

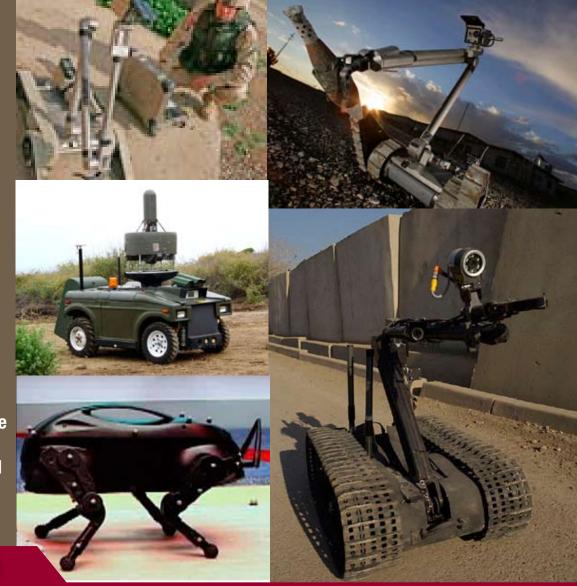
# 2 GROUND ROBOTICS CAPABILITIES

# CONFERENCE & EXHIBITION

"Into the Hands of the Warfighter"

THE PREMIER **FORUM DEVOTED EXCLUSIVELY TO UNMANNED GROUND SYSTEMS AND** TECHNOLOGIES.....

- **Hear from an impressive** array of speakers from throughout the unmanned ground systems community
- **Network with** decision makers within the federal government, industry and academia
- Participate in your choice of sessions designed to map future unmanned systems development paths



March 3 - 6, 2008 San Antonio, TX http://www.ndia.org/meetings/8380



### **CONFERENCE OBJECTIVE**

The purpose of this conference is to bring together warfighters and homeland security users, technology developers (govern and acquisition professionals to address increased responsiveness to user's needs. This conference will also provide a forum for ideas and methodologies to provide U.S. forces with unmanned ground technologies. The conference is intended to foster creat series of panels and speakers will present a wide array of thought provoking insights from diverse perspectives. Multiple focuse participants the opportunity to identify critical issues and needs, and develop practical steps for a path forward to resolve these



ment, industry and academia), or the exchange of information, tive "out of the box" thinking. A ed breakout sessions will afford issues.

### **WHO SHOULD ATTEND?**

### **OPERATIONAL**

- Tactical Users
- Requirements Generators
- Concepts Developers
- Trainers
- Logisticians

### **TECHNOLOGY**

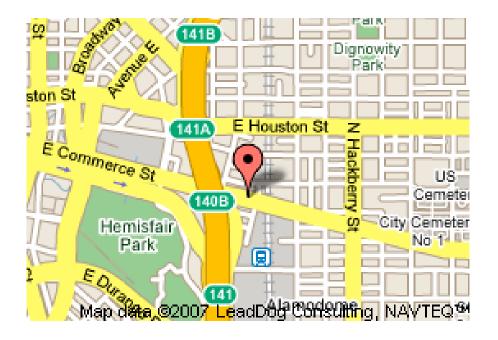
- Government laboratories, Industry and Academia focused on unmanned ground systems.
- Developers of peripheral technologies (power, controllers, manipulators, tools, sensors, miniaturization, etc.).



# 2008 GROUND ROBOTICS CAPABILITIES CONFERENCE & EXHIBITION

MARCH 3 - 6, 2008 GRAND HYATT SAN ANTONIO

Situated on the banks of the Riverwalk, the new Grand Hyatt San Antonio hotel presents contemporary style and an entirely new level of comfort, luxury and convenience among San Antonio hotels. The Grand Hyatt is adjacent to the San Antonio Convention Center and provides stunning views of downtown San Antonio and HemisFair Park.



