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MINE LINES

TOPICS IN THE ART OF MINE WARFARE

Awareness Precedes Preparedness

Vol. 2, No.4 December,1995

Published at the U.S. Naval Postgraduate School, Monterey, CA 93943 in association with the Mine Warfare Association
"To Enhance Communication about Mine Warfare"

ANNOUNCEMENT AND CALL FOR PAPERS (ABSTRACTS)

SYMPOSIUM: TECHNOLOGY AND THE MINE PROBLEM Mine Design, Mine Countermeasures, Humanitarian Demining

November 18-22, 1996

U. S. Naval Postgraduate School, Monterey, California

With sponsorship from the Office of Naval Research, and with the cooperation of Department of Defense and Military Department agencies that are concerned with all aspects of the Mine Problem, the Naval Postgraduate School announces a major Technical Symposium to identify the challenges and opportunities for the application of emergent technologies. This Symposium is a more inclusive sequel to the Symposium on Autonomous Vehicles in Mine Countermeasures that was held at the Naval Postgraduate School in April, 1995.

As with the earlier Symposium there will be exploration of the technologically - driven paradigm shifts in dealing with mines in both military and humanitarian contexts. This exploration will include technical "best practice" in dealing with many variants of the problem of handling hazardous wastes and responding to technological disasters or terrorist events.

Intended Audience. Individuals and organizations that are concerned with technology applications, development of technology and operational approaches (including physics-based analytical and simulation methodologies), formulation of military, national, and international policy regarding the use, traffic (control of proliferation), containment, and disposal of mines and mine-like objects and obstacles. The symposium will provide opportunity for users and vendors to exchange ideas and for academic and industrial R&D personnel to obtain familiarity with the many aspects of the Mine Problem.

General Plan and Format of the Symposium. The five-day symposium program allows for subject-specific workshop sessions to be conducted in parallel on Nov. 18, 1996, and on Nov. 22, 1996. The middle dates, Nov. 19-21, 1996, will feature UNCLASSIFIED, plenary sessions in sequence that address the major components (vehicles, sensors, etc.) that make up mine or counter-mine systems. Initial sessions on requirements and needs and on the developing mine threats help pose the technical problems and define the land and sea environments. In each session there will be a mix of invited and contributed papers, selected by the session chair to illustrate both the challenge and the technological opportunities. A modest registration fee will cover the overhead costs of the symposium plus session meals and refreshments. The Symposium Proceedings will be furnished to each attendee.

Contributions relating to the following topics are appropriate:

- A. Vehicle Systems: Existing sea, land, and air systems, Semi- or fully autonomous land, sea, and air platforms for mining or mine countermeasures missions;
- B. Power Plants: Off-board, Air-breathing, electrical, chemical, computation of energy budgets. Both propulsion uses and mission payloads are appropriate topics.
- C. Sensors: Acoustic, Magnetic, UEP, Optical, Radar and Microwave, Tactile, Nuclear, Biological, Sensor Fusion, Machine Vision, and Image Enhancement approaches to detection and classification. Applications to surveillance, reconnaissance, and detection of individual mines are appropriate subjects.
- D. Mission Packages. Marking, Classification, Destructive, Removal, systems integration. Work packages for mines and/or obstacles are appropriate topics. Also in this general category are subjects related to "self-protection" such as degaussing, signature-reduction, object-avoidance, or projected pulse techniques. Platform - related mine-hunting and/or influence minesweeping systems under development are appropriate topics under this category. Land, sea, and air platform applications are appropriate.
- E. Control. Control systems for individual units and ensembles of units, Navigation, Obstacle avoidance and obstacle reporting, Operator Interfaces, Applications of Virtual Reality.
- F. Operations Research, Tactics, C4I: Tactical information nets, Campaign Analyses, Tactical Analyses, Simulation and Trade-off Methodologies, Distributed Simulation and Virtual Reality Applications, Operational Test and Evaluation.
- G. Environments: Research Methodologies and Instrumentation Packages for characterizing the many land-types and sea and beach environmental niches. These characterizations must be related to the missions of countering mines and mine-like objects and obstacles.
- H. Education and Training about the Mine Problem: Case studies on the effectiveness of problem awareness approaches for policy levels, practitioners, and the general public; Distance learning applications.

