

## 6th International Symposium on Technology and the Mine Problem

### AGENDA

| Day             | #    | Session/Chair            | Time          | Place           | Speaker   | Topic   |
|-----------------|------|--------------------------|---------------|-----------------|---|---|
| Sun.,<br>May 9  |      | Registration & Reception | 1630-<br>1830 | Hilton Hotel    |   |   |
| Mon.,<br>May 10 |      | <b>PLENARY SESSION</b>   |               |                 |   |   |
|                 |      | Registration             | 630           | King Hall       |   |   |
|                 |      | Continental Breakfast    | 700           | King Hall       |   |   |
|                 | MP-1 |                          | 755           | King Hall       | • RADM John D. Pearson, USN (Ret), NPS Faculty Chair of Mine Warfare  | • Call to Order   |
|                 | MP-2 |                          | 800           | King Hall       | • CAPT George Clifford, CHC, USN, Naval Postgraduate School (NPS) Chaplin   | • Invocation  |
|                 |      |                          | 805           | King Hall       | • RDML Patrick Dunne, USN, NPS Superintendent   | • NPS Welcoming Remarks   |
|                 | MP-3 |                          | 815           | King Hall       | • Dr. Frank Cremer, VUB   | • Belgium Eudem-2 Conference  |
|                 |      |                          |               |                 | • RADM John D. Pearson, USN (Ret), NPS Faculty Chair of Mine Warfare  | • The Third Joint Australian/American Conference                    |
|                 | MP-4 |                          | 845           | King Hall       | • Fenner A. Milton, Director U.S. Army Night Vision and Electronic Support Division (NVEDS) (Army Mine/Countermeasure Programs) | • Army Countermine Technology Strategy                              |
|                 |      |                          | 915           | King Hall       | • Dr. Douglas Todoroff, Office of Naval Research (ONR)  | • Office of Naval Research  |
|                 |      | Break                    | 945           | King Hall       |   |   |
|                 | MP-5 |                          | 1015          | King Hall       | • Dr. David Heberlein, Institute for Defense Analysis   | • Marine Corps Countermine Technology Initiatives                   |
|                 | MP-6 |                          | 1045          | King Hall       | • Jim Thomsen, Deputy, Program Executive Officer, Littoral & Mine Warfare (PEO LMW)   | • PEO LMW perspective   |
|                 | MP-7 |                          | 1115          | King Hall       | • Dr. David Skinner, Littoral Product Area Director, Naval Surface Warfare Center (NSWC)  | • Littoral Combat Ship (LCS) and the Future of Mine Countermeasures |
|                 | MP-8 | Lunch                    | 1145          | McNitt Ballroom | • Dr. Chester McKinney, Director Emeritus, APL, University of Texas   | • Comments on the Evolution of Mine Hunting                         |

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|-----------------|------|---|------|---------------|--|---|
| Mon.,<br>May 10 |      | <b>TECHNICAL SESSIONS</b> 1-<br>4:30pm with a refreshment<br>break from 2:30-3:00pm |      |               |  |   |
|                 | MT-1 | Government-Industry Panel<br><br>• RADM Charles F. Horne, USN<br>(Ret)              |      | Spanagel 101A | • To be announced  | • Issues in Naval Mine Warfare Programs   |
|                 | MT-2 | Tactical Decision Aids and<br>Analytical Issues<br><br>• Alan Washburn, NPS         |      | ME Auditorium | • Craig Swanson, SAIC<br>• Michael McCurdy, Hammajang<br>Software                | • Mine Warfare and Environmental Decision Aids<br>Library (MEDAL)<br><br>• An Extension of Naval Minesweeping Risk Theory |
|                 |      | • David Taylor, CNA   |      |               | • Scott Savitz, Center for Naval<br>Analyses                                     | • Mines in the Falklands: CAPTMEIN Analysis of<br>the Potential Impact of Mines in a Regional<br>Conflict                 |
