

Scientific/Technical Program

Thursday, 3:40 PM - 5:20 PM
Room: Pacific 5

Cross Cutting Issues

Chair **Dr. Theodore Bennett, USNOO, MS**

Time: 3:40 PM

Implementing an Integrated Ocean Observing System for the United States:

Status and Plans 2506

Dr. Eric Lindstrom, Prof. Thomas C. Malone, Prof. Larry
Atkinson, Ms. Muriel Cole, Ms. Rosalind Cohen, Mr. Patrick
Dennis, Dr. Steve Piotrowicz, *Ocean.US, VA*

Time: 4:00 PM

Need for A METOC GRID

Computing Environment 2507

Mr. James H. Corbin, Dr. Avichal Mehra, Sachin Bhate,
Mississippi State University, MS

Time: 4:20 PM

Connecting the “National Backbone” with Regional Observing System Federations in the Integrated Ocean Observing System 2512

Dr. Dean A. Dunn, Mr. Russ Beard, Ms. Susan Starke, Mr.
Joe Stinus, *NOAA/National Coastal Data Development
Center, MS*

Time: 4:40 PM

Building Support for an Integrated Ocean Observing System 2513

Bill Fornes, Penny Dalton, *Consortium for Oceanographic
Research and Education, DC*

Time: 5:00 PM

The National Weather Service (NWS) United States Integrated Sustained Ocean Observing System and the Federal Backbone - The Next Steps, What Can the Federal Backbone Do for You? 2514

Mr. Dan Henderson, *NOAA National Data Buoy Center,
MS*

Thursday, 3:40 PM - 5:20 PM
Room: Pacific 7

Industry Participation II

Co-Chairs

Craig Okuda, MBARI, CA
David Frost, Orincon, CA

Time: 3:40 PM

TBD

Lars Hansen, *MacArtney Offshore*

Time: 4:00 PM

TrackLink: A Broadband Spread Spectrum USBL System

Ning Xiao, *LINKQUEST, CA*

Time: 4:20 PM

New Drop Net for Scientific Research and Commercial Fishing

Kent Thomas, *SCCFA, CA*

Time: 4:40 PM

Acoustic Systems Trainer in the Classroom

Mr. Criag A. Bateman, *ITP/Texas A&M University at
Galveston, TX*



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The National Science Foundation
wishes Scripps Institution of
Oceanography fair winds and
following seas as it begins
it's second century.

Scientific/Technical Program

Thursday, 3:40 PM - 5:20 PM
Room: Royal 1

Oceanographic Instrumentation II

Chair **Kim McCoy**, *Ocean Sensors, CA*

Time: 3:40 PM

Data from New Shallow Water ADCP 2521
Dr. Hening Huang, Dr. James R. Marsden, *RD Instruments, CA*

Time: 4:00 PM

A Newly Developed Wave Monitoring System on Ocean Platform 2522
Tetsuro Ikebuchi, Naoyuki Takatsu, Toshiyuki Kita, Norihito Okada, *Kawasaki Heavy Industries, LTD., Japan*
Wataru Koterayama, Masahiko Nakamura, *Research Institute for Applied Mechanics, Kyushu University, Japan*, Satoshi Fujii, Kenji Sato, *Okinawa Subtropical Environment Remote-Sensing Center, Communications Research Laboratory, Okinawa*

Time: 4:20 PM

Using Moored Buoy Observations to Assess and Improve a Circulation Model in Near-Real-Time 2530
Dr. Frank L. Bub, Dr. Charles W. Horton, Melody A. Clifford, Dennis Krynen, Richard Myrick
Naval Oceanographic Office, MS

Time: 4:40 PM

Five-Year Operation of the Oceanographic Research Vessel Mirai 2537
Chizuru Saito, Hiroyasu Momma, Shozo Tashiro, Katsura Shibata, *Japan Marine Science and Technology Center (JAMSTEC), Japan*



Thursday, 3:40 PM - 5:20 PM
Room: Royal 3

Ocean Science Education II

Co-Chairs **Dr. Cheryl Peach**, *Scripps UCSD, CA*
Dr. Sharon Walker, *Univ. of Southern Mississippi, MS*

Time: 3:40 PM

Education: A Vital Ingredient in Scientific Programmes - A Southern African Story 2540
B. Snow, *South African Institute for Aquatic Biodiversity, Coelacanth Programme, South Africa*

Time: 4:00 PM

Engaging Ocean Science Researchers in Informal Science Education 0
Shelley Glenn, Danielle Adler, *Birch Aquarium at Scripps Institution of Oceanography, CA*

Time: 4:20 PM

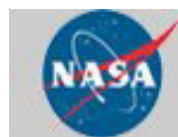
Bridging the Gap Between Ocean Science and Education: Creating Effective Partnerships Through Informal Educational Institutions 2544
Mr. Eric M. Solomon, Mr. Harry Helling, *Ocean Institute, CA*

Time: 4:40 PM

Ocean Scientists the Next Generation: Meeting the Changing Needs of Graduate Students 0
Dr. Paula G. Coble, Ms. Teresa Greely, Ms. Cynthia Leard, *University of South Florida, FL*

