

Bruce M. Howe

Grants and Contracts

Submitted from the University of Hawaii

Autonomous Mission Design and Data Fusion: Synergistic Applications for SWOT and XOVWM

NASA, Submitted, 2009 – 2011, \$1.5M

Howe PI (with co-PIs Arabshahi and Gray at APL-UW, Chao and Chien at UCLA)

Acoustic Seagliders: Mobile Tomography Receivers for the ONR Philippine Sea Experiment,

ONR (DURIP), Submitted, 2009 - 2010, \$0.36M

Howe PI

Acoustic Seaglider: Planning for the Philippine Sea Experiment 2010-2011

ONR, approved, funding in progress, 2008 – 2009, \$25K

Howe PI (with Carter and Nosal, UH)

Coastal Margin Observation and Prediction: Supporting Activities at the University of Hawaii

APL-UW, Submitted, 2008 – 2010, \$62K

Howe PI (see parent grant below)

A Smart Sensor Web: Supporting Activities at the University of Hawaii

APL-UW, Submitted, 2008 – 2009, \$34K

Howe PI (see parent grant below)

The HOT Profiler: Supporting Activities at the University of Hawaii

APL-UW, Submitted, 2008 – 2010, \$68K

Howe PI (see parent grant below)

Active at the Applied Physics Laboratory, University of Washington with continuing participation by Howe

The HOT Profiler: A Battery-Powered/Inductively-Charged, Satellite-Linked Moored Profiling System for Long Time Series of Rapid Vertical Profiles of Density and Velocity

NSF, OCE 0647971, 2007 – 2009, \$1.4M

Howe Co-PI (Alford PI, McGinnis co-PI)

Acoustic Seaglider2: PLUS

ONR, N00014-07-1-0637, 2007 – 2012, \$15.6 (\$8.4M options)

Howe PI (with Miyamoto and Luby); Luby is now PI at APL-UW

A Smart Sensor Web for Ocean Observation: System Design, Modeling, and Optimization

NASA, AIST-05-0030, 2006 – 2009, \$1.5M

Howe Co-PI (with Arabshahi PI, Fox, Roy, Chao, JPL)

Science and Technology Center for Coastal Margin Observation and Prediction

OHSU/NSF, GSTCN0001A7.UW/OCE 0424602, 7/2006 – 6/2010, \$0.8M/\$20M

Howe Co-I (Baptista at OSHU lead PI, many at OSU and UW participating)

North Pacific Acoustic Laboratory (NPAL) 3

ONR, N00014-03-1-0181, 12/2005 – 11/2008, \$2.4M

Howe Co-PI (with Mercer PI) [Howe will continue collaboration through the acoustic Seaglider / Philippine Sea proposals above]

SENSORS: ALOHA Mooring Sensor Network and Adaptive Sampling

NSF, OCE-0330082, 10/2003 – 9/2009, \$2.9M

Howe PI (co-PIs: Lukas, Boss, McGinnis) [PI status and some of the remaining funds will transfer to UH]

Completed at the Applied Physics Laboratory, University of Washington

OOI Regional Scale Nodes Implementing Organization

COL/NSF, Funded (expected), 2007 – 2008, (2008 – 2018), \$2M (\$150M)

Howe - Project Scientist (with move to UH, no longer participating; Delaney lead PI)

UW Support for NEPTUNE

UW, 7/2005 – 12/2007, \$0.6M

Co-PI (Delaney lead)

Acoustic Seaglider: Planning for the Philippine Sea 2009

ONR, N00014-07-1-0250, 2007 – 2008, \$40K

Howe PI

Acoustic Seaglider

ONR, N00014-05-1-0907, 10/2005 – 9/2007, \$1.4M

Howe PI

Development of a power system for cabled ocean observatories

NSF, OCE-0116750, 10/2001 – 1/2007, \$4.1M

Howe PI (co-PIs: Liu, El-Sharkawi, Delaney, Wilcock, Kirkham, Beauchamp)

MARS Cabled Submarine Observatory Power System

MBARI/ NSF, 5/2004 – 1/2007, \$0.7M

Howe PI (with El-Sharkawi, Liu)

DURIP: Seagliders for NPAL,
ONR, N00014-03-1-0693, 4/2003 – 3/2004, \$0.2M
Howe PI

North Pacific Acoustic Laboratory (NPAL) 2
ONR, N00014-03-1-0181, 12/2002 – 11/2005, \$3.2M
Co-PI (w/Spindel PI and Mercer), joint w/SIO

Improving the MAP program
CTBTO, 01/1/20/037, 3/2001-12/2001, \$15K
Howe PI

Critical elements of NEPTUNE Phase 2
NOPP, N00014-99-1-0129, 11/1998 – 12/2003, \$1.7M
Co-PI (Delaney lead)

Hawaii Ocean Mixing Experiment
NSF, OCE-9819527, 11/2000 – 10/2003, \$0.5M
Co-PI (Dushaw PI)

Baleen Whale Calls
UCSD, 1013384, 2/2000-9/2000, \$15K
Howe PI

Global Assimilative Ionospheric Model
USU/ DoD, 11/1999- 4/2004, \$0.3M
Howe Consultant

Monitoring the North Pacific for Improved Ocean, Weather, and Climate Forecasts
NOPP, N00014-97-1-1021, 8/1997 – 12/2001, \$2.9M
Howe Co-PI (Spindel lead PI)

UW Support for NEPTUNE
UW, 7/1998 – 12/2003, \$1M
Howe Co-PI (Delaney lead PI)

Design Study for NEPTUNE: A Fiber-Optic ‘Telescope’ to Inner Space
NOPP, 7/1998 – 12/2003, \$1M
Howe Co-PI (Delaney lead PI)

North Pacific Acoustic Laboratory (NPAL) 1
ONR, N00014-97-1-0259, 1/1997 – 2/2003, \$4.15M
Howe Co-PI (w/ Spindel PI and Mercer, joint w/SIO)

Acoustic Thermometry of Ocean Climate (ATOC)
UCSD/ARPA, 12/1992 – 5/1995, \$11.4M

Howe Investigator (SIO and APL leads, many other investigators)

Improving Altimetry using Ionospheric and Atmospheric Tomography

NASA, 10/1993-9/1996, \$0.3M

Howe PI

Ionospheric Tomography

Northwest Research Associates, 10/1990- 9/1991, \$10K

Applied Tomography

ONR, 3/1990- 2/1992, \$2.6M

Howe Co-PI (w/Spindel PI and Mercer)

SLICE89

ONT, 10/1988 – 9/1990, \$0.5M

Howe Co-PI (w/Mercer), joint w/SIO

Moving Ship Tomography (MST)

ONT, 7/1987 – 9/1993, \$6.8M

Howe Co-PI (w/Spindel PI and Mercer), joint w/SIO