|                 |      |   |      |               | • R. Reynolds Monach, Daniel H.<br>Wagner Associates                             | • Intelligence Based Clearance/Risk Evaluation<br>Module (IBEM)   |
|                 | MT-3 | An Enabling System of<br>Systems for Ship to Objective<br>Maneuver (STOM)           |      | King Hall     | • LtCol Philip Salinas, USMC   | System of Systems Approach to Enabling Ship to<br>Objective Maneuver  |
|                 |      | • Thomas Swean, ONR   |      |               | • Ned Witherspoon, Naval Surface<br>Warfare Center, Panama City, FL<br>(NSWC PC) | • Overhead Surveillance and Reconnaissance<br>Systems Development   |
|                 |      |   |      |               | • CAPT Thomas Green, USN,<br>Program Manager for EOD Systems<br>( PMS-EOD)       | • Emerging Concepts of Operations for Small<br>UUVS in the US Navy: Current and Future Fleet<br>Applications              |
|                 |      |   |      |               | • Dr. Thomas Swean, ONR  | • UUV Technology Development at ONR in<br>Support of Undersea Mine Reconnaissance and<br>Neutralization                   |
|                 |      |   |      |               | • CAPT Tom Davilli, USN (Ret),<br>SAIC   | • Fusing the Capabilities for the Breaching Family<br>of Systems  |
|                 |      |   |      |               | • Larry Kinsey, NSWC-PC  | • Deployable Differential Global Positioning<br>System Providing Enhanced Position Accuracy in<br>Mine Warfare            |
|                 |      |   |      |               | • Brian Almquist, ONR  | • Standoff Neutralization of Mines and Obstacles<br>to Support Ship-to-Objective Maneuver                                 |
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|-----------------|------|---|-----------|-----------------|---|---|
| Mon.,<br>May 10 | MT-4 | <b>TECHNICAL SESSIONS</b>   |           |                 |   |   |
|                 |      | Electro-Magnetic Sensors  |           | Spanagel 231    | • Dr. Saul Altshuler, Physical Science Interests          | • Detection of Underwater Buried Mines  |
|                 |      | • Carey Rappaport, Northeastern University                          |           |                 | • Ted Clem, NSWC PC                                       | • Electromagnetic Sensors for Buried Minehunting  |
|                 |      |   |           |                 | • Dr. Stephen Billings,, Sky Research Inc.                | • The effect of the ground on a pulse-induction metal detector  |
|                 |      |   |           |                 | • Larry Stolarczyk, Stolar Horizon, Inc.                  | • Solving the Cleared Area Landmine Injury Problem with MEMS Sensor-Head Tracking and Imaging                     |
|                 |      |   |           |                 | • Jens Hjelmstad, Norwegian University                    | • UXO and Landmine Detection Using 3-Dimensional Ground Penetrating Radar System in a Network Centric Environment |
|                 |      |   |           |                 | • Carey Rappaport, Northeastern University                | • Modeling Radar Scattering from Body-Worn Improvised Explosive Devices   |
|                 | MT-5 | Biochemical/Chemical Sensors  |           | Spanagel 321    | • Greg Collins, NRL SSC                                   | • Explosives Detection in Seawater Using Lab-on-a-Chip or a Submersible Voltammetric Sensor                       |
|                 |      | • Ronald Woodfin, Baylor University, (Sandia National Lab, retired) |           |                 | • Dr. Hedi Mattoussi, NRL SSC                             | • Design of Quantum Dot Protein-Bioconjugate Nanosensors Based on Fluorescence Resonance Energy Transfer          |
|                 |      | • Angela Ervin, ONR   |           |                 | • Philip Rodacy, Sandia National Laboratories             | • Explosive Detection in the Marine Environment and On Land Using Ion Mobility Spectroscopy                       |