Time: 5:00 PM

Why Do We Have an Ocean?? 2545
Dr. Hal D. Palmer, *Veridian Systems Division, VA*



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AND SPACE ADMINISTRATION**

**The National Aeronautics and Space Administration
congratulates Scripps Institution of Oceanography's
many contributions to earth science.**

Scientific/Technical Program

Thursday, 3:40 PM - 5:20 PM

Room: Royal 4

Ocean Exploration Forum

Chair

Capt. Craig N. McLean

NOAA Office of Ocean Exploration, MD

Thursday, 3:40 PM - 5:20 PM

Room: Royal 6

Image Processing

Co-Chairs

Dr. Jack Lloyd

Coastal Systems Station, FL

Dr. Mahmood Azimi-Sadjadi

Colorado State Univ., CO

Time: 3:40 PM

On Reconstruction of 3-D Volumetric Models of Reefs and Benthic Structures from Image Sequences of a Stereo Rig 2553

Mr. Hongsheng Zhang, Prof. Shahriar Negahdaripour
University of Miami, FL

Time: 4:00 PM

Detection of Small Targets in Ocean Wave Clutter Using Panchromatic Time Series Imagery 2560

Dr. John P. Dugan, Ms. Cynthia C. Piotrowski, Mr. David C. Campion, Arete Associates, VA

Time: 4:20 PM

A Feasibility Study of Using Color Indexing for Reef Fish Identification 2566

Prof. Hsin-Hung Chen, Inst. of Undersea Technology,
National Sun Yat-sen University, Taiwan

Time: 4:40 PM

An Integrated Vision-Based Positioning System for Video Stabilization and Accurate Local Navigation and Terrain Mapping 2567

Miss Caroline Barufaldi, Mr. Pezhman Firoozfam, Prof. Shahriar Negahdaripour, University of Miami, FL

Thursday, 3:30 PM - 5:30 PM

Room: Sunset

Oceanographic Buoy Systems

Chair

Dr. Walter Paul, WHOI, MA

Time: 3:40 PM

Dynamic Modeling and Actual Performance of the MOOS Test Mooring 2574

J. Andrew Hamilton, Mark Chaffey, Ed Mellinger, Jon Erickson, Lance McBride, MBARI, CA

Time: 4:00 PM

Transition of the Deep-ocean Assessment and Reporting of Tsunamis Network – A Technology Transfer from NOAA Research to NOAA Operations 2582

B. Taft, L. Bernard, C. Teng, K. O'Neil, C. Demers, NOAA/NDBC Stennis Space Center, MS, C. Meinig, S. Stalin, M. Eble, NOAA/PMEL, WA

Time: 4:20 PM

Telemetry Environmental Monitoring Buoy and Mooring 2589

J.D. Irish, D.W. Fredriksson, WHOI, MA

Time: 4:40 PM

The GoMOOS Moored Buoy Design 2596

Mr. John P. Wallinga, Dr. Neal R. Pettigrew, University of Maine, ME



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Kobe, Japan

November 9-12, 2004

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Oceans 2005

Washington, DC

September 19-23, 2005

Scientific/Technical Program

Thursday, 3:40 PM - 5:20 PM
Room: Sheffield

Data Acquisition and Storage

Co-Chairs

Dr. Roger Richards, *NUWC, RI*
Kim C. Benjamin, *NUWC, RI*

Time: 3:40 PM

Fine-Spatial-Scale Measurement of the Mid-Frequency (1 kHz-10 kHz) Ocean Noise

Field with a Vertical Billboard Array 2600

Dr. Gerald Lynden D'Spain, Jeff Skinner, Greg Edmonds,
William S. Hodgkiss, David Ensberg, Richard A. Harriss,
*Marine Physical Lab, Scripps Institution of
Oceanography, CA*

Time: 4:00 PM

A High Speed Acoustic Data Acquisition System Using Mostly COTS Components 2601

Jeffrey D. Skinner, Gregory L. Edmonds, David E. Ensberg,
Gerald L. D'Spain, William S. Hodgkiss
*Scripps Institution of Oceanography/Marine Physical
Laboratory, CA*

Time: 4:20 PM

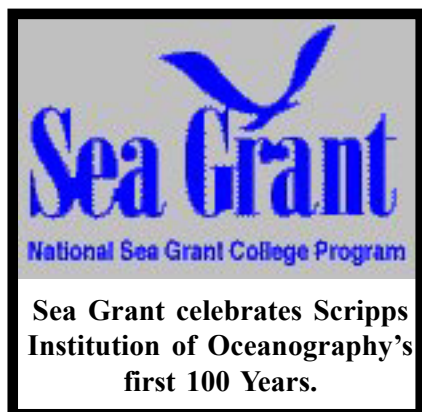
The ONR Five Octave Research Array (FORA) at Penn State 2607

Dr. Kyle M. Becker, Dr. John R. Preston, *The Pennsylvania
State University/Applied Research Lab., PA*

