ENABLING NEW UNDERWATER ROBOTICS CAPABILITIES AT WOODS HOLE OCEANOGRAPHIC INSTITUTION - Dana Yoerger, Andrew Bowen, Michael Jakuba, Deep Submergence Laboratory, Center for Marine Robotics, Woods Hole Oceanographic Institution, USA

REGIONALLY-DEPLOYED ADAPTIVE PLATFORMS FOR OCEAN RESEARCH TECHNOLOGIES - Jim Costopulos, CEO, Global Oceans, Vernon Hills, IL, USA

HIGHLY RESONANT WIRELESS POWER TRANSFER IN SUBSEA APPLICATIONS - Dr. Morris Kesler, Colin McCarthy, WiTricity Corporation, Watertown, MA, USA

SLOCUM GLIDER; EXPANDING THE CAPABILITIES - Clayton Jones, Ben Allsup, Doug Webb, Teledyne Webb Research, Falmouth, MA

SABERTOOTH A SEAFLOOR RESIDENT HYBRID AUV / ROV SYSTEM FOR LONG TERM DEPLOYMENT IN DEEP WATER AND HOSTILE ENVIRONMENTS - Jan Siesjö, Saab Underwater Systems AB - Chris Roper, Saab Seeye Ltd., Contributions from Marcus Furuholmen Aker Solutions AS

AUTONOMOUS TRANSIENT OCEAN EVENT MONITORING (ATOEM) - Kevin M. Ulmer, Seaquester, Inc., East Sandwich, Massachusetts USA & Woods Hole Oceanographic Institution, Woods Hole, Massachusetts USA


RESOLVING VEHICLE MOTION IN AN UNTETHERED UNMANNED UNDERWATER VEHICLE - Greg Rivalan, Teledyne RDI, USA

MULTI-VEHICLE DYNAMIC PURSUIT WITH ACOUSTICS AND COARSE QUANTIZATION - Brooks L. Reed, MIT/WHOI Joint Program in Oceanographic Engineering, Josh Leighton, Mei Yi Cheung, and Franz S. Hover, Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge MA

RUN-TIME ETHICS CHECKING FOR AUTONOMOUS UNMANNED VEHICLES: DEVELOPING A PRACTICAL APPROACH - Donald P. Brutzman, Duane T. Davis, George R. Lucas Jr., and Robert B. McGhee, Naval Postgraduate School (NPS), Monterey California USA
TOWARDS THREE-DIMENSIONAL UNDERWATER MAPPING WITHOUT ODOMETRY - Alistair Dobke, Joshua Vasquez, Lauren Lieu, Ben Chasnov, Christopher Clark, Harvey Mudd College, Claremont, California, USA, Ian Dunn, Zo J. Wood, California Polytechnic University, San Luis Obispo, California, USA, Timothy Gambin, University of Malta, AURORA Trust, Msida, Malta

A MULTI-ARMED BANDIT WITH SWITCHING COSTS FOR AUTONOMOUS ACOUSTIC RELAY POSITIONING - Mei Yi Cheung, Joshua Leighton and Franz S. Hover
Massachusetts Institute of Technology, Cambridge MA 02139

THRUST GENERATION AND PROPULSIVE EFFICIENCY IN GROUND EFFECT FOR HEAVING AND PITCHING HIGH ASPECT RATIO FOILS - Jason Dahl, Stephen Licht, Ocean Engineering Department, University of Rhode Island, USA

GAME ENGINE-BASED SIMULATOR FOR AUTONOMOUS UNDERWATER VEHICLES - Alexander B. Strout & Roy M. Turner, School of Computing and Information Science, University of Maine, Orono

BIO-INSPIRED FLOW SENSING AND CONTROL: AUTONOMOUS UNDERWATER NAVIGATION USING DISTRIBUTED PRESSURE MEASUREMENTS - Francis D. Lagor, Levi D. DeVries, Kathryn M. Waychoff, and Derek A. Paley, Department of Aerospace Engineering and the Institute for Systems Research, University of Maryland, College Park MD, USA

HOW TO MAXIMIZE PECTORAL FIN EFFICIENCY BY CONTROL OF FLAPPING FREQUENCY AND AMPLITUDE - John S. Palmisano, Ravi Ramamurti, Jason D. Geder, Marius Pruessner, William C. Sandberg, and Banahalli Ratna

A COMPREHENSIVE ALLOMETRIC ANALYSIS OF BIO-MIMETIC MPF-TYPE UUVS - John S. Palmisano, Marius Pruessner, and Jason D. Geder

POWER AND THRUST COMPARISON OF BIO-MIMETIC PECTORAL FINS WITH TRADITIONAL PROPELLER-BASED THRUSTERS - John S. Palmisano*, Jason D. Geder**, Marius D. Pruessner*, Ravi Ramamurti**, *Center for Biomolecular Science and Engineering, Naval Research Laboratory (NRL),Washington, DC USA, **Laboratory for Computational Physics & Fluid Dynamics, NRL Washington, DC, USA