|                 |      |   |           |                 | • Rich Arrieta, SPAWAR Systems Center, San Diego (SSC SD) | • Development of Chemical Sensing and Plume Tracing of UXO Using Unmanned Undersea Vehicles                       |
|                 |      |   |           |                 | • Alfred Hanson, SubChem Systems, Inc.                    | • Detecting Chemical Explosives in Marine Waters with Chemical Sensors Deployed on Autonomous Underwater Vehicles |
|                 |      |   |           |                 |   |   |
|                 |      | MINWARA Reception   | 1830-2130 | Maritime Museum |   |   |
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|------------------|------|---|------|--------------|---|---|
| Tues.,<br>May 11 |      | <b>TECHNICAL SESSIONS</b>   |      |              |   |   |
|                  | TT-2 | Environment (Sea)   |      | King Hall    | <ul style="list-style-type: none"> <li>• Thomas Drake, ONR</li> </ul>                                       | <ul style="list-style-type: none"> <li>• The Office of Naval Research Mine Burial Prediction Program</li> </ul>   |
|                  |      | <ul style="list-style-type: none"> <li>• Dr. Herbert Eppert, Naval Research Laboratory, Stennis Space Center, MS (NRL SSC)</li> </ul> |      |              | <ul style="list-style-type: none"> <li>• Peter Chu, NPS</li> </ul>  | <ul style="list-style-type: none"> <li>• Development of the Navy's 3D Mine Impact Burial Prediction Model (IMPACT35)</li> </ul>                                 |
|                  |      | <ul style="list-style-type: none"> <li>• Peter Chu, NPS</li> </ul>  |      |              | <ul style="list-style-type: none"> <li>• Andrei Abelev, NRL SSC</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Risk assessment and implementation of impact burial prediction algorithms for detection of bottom sea mines</li> </ul> |
|                  |      | <ul style="list-style-type: none"> <li>• Edward Thornton, NPS</li> </ul>  |      |              | <ul style="list-style-type: none"> <li>• Grant Bower, NRL SSC</li> </ul>                                    | <ul style="list-style-type: none"> <li>• Mine Burial by Scour: Results from the Gulf of Mexico Experiments</li> </ul>   |
|                  |      |   |      |              | <ul style="list-style-type: none"> <li>• Peter Traykovski, Woods Hole Oceanographic Institute</li> </ul>    | <ul style="list-style-type: none"> <li>• Mine Burial Experiments at the Martha's Vineyard Coastal Observatory</li> </ul>  |
|                  |      |   |      |              | <ul style="list-style-type: none"> <li>• Michael Richardson, NRL SSC</li> </ul>                             | <ul style="list-style-type: none"> <li>• Real-Time Characterization of Mine Scour Burial at the Martha's Vineyard Coastal Observatory</li> </ul>                |
|                  | TT-3 | Optical Sensors   |      | Spanagel 231 | <ul style="list-style-type: none"> <li>• K. Todd Holland, NRL SSC</li> </ul>                                | <ul style="list-style-type: none"> <li>• Remote Characterization of Littoral Dynamics in Support of Expeditionary Warfare</li> </ul>                            |
|                  |      | <ul style="list-style-type: none"> <li>• R. Norris Keeler, Directed Technologies, Inc.</li> </ul>                                     |      |              | <ul style="list-style-type: none"> <li>• R. Norris Keeler, Directed Technologies, Inc.</li> </ul>           | <ul style="list-style-type: none"> <li>• Secchi Disc Measurements In Support of Isintek Multispectral Satellite Imagery</li> </ul>                              |
|                  |      | <ul style="list-style-type: none"> <li>• Ned Witherspoon, NSWC, PC</li> </ul>   |      |              | <ul style="list-style-type: none"> <li>• Steve Moran, Kaman Aerospace Corporation</li> </ul>                | ?   |