Time: 4:40 PM

A 16-Element Autonomous Receiving Array 2611

Dr. William S. Hodgkiss, Mr. Jeffrey D. Skinner, Mr. Richard
A. Harriss, *Scripps Institution of Oceanography/Marine
Physical Laboratory, CA*



Thursday, 3:40 PM - 5:20 PM
Room: Windsor

SAS Focusing II

Co-Chairs

Dr. Kerry Commander
Coastal Systems Station, FL
Dr. Marc Pinto, *NATO, Italy*

Time: 3:40 PM

3-D Acoustic Imaging of

Broadband SAS Data 2615

Dr. JoEllen Wilbur, Mr. James Christoff, Mr. Daniel Cook,
Coastal Systems Station, Dahlgren Division, NSWC, FL

Time: 4:00 PM

Contrast Optimisation of Coherent Images 2622

Steven A. Fortune, Dr. Michael Hayes, Prof. Peter Gough,
*Acoustics Research Group, University of Canterbury,
New Zealand*

Time: 4:20 PM

Simulation of Multiple-Receiver Broadband

Interferometric SAS Imagery 2629

Mr. Alan J. Hunter, Dr. Michael P. Hayes, Prof. Peter T.
Gough, *Acoustics Research Group, University of
Canterbury, New Zealand*

Time: 4:40 PM

Statistics of Synthetic Aperture

Sonar Images 2635

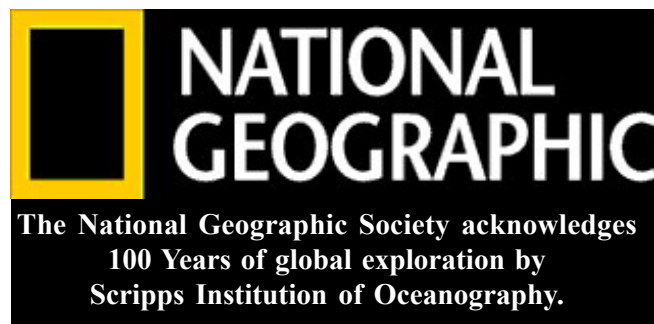
Prof. Alfred Hanssen, Mr. Jonas Kongsli, *University of
Tromsø, Norway*, Dr. Roy Edgar Hansen, *Norwegian
Defence Research Establishment, Norway*, Sean Chapman
QinetiQ, UK

Time: 5:00 PM

Blind Separation of Signal and Multipath Interference for Synthetic

Aperture Sonar 2641

Ivars P. Kirsteins, *Naval Undersea Warfare Center, RI*



Scientific/Technical Program

Thursday, 3:40 PM - 5:20 PM
Room: Garden 1

UUV Control II
Co-Chairs

Claude Brancart, *Next Fish, ME*
Barbera Fletcher
SPAWARSSYSCEN San Diego, CA

Time: 3:40 PM

An Optimal Control for Multiple Unmanned Underwater Crawling Vehicles 2649
Dr. Kwang-Hwa Lee, *Coastal Systems Station, FL*

Time: 4:00 PM

Hybrid Simulation of a Distributed Control System for the "C-Scout" Autonomous Underwater Vehicle (AUV) 2650
Steve Taylor, Dr. Neil Bose, Dr. Siu O'Young
Memorial University of Newfoundland, Canada

Time: 4:20 PM

Autotracker: AUV Embedded Control Architecture for Autonomous Pipeline and Cable Tracking 2651
Dr. Jonathan Evans, Dr. Yvan Petillot, Paul Redmond, Prof. David Lane, *Heriot-Watt University, United Kingdom*

Time: 4:40 PM

Multivariable Optimal Control of an Autonomous Underwater Vehicle for Steering and Diving Control in Variable Speed 2659
Bong-Hwan Jeon, Pan-Mook Lee, Ji-Hong Li, Seok-Won Hong, Yeon-Gyu Kim, *Korea Research Institute of Ships & Ocean Engineering, KORDI, Republic of Korea*, Jihong Lee, *Chungnam National University, Republic of Korea*



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Thursday, 3:40 PM - 5:20 PM
Room: Garden 2

Human Powered Submarines

Chair **Dr. Nip Shah**, *United Technologies, CA*

Time: 3:40 PM

Human Powered Submarine Propeller Design 2665
Brian Ellis, Daniel Wacholder, *University of California, CA*

Time: 4:00 PM

Human Powered Submarine Hull Design 2671
Soren Harrison, Gregory Burton, *University of California, CA*

Time: 4:20 PM

Human Powered Submarine Hull Construction 2674
Soren Harrison, Gregory Burton, *University of California, CA*

Time: 4:40 PM

Manufacturing Processes of Composite Materials for a Human-Powered Submarine 2678
A.J. Maisano, *Virginia Polytechnic Institute and State University, VA*

Time: 5:00 PM

Manned Submersible Technology: Opening the Ocean to Scientific Study 2682
Mr. William Kohnen, *SEAmagine Hydrospace Corporation, CA*