Product, Technology, and Capabilities Displays. Facilities for display are somewhat limited. Organizations wishing to provide displays should indicate their requirements in writing by the dates indicated for submittal of abstracts.

Contributions are requested. Acceptance for presentation will be based on a review of an abstract OF 500 WORDS IN LENGTH. Abstracts should be mailed or faxed on or before March 1, 1996. Authors will be notified of acceptance by May 1, 1996. Camera-ready full papers are due October 1, 1996, in the IEEE format.

The Symposium Hosts and Sponsors are deliberately looking for contributions from and participation by individuals in industry and academe who are not necessarily involved in military R&D. The premise is that there are many investigators and vendors who are following paths of relevance to the Mine Problem but who do not understand the needs and potential application opportunities. Similarly, individuals in the military systems acquisition organizations may not be familiar with the investigators who are working on problems related to those of Mine Warfare.

Communications. Abstracts and requests for information should be sent to

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FIRST REGIONAL WORKSHOP AN OUTSTANDING SUCCESS

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FIRST ANNUAL MEETINGLIFE MEMBERSHIP NOW
\$250 - PAYABLE IN
INSTALLMENTSMINWARA SETS A GOAL:
1000 MEMBERS IN CY '96
CHUCK HORNE BREATHES FIRE AND
LIFE INTO MEMBERSHIP DRIVE

The adjective that describes the First Annual Meeting of MINWARA is enthusiasm. This enthusiasm is coupled with a real sense of urgency and mission. Pat Warren and RADM Charles Horne, USN (Ret), are leading the membership drive; but it is incumbent upon all present members to become active recruiters. We urge all recipients of MINE LINES to join MINWARA help us develop programs, regional activities, and outreach.

Chuck Horne's suggestion that Life Membership be available for \$250 and that installment payment be accepted from all present Active Members was unanimously adopted by the Board of Directors as was the suggestion that MINWARA prepare a brochure summarizing its goals and joining information.

The mailing address for MINWARA has been changed to P.O. Box 185, Newington, VA 22122-0185 for greater convenience for the Sec.-Treas., [Dr. Joe Molitoris](#).

The Provisional Officers and Directors were confirmed for two year terms.

BUILDING THE MINWARA
MEMBERSHIP: A PLAN FOR
EXECUTIONBOSNIA PROVIDES JUST ONE MORE
EXAMPLE OF THE URGENCY OF THE
MINE/COUNTERMINE PROBLEMMINWARA CAN PLAY A VITAL ROLE
IN EDUCATION, IN DEVELOPING A
SUPPORT BASE, AND IN IDENTIFYING R&D OPPORTNITIES

The bottom line about our efforts to build understanding of and capabilities in mine countermeasures/countermine activities is to reduce the risks to our young men and women from mines, wherever mines may be encountered! It is also a U.S. National Objective to lead in the technological solution to the world-wide scourge of mines through approaches to Humanitarian Demining.

Your membership and support in MINWARA can help assure the level and stability of funding for programs that will accomplish these goals.

The Membership Plan for Execution is simple. Every member, every person who reads MINE LINES,

recruit 1, 5, 10, or more members. A detachable brochure and membership form is enclosed in this edition. Reproduce it and use it. Those who sponsor Life Members will receive public recognition. ADM Horne sponsored the first Life Member, CAPT (Select) Terry Briggs, USN.