|                  |      |   |      |              | <ul style="list-style-type: none"> <li>• John McLean, Arete Associates</li> </ul>                           | ALMDS Design, Implementation, Performance   |
|                  |      |   |      |              | <ul style="list-style-type: none"> <li>• Michael Deweert, Science &amp; Technology International</li> </ul> | <ul style="list-style-type: none"> <li>• Adaptation of Mine Countermeasures Technologies for Port and Harbor Security Applications</li> </ul>                   |
|                  |      |   |      |              | <ul style="list-style-type: none"> <li>• Gary Gilbert, SPAWAR SYS CENTER - San Diego</li> </ul>             | <ul style="list-style-type: none"> <li>• Some observations and thoughts on the optics of mine detection</li> </ul>  |
|                  |      |   |      |              | <ul style="list-style-type: none"> <li>• Dr. John Hargrove, Science and Technology International</li> </ul> | <ul style="list-style-type: none"> <li>• Performance analysis of a multispectral system for mine detection in the littoral zone</li> </ul>                      |
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|-----------------|------|-------------------------------------|------|-----------------|---|---|
| Wed.,<br>May 12 |      | <b>PLENARY SESSION</b>              |      |                 |   |   |
|                 |      | Continental Breakfast               | 630  | King Hall       |   |   |
|                 |      | Registration                        | 630  | King Hall       |   |   |
|                 | WP-1 | Distinguished Paper                 | 730  | King Hall       | • Richard Rothschild, UC San Diego  | • Coded Aperture X-ray Backscatter Imager for Improved Explosive Device and Antipersonnel Landmine Detection  |
|                 | WP-2 | Distinguished Paper                 | 800  | King Hall       | • Gerald Dobeck, NSWC PC  | • Algorithm Fusion: the fusion of multiple mine detection & classification algorithms to reduce false alarms while maintaining a high probability of detection and classification |
|                 | WP-3 |                                     | 830  | King Hall       | • LTCOL Michael Micucci, USMC, 2nd Marine Division                                  | • Operation Iraqi Freedom, Landmine Experience  |
|                 | WP-4 |                                     | 900  | King Hall       | • ADM Walter F. Doran, USN, Commander, U.S. Pacific Fleet (COMPACFLT)               | • COMPACFLT Perspective   |
|                 |      | Break                               | 945  | King Hall       |   |   |
|                 | WP-5 |                                     | 1015 | King Hall       | • CAPT Mike Tillotson, USN, Commander, EOD Group One (COMEODGRUONE)                 | • Operation Iraqi Freedom, Sea Mine Experience  |
|                 | WP-6 |                                     | 1045 | King Hall       | • CAPT Randy Young, USN Chief of Staff, U.S. Navy Mine Warfare Command (MINEWARCOM) | • COMINEWARCOM Perspective  |
|                 | WP-7 | Distinguished Paper                 | 1115 | King Hall       | • Colin Cumming, Nomadics, Inc.   | • Applications of Ultra-Trace Chemical Detection of Explosives  |
|                 | WP-8 | Lunch                               | 1145 | McNitt Ballroom |   |   |
|                 |      |                                     |      |                 |   |   |
|                 |      | <b>TECHNICAL SESSIONS</b>           |      |                 |   |   |
|                 | WT-1 | Ft. Ord Remediation Site Field Trip | 1300 | Ft. Ord         | • Xavier Maruyama, NPS  | • BRAC Site Remediation Tour, Fort Ord  |
|                 |      | • Xavier Maruyama                   |      |                 |   |   |
|                 |      |                                     |      |                 |   |   |
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|-----------------|------|---|------|---------------|---|--|
