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I. EDUCATION:

1980 B.S., University of Rhode Island (Mechanical/Ocean Engineering)
1978-1980 Research Assistant, Department of Physical Oceanography, Graduate School of Oceanography, University of Rhode Island

II. PROFESSIONAL EXPERIENCE:

2011-Present Principal Engineer, Deep Submergence Laboratory, Department of Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution
1998-2011 Research Specialist, Deep Submergence Laboratory, Department of Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution
1985-1998 Research Engineer, Deep Submergence Laboratory, Department of Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution
1981-1985 Mechanical Engineer, Benthos, Inc.
1980-1981 Mechanical Engineer, Hydro Products, Inc.

AWARDS and HONORS:

WHOI Senior Technical Staff Award
W.M. Keck Technology Innovation Award
Green Technology Innovation Award
GlobalSpec Great Moments in Engineering Award

III. SIGNIFICANT PUBLICATIONS:

Bowen, A., Yoerger, D., Taylor, C., McCabe, R., Howland, J., Gomez-Ibanez, D., Kinsey, J., Heintz, M., McDonald, G., Peters, D., Young, C., Buescher, J., Fletcher, B., Whitcomb, L., Martin, S., Webster, S., and Jakuba, M., "The Nereus hybrid underwater robotic vehicle", *Underwater Technology*, 28(3): 79-89, 2009.

Jakuba, M., Whitcomb, L., Yoerger, D. and Bowen, A., Toward Under-Ice Operations with Hybrid Underwater Robotic Vehicles. In *Proceedings of the 2008 IEEE/OES Autonomous Underwater Vehicle Workshop (AUV08)*, October 14, 2008.

Bowen, A., Yoerger, D., Taylor, C., McCabe, R., Howland, J., Gomez-Ibanez, D., Kinsey, J., Heintz, M., McDonald, G., Peters, D., Fletcher, B., Young, C., Buescher, J., Whitcomb, L., Martin, S., Webster, S., Jakuba, M., The Nereus Hybrid Underwater Robotic Vehicle for Global Ocean Science Operations to 11,000m Depth. In *Proceedings of IEEE/MTS Oceans 2008, Quebec*, September 17, 2008.

Young, C., Whitcomb, L.L., Yoerger, D., Bowen, A., Grosenbaugh, M., Bingham, B. "The Hybrid Remotely Operated Vehicle (HROV): New Challenges and Opportunities." *Underwater Intervention 2005 Conference Proceedings*, 2005. Association of Diving Contractors, Marine Technology Society, Washington, D.C.

Bowen, A., Yoerger, D., Whitcomb, L., Fornari, D., Exploring the Deepest Depths: Preliminary Design of a Novel Light-Tethered Hybrid ROV for Global Science in Extreme Environments. *Journal of the Marine Technology Society*. 38(2) :92-101, Summer 2004.

Webster, S. and Bowen, A., Feasibility Analysis of an 11,000 m Vehicle with a Fiber Optic Microcable Link to the Surface. *IEEE/MTS OCEANS 2003*, pp 2469-2474.

Bowen, A., "Equipment Configuration and Survey Techniques for the MV Derbyshire Survey, 1997", Proceedings MTS/Ocean Community Conference '98, Vol. 2, 1099-1103, Baltimore, Maryland, November 1998.

Bowen, A. and Walden, B.B., "Manned Versus Unmanned Systems: A Complimentary Approach", *Marine Technology Society Journal*, Vol. 26, No. 4, 79-80, Winter 1992-93.

Ballard, R.D., Yoerger, D.R., Stewart, W.K. and Bowen, A., "ARGO/JASON: A Remotely Operated Survey and Sampling System for Full-Ocean Depth", *Oceans 91*, 1:71-75, 1991.

von Alt, C., Bowen, A. and Bergeron, E.M., "JASON Junior: System Design and Deep Submergence Vehicle Interface", Intervention 87 Conference and Exposition. The Working Diver 87: Special Sessions on Manned Submersibles, sponsored by the Marine Technology Society, March 10-12, 1987, San Diego. Marine Technology Society, Washington, DC, 200-208, 1987.

IV. SYNERGISTIC ACTIVITIES

1. Manager Unmanned Deep Submergence Operations Group
2. Project Engineer for Hybrid Remotely Operated Vehicle
3. Project Engineer for JASON II and Isis
4. Project Engineer for JASON
5. Mechanical Design Engineer for JASON Junior Remotely Operated Vehicle System
6. Over 40 oceanographic ROV/AUV cruises as an Expedition Leader or senior team member
7. Participated in the development of an advanced maneuverable underwater viewing system
8. Project Engineer for remotely piloted vehicle, Benthos RPV 430
9. Production/test engineer for USN Mine Neutralization vehicle

V. COLLABORATORS

B. Bingham (Univ. of Hawaii); J Buescher (USN-SPAWAR); M Chaffey (MBARI); B Fletcher (USN-SPAWAR); D. Fornari (WHOI); D Gomez-Ibanez (WHOI); G Griffiths (Southampton Oceanography Center); M. Grosenbaugh (WHOI); M Heintz (WHOI); J Howland (WHOI); M Jakuba (Australian Ctr for Field Robotics/Univ of Sydney); P Johnson (Univ of Washington); D Kelley (Univ of Washington); J Kinsey (WHOI); S. Martin (USN-SPAWAR); R McCabe (WHOI); G McDonald (WHOI); D Peters (WHOI); C Taylor (WHOI); B. Walden (WHOI); S Webster (Johns Hopkins University); L Whitcomb (Johns Hopkins University); R Williams (UK Dept of Transport); D Yoerger (WHOI); C. Young (USN-SPAWAR)