LET'S GET WITH THE PROGRAM

MINE WARFARE ASSOCIATION (MINWARA)
 First Regional Meeting, Alexandria, VA
 Nov. 3, 1995

The Center for Naval Analyses (CNA) provided the site for the First Regional Meeting of MINWARA. The there that emerged from the Workshop was "seamlessness". Seamlessness is the challenge as we develop tactics and techniques that exploit the complementary capabilities of the mine countermeasures "system of systems". Seamlessness refers to moving successfully from littoral waters, through the surf and beach zones, to link up with land maneuver elements. It is necessary to be able to counter both mines (all types) and obstacles.

After a welcome from The Honorable Robert Murray, President of CNA and Former Undersecretary of the Navy, a series of distinguished speakers was introduced by RADM Charles Horne, USN (Ret), former COMINEWARCOM. The challenges facing Navy-Marine Corps operational commanders (and hence those responsible for acquisition and R&D programs) were articulated forcefully and succinctly by LT. GEN. Charles E. Wilhelm, USMC, Commanding General, Fleet Marine Force Atlantic, and by RADM John D. Pearson, USN, Commander of the U.S. Navy Mine Warfare Command. These are the users that the rest of the acquisition and R&D communities are supporting.

For the Navy-Marine Corps Team, the Director of Expeditionary Warfare (N-85) in the Office of the Chief of Naval Operations is the spokesman for the policies that support "operational maneuver from the sea". This is the strategic and tactical doctrine that demands seamlessness and demands the full panoply of tools and techniques that make up the mine countermeasures system of systems. MAJ. GEN. xxxxx Jones, USMC, reviewed these needs and the considerable progress that is being made in provisioning and equipping the forces.

Although the Marine Corps draws upon U.S. Army development and acquisition programs for much of its land combat equipment, the overall responsibility for acquisition of Mine Warfare - related items falls on RADM Richard D. Williams, III, USN, Program Executive Officer Mine Warfare. ADM Williams reviewed the progress that has been made under his leadership as the first PEO-Mine Warfare.

In summary, problems are recognized. Solutions are being worked. Operational and support organizational lines have been streamlined and made functional. The mood is up-beat provided we can maintain level and stability of funding and personnel resources. That is, of course, far from certain.

The morning session was followed by a series of shorter papers and presentations on topics ranging from research into the littoral environments, remote sensing, an outline of the extensive modeling and simulation activities at the Navy's Coastal Systems Station (Panama City) by Dr. Elon Moritz, and a note to industrial participants that the Navy-Marine Corps are challenging to do business with (MAJ GEN Ron Beckwith, USMC (Ret)).

Readers desiring additional details of the program or copies of material should contact the event organizer, Dr. Joseph J. Molitoris, CNA, and Secretary-Treasurer of MINWARA. On behalf of all attendees and of MINWARA, hearty thanks and a well done are extended to Joe Molitoris for organizing this excellent program. MINWARA is off to a good start.

The next regional workshop for MINWARA will be in the Northern Virginia area on March 22, 1996. MINWARA members will receive announcements in the mail. Others should contact Dr. Molitoris. We hope to have substantial Army-Marine Corps focus on the approaches to land warfare countermine and Humanitarian Demining.

Note also the Announcement and Call for Papers for the November 18-22, 1996, Symposium on The Mine Problem covered in this issue of MINE LINES.

REQUEST FOR ASSISTANCE AND CORPORATE SPONSORSHIP

If corporate sponsorship can be obtained to help meet the event cost, MINWARA plans to arrange a buffet-reception at the Monterey Bay Aquarium on the evening of Nov. 18, 1996. This event will not be included in the Registration fee for the Naval Postgraduate School Symposium.

Corporate sponsors will have opportunity for recognition in the publicity of the registration details and in the Symposium Program. There is also opportunity for display of promotional material at the Aquarium during the reception.

A sponsor's brochure is in preparation. Please contact Prof. Albert M. Bottoms, Ellis A. Johnson Chair of Mine Warfare, Naval Postgraduate School at the addresses shown in the Symposium Announcement.

Minwara WWW Administrator

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