| Wed.,<br>May 12 | WT-2 | <b>TECHNICAL SESSIONS</b><br>1:00-4:30pm with a<br>refreshment break from 2:30-<br>3:00pm |      |               |   |  |
|                 |      | Acoustic Sensors  |      | Spanagel 117  | <ul style="list-style-type: none"> <li>• Christopher Minto, QinetiQ</li> </ul>                                      | <ul style="list-style-type: none"> <li>• Practical Synthetic Aperture Sonar</li> </ul>   |
|                 |      | <ul style="list-style-type: none"> <li>• Nicholas Chotiros, ONR</li> </ul>                |      |               | <ul style="list-style-type: none"> <li>• Marc Parent, RD Instruments</li> </ul>                                     | <ul style="list-style-type: none"> <li>• A 3D Forward -Looking Imaging Sonar for Unmanned Underwater Vehicles</li> </ul>   |
|                 |      | <ul style="list-style-type: none"> <li>• Sam Richardson, NSWC, PC</li> </ul>              |      |               | <ul style="list-style-type: none"> <li>• Peter Chu, NPS</li> </ul>  | <ul style="list-style-type: none"> <li>• Uncertainty in Acoustic Mine Detection Due to Environmental Variability</li> </ul>  |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Marlin Gendron, NRL SSC</li> </ul>   | <ul style="list-style-type: none"> <li>• Automatic Change Detection and Classification (ACDC) System</li> </ul>  |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Steve Mitchell, APL, University of Texas</li> </ul>                        | <ul style="list-style-type: none"> <li>• High Resolution Bistatic and Monostatic Circular SAS Imaging at Search Frequencies</li> </ul>   |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Ruth Keenan, SAIC</li> </ul>   | <ul style="list-style-type: none"> <li>• On the Importance of Surface Reverberation for Mine-Hunting Sonar Predications</li> </ul>   |
|                 | WT-3 | Reconnaissance & Surveillance   |      | Spanagel 231  | <ul style="list-style-type: none"> <li>• Colin Cumming, Nomadics, Inc.</li> </ul>                                   | <ul style="list-style-type: none"> <li>• Minefield Area Reduction Using High Volume Air Sampling and Ultra-Trace Explosives Detection</li> </ul>                                 |
|                 |      | <ul style="list-style-type: none"> <li>• Charles Loeffler, University of Texas</li> </ul> |      |               | <ul style="list-style-type: none"> <li>• John Lathrop, NSWC PC</li> </ul>   | <ul style="list-style-type: none"> <li>• Sonar Detection of Targets Buried Under Seafloor Ripple at Extended Ranges</li> </ul>   |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Philippe Waquet, DCN</li> </ul>  | <ul style="list-style-type: none"> <li>• Mine Reconnaissance with SeaKeeper</li> </ul>   |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Bart Hoekstra, Parsons</li> </ul>  | <ul style="list-style-type: none"> <li>• Validation of Helicopter-Based Magnetic Survey at the Former Badlands Bombing Range</li> </ul>  |
|                 | WT-4 | Sensor Processing and Fusion  |      | ME Auditorium | <ul style="list-style-type: none"> <li>• Dr. Tom Aridgides, Lockheed Martin Maritime Systems and Sensors</li> </ul> | <ul style="list-style-type: none"> <li>• Improved Processing String Fusion Approach for Performance Evaluation for Automated Sea Mine Classification in Shallow Water</li> </ul> |
|                 |      | <ul style="list-style-type: none"> <li>• Gerald Dobeck, NSWC, PC</li> </ul>               |      |               | <ul style="list-style-type: none"> <li>• Charles Ciany, Raytheon Company</li> </ul>                                 | <ul style="list-style-type: none"> <li>• Fusion Algorithms for Computer Aided Detection and Classification of Bottom Mines in the Littoral Environment</li> </ul>                |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Michael Harris, NRL SSC</li> </ul>   | <ul style="list-style-type: none"> <li>• Environmental Data Collection, Sensor to Decision Aid</li> </ul>  |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• David Tillson, Environmental Geophysical Services</li> </ul>               | <ul style="list-style-type: none"> <li>• Landmine and UXO Classification Using Tomographic Imaging and an Advanced 3D-Radar Array System</li> </ul>                              |