AQUAPIX – A LOW-COST INTERFEROMETRIC SYNTHETIC APERTURE SONAR FOR AUVS: SEA TRIALS AND RESULTS - David Shea, Peter Crocker, Jeremy Dillon, Sean Chapman, Kraken Sonar Systems, St. John’s, NL, Canada,


LIMIT CYCLING IN CONTROL OF UNDERWATER VEHICLES CAUSED BY LOSSY QUANTIZED COMMUNICATION CHANNELS - Eric Gilbertson and Franz Hover
Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts

USING TIME OF FLIGHT DISTANCE CALCULATIONS FOR TAGGED SHARK LOCALIZATION WITH AN AUV - Yukun Lin, Hannah Kastein, Taylor Peterson, Christopher Clark, Harvey Mudd College, Claremont, California, USA, Connor White, Christopher Lowe, Department of Biological Sciences, CSU Long Beach Long Beach, CA, USA
PIEZOELECTRIC MEMS SENSOR FOR FISH-LIKE UNDERWATER SENSING - Mohsen Asadnia1, Ajay Giri prakash Kottapalli1,2, Jianmin Miao1,2, and Michael Triantafyllou2,3; 1School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore, 2Singapore-MIT Alliance for Research and Technology (SMART), Singapore, 3Department of Mechanical Engineering, Massachusetts Institute of Technology, Massachusetts, USA

COLLISION AVOIDANCE PASSIVE SONAR - Dale Green, Steven J McManus, Teledyne Benthos, Inc.

A ROBUST FRAMEWORK FOR FAILURE DETECTION AND RECOVERY FOR TERRAIN-RELATIVE NAVIGATION - Sarah E. Houts, Shandor G. Dektor, Aerospace Robotics Laboratory, Stanford University, Stanford, CA, Stephen M. Rock, Aerospace Robotics Laboratory, Stanford University, Stanford, CA, USA & Monterey Bay Aquarium Research Institute (MBARI), Moss Landing, CA 95039, USA

STABILITY CRITERION FOR A WALL-FOLLOWING AUV - Robert S. McEwen, Stephen M. Rock, Monterey Bay Aquarium Research Institute, Moss Landing, CA, Stanford University, Stanford, CA, USA

INTEGRATED CONTROL SYSTEM FOR AUTONOMOUS SEARCH CAPABILITY - Douglas E. Humphreys, Rafael A. Mandujano, Thomas F. Tureaud, Vehicle Control Technologies, Inc, Reston, VA, USA

TOWARD HIGH-COVERAGE IMAGING OF HYDROTHERMAL VENT FIELDS: A RECURSIVE PATH-PLANNING METHOD OF AN AUV - Yoshiki Sato*, Toshihiro Maki*, Ayaka Kume**, Takumi Matsuda**, Takashi Sakamaki*, and Tamaki Ura***; *Institute of Industrial Science, The University of Tokyo, Tokyo, Japan, **Graduate School of Frontier Sciences, The University of Tokyo, Chiba, Japan, ***Kyushu Institute of Technology, Japan

DEVELOPMENT OF CENTRALIZED CONTROL SYSTEM FOR AUV GROUP - Igor Tuphanov and Alexander Scherbatyuk, Institute for Marine Technology Problems FEB RAS and Far Eastern Federal University, Vladivostok, Russia, Yuri Vaulin, Far Eastern Federal University, Vladivostok, Russia

ASSESSING AUTOMATED AND HUMAN PATH PLANNING FOR THE SLOCUM GLIDER - Hans Christian Woithe, Rutgers University, Mike Eichhorn, Institute for Automation and Systems Engineering, Ilmenau University of Technology, Oscar Schofield, Ulrich Kremer, Rutgers University

CORRELATION OF SIDESCAN SONAR ACOUSTIC SHADOWS AND BATHYMETRY FOR TERRAIN-RELATIVE NAVIGATION - Jose Padial, Shandor G. Dektor, Aerospace Robotics Laboratory, Stanford University, Stanford, CA & Monterey Bay Aquarium Research Institute (MBARI), Moss Landing, CA 95039, USA

DISTRIBUTED, CONTEXT-BASED ORGANIZATION AND REORGANIZATION OF MULTI-AUV SYSTEMS - David Gagne, Department of Computer Science, University of Southern Maine, Sonia Rode and Roy M. Turner, School of Computing and Information Science, University of Maine

OCEAN OBSERVING IN THE 4TH DIMENSION – AUTONOMOUS GLIDER SURVEYS IN THE GULF OF MEXICO - Peter Brickley, Horizon Marine, Inc, 15 Creek Road, Marion, MA, USA

MODULAR LOW LOGISTICS AUVS IN COMMERCIAL SURVEY APPLICATIONS - Thomas Hiller, Teledyne Gavia, Reykjavik, Iceland, Arnar Steingrimsson, Robert Melvin, Teledyne Benthos, Falmouth MA, USA

SEAFLOOR MAPPING AND IMAGING EFFORTS USING AUTONOMOUS UNDERWATER VEHICLES - Eric J. Martin, Hans Thomas, David W. Caress, and Brett W. Hobson, Monterey Bay Aquarium Research Institute