### SAN ANTONIO, TX

# OTHER LOCAL POINTS OF INTEREST

Henry B. Gonzalez Convention Center—Adjacent to the Grand Hyatt Hotel

River Walk (Paseo Del Rio) — Adjacent to the hotel

HemisFair Park-1 block from the hotel

IMAX Theater—1 block from the hotel

Shops at La Villita Arts Village — 1 block from the hotel

River Center Mall—1 block from the hotel

The Alamo - 3 blocks from the hotel

Market Square (El Mercado) – ½ mile from the hotel

AT&T Center—2 miles from the hotel

San Antonio Zoo-4 miles from the hotel

Fiesta Texas—15 miles from the hotel

Sea World®—15 miles from the hotel

### **ABOUT NDIA**

### **NDIA'S VISION**

America's leading Defense Industry association promoting National Security

### **NDIA'S MISSION**

ADVOCATE: Cutting-edge technology and superior weapons, equipment, training, and support for the War-Fighter and First Responder

PROMOTE: A vigorous, responsive, Government – Industry National Security Team

PROVIDE: A legal and ethical forum for exchange of information between Industry and Government on National Security issues

### **NDIA'S MOTTO**

Strength through Industry and Technology

NDIA provides its members and customers broad outreach and sector coverage through its chapters, technical, policy, and war-fighting divisions, and the complimentary missions of its affiliate



### DOD APPROVAL

The Department of Defense finds this event meets the minimum regulatory standards for attendance by DoD employees. This finding does not constitute a blanket approval or endorsement for attendance. Individual DoD Components commands or organizations are responsible for approving attendance of DoD employees based on mission requirements and DoD regulations.





# WORKING GROUP DESCRIPTIONS

### **WORKING GROUP B:**

### SMALL BUSINESS ISSUES:

A continuing area of concern among small businesses is how to become involved in the DoD acquisition process. The focus of this break out session will be to identify the key issues faced by small, non-traditional businesses and develop courses of action for both industry and the government to overcome these issues.

### **WORKING GROUP C:**

### TECHNOLOGY "LONGPOLES":

The successful demonstration of first generation ground robots in defense and commercial applications has been witnessed by all. As these amazing vehicles are tasked to do more, this session will identify what the next level of robotic performance should be, especially in the areas of affordability, R&M, and manufacturability, what technologies will need to be developed to achieve this level of performance, and what steps need to be taken to develop the technology.

# WORKING GROUP D: GROUND ROBOTICS IN HOMELAND DEFENSE:

This session will focus on robotics in the NORTHCOM mission areas. The session will assess the impacts that robotics have on their mission areas, the need for advanced robotic technologies, and the development of plans for obtaining these capabilities.

### **MONDAY, MARCH 3**

3:00-6:30 PM Onsite Registration

5:00-6:30 PM Grand Opening Reception in Exhibit Hall

### **TUESDAY, MARCH 4**

7:00 AM	Continental Breakfast/Registration
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8:00 AM Opening Remarks – *Mr. David Ahern*, Director, Portfolio Systems

Acquisition, Acquisition, Technology and Logistics, OUSD

8:30 AM Keynote Speaker – GEN Paul Kern, USA (Ret)

9:00 AM Guest Speaker – BG Irardi, (JTF-N CG)

9:30 AM Break in Exhibit Hall

10:00 AM OSD Ground Robotics Update - Mrs. Ellen Purdy, Director, Joint Ground

Robotics Enterprise, Acquisition, Technology and Logistics, OUSD

10:30 AM Keynote Panel – Warfighter Perspective / Needs

Chair - COL Russell Hrdy, USA, Deputy Director, US Army Armament

Research and Development Center

12:00 PM Lunch

1:30-5:00 PM TRACK A - Paper Presentations (Paper order is subject to change)

Intelligent Modular Manipulation for Mobile Robots, Mr. Jorgen Pedersen

Robotics and the Law of War, COL Richard Jackson, USA (Ret)

Virtual Autonomous Navigation Environment (VANE), Mr. Randolph Jones

Improving Endurance of Unmanned Ground Vehicles, Mr. John Hart

Understanding the Benefits and Limitations of Autonomy for Critical UGV

Tactical Operations, Mr. David Bruemmer

Improving Reliability of EOD Robots with Systems Health Management,

Mr. Chris Rogan P.E.