|                 |      |   |      |               | <ul style="list-style-type: none"> <li>• Jing Zhang, University of Melbourne</li> </ul>                             | <ul style="list-style-type: none"> <li>• 4-D GPR Image Based on FDTD Parallel Technique</li> </ul>   |
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|-----------------|------|---|------|--------------|--|--|
| Wed.,<br>May 12 | WT-5 | <b>TECHNICAL SESSIONS</b>   |      |              |  |  |
|                 |      | Mine Burial (Sea)   |      | Spanagel 321 | <ul style="list-style-type: none"> <li>• Art Trembanis, Virginia Institute of Marine Science</li> </ul>  | <ul style="list-style-type: none"> <li>• Real-Time Forecasts of Mine Scour Burial at Indian Rocks Beach, Florida and Martha's Vineyard, Massachusetts</li> </ul>                                 |
|                 |      | <ul style="list-style-type: none"> <li>• Dr. Herbert Eppert, Naval Research Laboratory, Stennis Space Center, MS (NRL SSC)</li> </ul> |      |              | <ul style="list-style-type: none"> <li>• Sarah Rennie, Johns Hopkins Applied Physics Lab</li> </ul>  | <ul style="list-style-type: none"> <li>• Utilization of an Expert System for Predicting Mine Burial</li> </ul>   |
|                 |      | <ul style="list-style-type: none"> <li>• Peter Chu, NPS</li> </ul>  |      |              | <ul style="list-style-type: none"> <li>• Paul Elmore, NRL SSC</li> </ul>   | <ul style="list-style-type: none"> <li>• Regional Mine Burial Prediction Using Monte Carlo and Deterministic Methods</li> </ul>  |
|                 |      | <ul style="list-style-type: none"> <li>• Edward Thornton, NPS</li> </ul>  |      |              | <ul style="list-style-type: none"> <li>• Maria Kalcic, NRL SSC</li> </ul>  | <ul style="list-style-type: none"> <li>• Textural segmentation of high -resolution sidescan sonar images</li> </ul>  |
|                 |      |   |      |              | <ul style="list-style-type: none"> <li>• Luigi Alcaro, Italian Central Institute for Scientific and Technological Research Applied to the Sea (ICRAM)</li> </ul> | <ul style="list-style-type: none"> <li>• Assessment of Environmental Threats of Conventional and Chemical Unexploded Ordnance Dumped in the Southern Adriatic Sea (Mediterranean Sea)</li> </ul> |
|                 |      |   |      |              | <ul style="list-style-type: none"> <li>• Randall Maurer, SAIC</li> </ul>   | <ul style="list-style-type: none"> <li>• Environmental Segmentation Techniques in Support of Countermine Operations Effectiveness Assessment</li> </ul>  |
|                 | WT-6 | Robotics Applications   |      | King Hall    | <ul style="list-style-type: none"> <li>• Brett Hobson, Nekton Research</li> </ul>  | <ul style="list-style-type: none"> <li>• Free-Swimming MicroUUVs as Homing Torpedoes for Sea Mine Neutralization</li> </ul>  |
|                 |      | <ul style="list-style-type: none"> <li>• Dr. James Bellingham, Monterey Bay Aquarium Research Inst.</li> </ul>                        |      |              | <ul style="list-style-type: none"> <li>• Ian Gravagne, Baylor University</li> </ul>  | <ul style="list-style-type: none"> <li>• Now That I Have a Robot, What Do I Tell It To Do?</li> </ul>  |
|                 |      | <ul style="list-style-type: none"> <li>• Anthony Healey, NPS</li> </ul>   |      |              | <ul style="list-style-type: none"> <li>• Matthew Zucker, Bluefin Robotics</li> </ul>   | <ul style="list-style-type: none"> <li>• Implementing Payload-Assisted Control for MCM UUV Applications</li> </ul>   |
