonomous Underwater Vehicle design, configuration and testing.
- Expedition Leader
- Troubleshooting vehicle ailments pertaining to mechanical and electrical components using meters, scopes and other electronic equipment.
- Conducting science and military field work with AUVs and participating in cruises and extensive fieldwork.
- Training and managing of junior technicians and staff.
- Project Leadership, vehicle technical support for customers.
- Project Development, Management and Principal Investigator responsibilities.

Professional Affiliations:

ASLO, American Society for Limnology and Oceanography
IEEE Ocean Engineering Society

Participation in Education and Outreach Programs:

- Children School of Science faculty member (2001-2007).
- EngineerYourLife.org outreach brochure and featured engineer- ongoing.
- Design Squad PBS outreach profile video for kids.
- Engineergirl.org profile outreach program-featured engineer- ongoing.
- Falmouth Academy Summer Faculty for Underwater Robotics Class, July 2008.
- DotDiva.org, mentor for college bound women, Microsoft/WGBH, 2010-ongoing.
- Girls, Math & Science Partnership, mentor, Braincake.org , 2010-ongoing.
- WOWSTER Program, Highlighted Mentor for Governor's STEM Program, 2011-ongoing.

Cruise/Field Work Participation:

Over 75 field expeditions from Antarctica to Greenland

Publications:

Jason D. Holmes, William M. Carey, James F. Lynch, Arthur E. Newhall and Amy Kukulya, "An Autonomous Underwater Vehicle Towed Array for Ocean Acoustic Measurements and Inversions", ASA Vancouver, 2005.

Roger Stokey, Alexander Roup, Chris von Alt, Ben Allen, Ned Forrester, Tom Austin, Rob Goldsborough, Mike Purcell, Fred Jaffre, Greg Packard, Amy Kukulya, "Development of the REMUS 600 Autonomous Underwater Vehicle", Oceans 2005.

*Kukulya, A., Stokey, R., von Alt, C., Packard, G., Purcell, M., Forrester, N., Austin, T., Goldsborough, R., Allen, B., "Recent Science Applications for the REMUS AUV", Presented ASLO 2004, Hawaii. *Presented

Ben Allen, Tom Austin, Ned Forrester, Rob Goldsborough, Amy Kukulya, Greg Packard, Mike Purcell and Roger Stokey, "Autonomous Docking Demonstrations with Enhanced REMUS Technology", September 2006. Presented at Oceans 2006, Boston.

Jason D. Holmes, Amy **Kukulya**, "Characteristics of an autonomous underwater vehicle with a towed hydrophone array", September 2006. Presented at Oceans 2006, Boston.

National Geographic Adventure Magazine, The Big, Record-Breaking, Green, Disease-Busting, Deep-Sea, Crime-Fighting IDEAS for 2009, October 2009.

***A. Kukulya**, A. Plueddemann, T. Austin, R. Stokey, M. Purcell, B. Allen, R. Littlefield, L. Freitag, P. Koski, E. Gallimore, J. Kemp, K. Newhall and J. Pietro, "Under-ice Operations with a REMUS-100 AUV in the Arctic," *Proceedings: IEEE Autonomous Underwater Vehicle Conference 2010*, Mapping the World's Oceans, Naval Postgraduate School, Monterey, California 1–3 September 2010. *Presented

A. Plueddemann, **A. Kukulya**, R. Stokey, L. Freitag, "Autonomous Underwater Vehicle Operations Beneath Coastal Sea Ice," TMECH-04-2011-1580, (Peer-Reviewed).

Sharon L Walker, Cornel E J de Ronde, Daniel J Fornari, Matthew I Leybourne, Vicki Lynn Ferrini, Amy **Kukulya**, Robin Littlefield, Bradley J Scott, Dirk Immenga, Edward T Baker, "Hydrothermal Venting at Lake Rotomahana, New Zealand, 125 Years After the Tarawera Eruption of 1886," AGU SESSION: EP19. Post-Eruptive Processes Operating on Volcanic Landscapes.

Cornel E J de Ronde, Daniel J Fornari, Vicki L Ferrini, Fabio Caratori Tontini, Sharon L Walker, Bradley J Scott, Matthew I Leybourne, Adrian Pittari, Ronald F Keam, John E Lupton, Agnes Mazot, Amy **Kukulya**, Robin H Littlefield, Dirk Immenga, Vaughan Stagpoole, Christian Timm, Tineke J Berthelsen, "Rediscovery of the 8th Natural Wonder of the World: The Pink and White Terraces' survival of the 1886 Tarawera Rift eruption," AGU 2011 SESSION: EP19: Post-Eruptive Processes Operating on Volcanic Landscapes.

G. Gawarkiewicz, F. Bahr, **A. Kukulya**, C. Marquette, C. Linder, T. Grothues and J. Dobarro, "Impact of recent flooding on the continental shelf north of Cape Hatteras: Results from Scanfish and AUV surveys," AGU Session 2011.

G.E. Packard, **A. L. Kukulya**. "Continuous Autonomous Tracking and Imaging of White Sharks and Basking Sharks Using a REMUS-100 AUV". Presented IEEE MTS Oceans, San Diego October, 2013.

Professional Talks:

Presenter: Public Event: *White Sharks, Gray Seals::Chasing the Cape's Most Charismatic Predators*. Wednesday, August 7, 2013, 5:30 - 9:00 p.m. • Discovery Tent • Redfield Courtyard

Presenter: Science made public talk, *SharkCam: Robots chase sharks where no else can go*. Redfield Auditorium August 20

Talk: Keynote Speaker: First Robotics Competition. Newton North High School, September 8, 2012.

Talk: "Finding New Zealand's Lost Pink and White Terraces." Science Made Public Lecture, August 12, 2012, WHOI Exhibit Center.

Talk: "Robots Untethered", WHOI Exhibit Center, July 28, 2006

Woman's History Month Panel Discussion Participant, *Woman of WHOI, Yesterday, Today and Tomorrow*, April 2nd 2008.

Talk: "REMUS, The Ultimate Science Tool", October 5, 2006, MBL Club Talk to Newton Middle School

Kukulya, A., Stokey, R., von Alt, C., Packard, G., Purcell, M., Forrester, N., Austin, T., Goldsborough, R., Allen, B., "Recent Science Applications for the REMUS AUV", Presented ASLO 2004, Hawaii.

Licenses and Certifications:

- United States Coast Guard Captains License- 50 Ton, Current
- Advanced First Aid and CPR, Current
- Confined Space Training