|                 |      |   |      |              | <ul style="list-style-type: none"> <li>• Per Espen Hagen, Norwegian Defense Research Establishment (FFI)</li> </ul>  | <ul style="list-style-type: none"> <li>• Robotic Applications/Field Experience</li> </ul>  |
|                 |      |   |      |              | <ul style="list-style-type: none"> <li>• Robert Metzger, EDO Marine &amp; Aircraft Systems</li> </ul>  | <ul style="list-style-type: none"> <li>• Demonstration of Mine Countermeasures Capability from an Unmanned Surface Vehicle (USV)</li> </ul>  |
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|------------------|-------|--|------|---------------|---|---|
| Thurs.,<br>May13 |       | Continental Breakfast  | 7 00 | King Hall     |   |   |
|                  |       | Registration   | 7 00 | King Hall     |   |   |
|                  |       | <b>TECHNICAL SESSIONS</b> 8:00-11:15 am with a refreshment break from 9:30-9:45am  |      |               |   |   |
|                  | ThT-1 | Site Remediation Issues  |      | Spanagel 101A | <ul style="list-style-type: none"> <li>• R. Preston Hawkins, NAEVA Geophysics, Inc.</li> </ul>              | <ul style="list-style-type: none"> <li>• Preliminary Evaluation of the Dual MK2 Sled for UXO Detection and Site Characterization</li> </ul>                             |
|                  |       | <ul style="list-style-type: none"> <li>• Christopher Penny, Naval Facilities Engineering Command, Atlantic Division (NAVFACENCEOM LANT)</li> </ul> |      |               | <ul style="list-style-type: none"> <li>• John Bowles, Environmental Chemical Corp.</li> </ul>               | <ul style="list-style-type: none"> <li>• Underwater Detection Capabilities: Lessons Learned At The Mare Island Naval Shipyard Site</li> </ul>                           |
|                  |       | <ul style="list-style-type: none"> <li>• Kenneth Stockwell, Parsons Infrastructure &amp; Technology</li> </ul>                                     |      |               | <ul style="list-style-type: none"> <li>• Brett Wiese, Parsons</li> </ul>                                    | <ul style="list-style-type: none"> <li>• A GIS-Based Conceptual Site Model for Munitions Response Project at Camp Howze, Texas</li> </ul>                               |
|                  |       |  |      |               | <ul style="list-style-type: none"> <li>• James Manthey, US Army Engineering and Support Center</li> </ul>   | <ul style="list-style-type: none"> <li>• Risk and Risk Management in Military Munitions Response</li> </ul>   |
|                  |       |  |      |               | <ul style="list-style-type: none"> <li>• John Tomik, CH2Mhill</li> </ul>                                    | <ul style="list-style-type: none"> <li>• An MEC Remedial Investigation and Explosives Safety Risk Assessment of An OB/OD Site in Vieques, Puerto Rico</li> </ul>        |
|                  | ThT-2 | Field Experience (Land)  |      | Spanagel 231  | <ul style="list-style-type: none"> <li>• Dr. Patrick W. Johnson, ZAI</li> </ul>                             | <ul style="list-style-type: none"> <li>• Stand Off Detection of Buried Anti-Personnel Landmines</li> </ul>  |
|                  |       | <ul style="list-style-type: none"> <li>• COL Dennis Barlow, USA (Ret), James Madison University</li> </ul>   |      |               | <ul style="list-style-type: none"> <li>• Vladimir Petrachenkov, Transimplex Corporation, Ukraine</li> </ul> | <ul style="list-style-type: none"> <li>• Humanitarian Landmine Detection and Elimination Methods</li> </ul>   |
|                  |       | <ul style="list-style-type: none"> <li>• Margaret Buse, James Madison University</li> </ul>  |      |               | <ul style="list-style-type: none"> <li>• Bart Hoekstra, Parsons</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Design and Implementation of a Geographic Information System for a UXO Characterization Project in a Populated Area</li> </ul> |
|                  |       |  |      |               | <ul style="list-style-type: none"> <li>• Colin Henderson, University of Montana- Missoula</li> </ul>        | <ul style="list-style-type: none"> <li>• Use of Trained Honey Bees as an Effective Tool for Rapid Quantitative Mapping of Buried Landmines</li> </ul>                   |
|                  |       |  |      |               | <ul style="list-style-type: none"> <li>• COL Dennis Barlow, USA (Ret), James Madison University</li> </ul>  | <ul style="list-style-type: none"> <li>• Mine Action Information Technology Support</li> </ul>  |
|                  |       |  |      |               | <ul style="list-style-type: none"> <li>• Paul Ellis, GICHD</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Questions about Liability Insurance</li> </ul>   |
|                  |       |  |      |               |   |   |
|                  |       |  |      |               |   |   |
|                  |       |  |      |               |   |   |

## 6th International Symposium on Technology and the Mine Problem

### AGENDA

| Day              | #     | Session/Chair   | Time | Place        | Speaker   | Topic  |
|------------------|-------|---|------|--------------|---|--|
| Thurs.,<br>May13 |       | <b>TECHNICAL SESSIONS</b>   |      |              |   |  |
|                  | ThT-3 | Biological/Biomimic Sensors   |      | King Hall    | <ul style="list-style-type: none"> <li>• Roger Quinn, Case Western Reserve University</li> </ul>                    | <ul style="list-style-type: none"> <li>• A Biologically Inspired System for Demining, UXO Site Remediation and National Security Missions</li> </ul>   |
|                  |       | <ul style="list-style-type: none"> <li>• Joseph Ayers, Northeastern University</li> </ul> |      |              | <ul style="list-style-type: none"> <li>• Patrick Moore, SSC SD</li> </ul>   | <ul style="list-style-type: none"> <li>• Off-Axis Target Detection by an Echolocating Bottlenosed Dolphin</li> </ul>   |
|                  |       | <ul style="list-style-type: none"> <li>• Patrick Moore, SSC SD</li> </ul>                 |      |              | <ul style="list-style-type: none"> <li>• Tom Pastore, SSC SD</li> </ul>   | <ul style="list-style-type: none"> <li>• Signal Processing Applied to the Dolphin-Based Sonar System</li> </ul>  |
|                  |       |   |      |              | <ul style="list-style-type: none"> <li>• Richard Hall, Space and Naval Warfare Systems Center, San Diego</li> </ul> | <ul style="list-style-type: none"> <li>• Overview of the U.S. Navy Marine Mammal Systems</li> </ul>  |
|                  | ThT-4 | Advanced Systems  |      | Spanagel 321 | <ul style="list-style-type: none"> <li>• Bagdan Maglich, HiEnergy Technologies, Inc.</li> </ul>                     | <ul style="list-style-type: none"> <li>• Results of Open-Air Field Trials on Stoichiometric (Models 3B2 and 3ATS) Identification of UXO Fillers and Buried AT landmines using Portable Non-Pulsed Non-Directed Fast-Neutron</li> </ul> |
|                  |       | <ul style="list-style-type: none"> <li>• tbd</li> </ul>                                   |      |              | <ul style="list-style-type: none"> <li>• Terry Northcutt, Timberline Environmental Services</li> </ul>              | <ul style="list-style-type: none"> <li>• Development and Demonstration of Ordnance Shredder</li> </ul>   |
|                  |       |   |      |              | <ul style="list-style-type: none"> <li>• Alan Crandall, USA Environmental, Inc.</li> </ul>                          | <ul style="list-style-type: none"> <li>• Range Master, A Remote Excavator for Heavily Contaminated UXO sites</li> </ul>  |
|                  |       |   |      |              | <ul style="list-style-type: none"> <li>• John Crawford, R.S.T.</li> </ul>   | <ul style="list-style-type: none"> <li>• The Detection of Land-Mine Trip Wires by Radar Techniques</li> </ul>  |
|                  |       | <b>PLENARY SESSION</b>  |      |              |   |  |
|                  |       | Wrap-Up   | 1115 | King Hall    |   |  |