1:30-5:00 PM Working group B – Small Business Issues

Working group C - Technology "Longpoles"

Working group D - Ground Robotics In Homeland Defense

5:00-6:00 PM Reception in Exhibit Hall

6:00-8:00 PM Banquet Dinner

### **WEDNESDAY, MARCH 5**

7:00 AM Continental Breakfast/Registration

8:00 AM Opening Remarks

8:15 AM Keynote Speaker – Mr. Rodney Brooks, iRobot

9:00 AM Guest Speaker – Automotive Company

9:30 AM Break in Exhibit Hall

10:00 AM Keynote Panel – International

12:00 PM Lunch

1:30 – 5:00 PM TRACK E - Paper Presentations (Paper order is subject to change)

Army Combat Casualty Care Collaborative Robotics & Telerobotics for

Multiple Missions, Dr. Gary Gilbert, PhD

Effective User Interfaces for Human-Robot Collaboration in Dismounted

Operations, Dr. Candace Sidner

AEODRS - The Fourth Generaltion EOD Robot, Mr. Byron Brezina

Supporting Robotics in a War Environment, Mr. Jerry Decker

Optimal Search Strategies for Teams of UXO Hunting Robots, Mr. Stephen Tully

Intelligent Radios with Integrated Video for Ground Robotics, Mr. Ricky

Houghton

1:30 – 5:00 PM Working Group F – Combat Support/Combat Service Support Issues

Working Group G - Operational Issues/Challenges

Working Group H - Interoperability

4:00 PM Exhibits Close

5:00 PM Adjourn for the day

### **THURSDAY, MARCH 6**

7:00 AM Continental Breakfast/Registration

8:00 AM Opening Remarks

8:15 AM Keynote Speaker – Mr. Richard Rumpf, Former Acting Assistant

Secretary of the Navy for Research, Engineering and Systems; Rumpf

Associates International

9:00 AM Tracks B-D and F-H Working Sessions Results

11:30 AM Conference Wrap-up

12:00 PM Conference Adjourned

# WORKING GROUP DESCRIPTIONS

### **WORKING GROUP F:**

## COMBAT SUPPORT/COMBAT SERVICE SUPPORT ISSUES:

Much of the focus for today's unmanned systems technologies is on the critical need to defeat IEDs. The focus of this break out session will be to identify potential uses of unmanned systems to support CS/CSS mission areas and the associated technologies, and develop courses of action to increase the speed with which these capabilities can be provided to the Warfighters.

# WORKING GROUP G: OPERATIONAL ISSUES/CHAL-LENGES:

This session will have multiple topics, ranging from the laws of armed conflict to instilling trust in the use of unmanned systems to the need for full autonomy. Each of these topics, among others, will be assessed and steps developed to overcome them.

### WORKING GROUP H: INTEROPERABILITY:

The importance of interoperability continues to grow as more unmanned systems – including ground, air, sea, and underwater vehicles – are fielded. Most visibly, the Joint Architecture for Unmanned Systems (JAUS) and NATO's Standardization Agreement "STANAG" 4586 enjoy considerable attention. An examination of interoperability standards for unmanned systems is the focus of this breakout session, as well as developing a path forward for achieving these roles.

### **EXHIBITOR INFORMATION**

To reserve a booth online go to the NDIA web site: http://exhibits.ndia. org. If you have questions, please contact Ms. Alden Davidson, Exhibits Manager at phone: (703) 247-2582; email: adavidson@ndia.org.

Exhibitors please note: Each company gets two full conference registrations with each 10x10 booth. If you are supposed to be registered as exhibit personnel, please verify with Alden Davidson to check on your badges. After the two complimentary registrations have been taken, you will need to register on the conference side for your badge.

### **EXHIBIT HOURS**

Monday, March 3, 2008 5:00 PM - 6:30 PM

Tuesday, March 4, 2008

9:00 AM - 6:00 PM

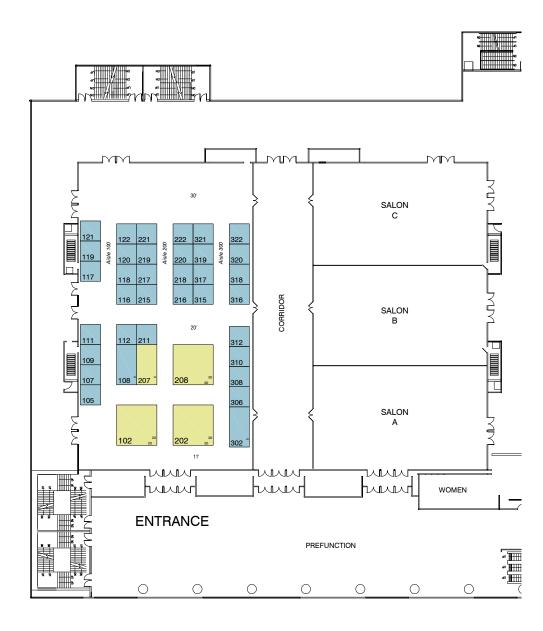
Wedneday, March 5, 2008

9:00 AM - 4:00 PM

Visit the following web link to to purchase a booth:

http://exhibits.ndia.org/exhibits/8380

### **EXHIBIT FLOOR PLAN**



Rev. 11/14/07

Texas Ballroom D/E/F 51-10x10 booths Aisle widths 8' unless noted

### **SPONSORSHIP INFORMATION**

GRAND OPENING RECEPTION SPONSOR (AVAILABLE TO 2 SPONSORS):

Investment: \$10,000 each (Monday only)

TUESDAY NIGHT RECEPTION AND BANQUET DINNER SPONSOR (AVAILABLE TO 2 SPONSORS):

Investment: \$10,000 each (Tuesday only)

CONTINENTAL BREAKFAST SPONSOR (AVAILABLE TO 3 SPONSORS):

Investment: \$6,000 each (Tuesday, Wednesday, and Thursday)

LUNCH SPONSORSHIP (AVAILABLE TO 1 ADDITIONAL SPONSOR):

Investment: \$9,000 each (Tuesday Lunch Sponsorship sold to Foster-Miller, Inc.)

ATTENDEE EXECUTIVE PADFOLIO SPONSORSHIP (LIMITED TO ONE SPONSOR):

Investment: \$6,000 (if Sponsor provides insert) \$7,000 (if NDIA provides insert)

COFFEE BREAK SPONSORSHIP (AVAILABLE TO 2 SPONSORS):

Investment: \$3,000 each (Tuesday and Wednesday morning)

INTERNET CAFÉ SPONSORSHIP (LIMITED TO ONE SPONSOR):

Investment: \$5,000 for all four days

### LANYARDS:

What better way to market your company everyday of the conference than to have your logo printed on lanyards which will hold name badges for the attendees and exhibitors.

Investment: \$3,000

LITERATURE INSERT SPONSORS: (available to three sponsors): Inserting 300, one page flyers into all the attendee padfolios (if available) or handed out with the on-site agenda is a great way to promote a new product or service. Company provides the promotional flyer materials.

Investment: \$2,000 (If NDIA prints the insert, investment increases to \$2,500)

To receive more information please contact Alden Davidson, Exhibits and Sponsorships Manager, at 703-247-2582 or email: adavidson@ndia.org or Laura Hoover, Sponsorship Manager, at 804-437-3773 or email: lhoover@ndia.org.

### **HOTEL INFORMATION**

Please use the following link to make your reservations at the Grand Hyatt San Antonio:

https://resweb.passkey.com/Resweb.do?mode=welcome\_ei\_new&eventlD=54994fromResdesk=true.

You can also find this link on the NDIA website at www.ndia.org/meetings/8380. (when making your reservations via the above link click on "Search Available Rooms" then select either "Government" or "Industry" under the pull down menu).

An access code is not required to make a hotel reservations however you will have to show active duty or civilian government identification when you check into the hotel.

NDIA personal will monitor the block for reservation accuracy. Rooms will not be held after Thursday, February 14, 2008 and may sell out before then. Rates are also subject to increase after this date. The current per diem rate at the Grand Hyatt San Antonio is \$112 plus \$25 for each additional person. The industry room rate is \$189 for single occupancy and \$214 for double occupancy.

Please visit www.gsa.gov for more information on the government per diem rates.

CONFERENCE REGISTRATION FEES	EARLY (UNTIL 1/18)	REGULAR (1/19-2/15)	LATE AFTER (2/15)
GOVERNMENT/ ACADEMIA/ ALLIED GOV.	\$550	\$605	<b>\$665</b>
INDUSTRY NDIA MEMBER	\$745	\$820	\$895
INDUSTRY NON-NDIA MEMBER	\$795	\$875	\$965

### **REGISTRATION - THERE ARE THREE WAYS TO REGISTER**

### **ONLINE**

Our preferred method of registration is online. Please visit www.ndia. org/meetings/8380 to register online.

### **FAX**

Register via fax by completing the Registration Form and faxing it to (703) 522-1885. Please do not fax any registrations after February 15, 2007. After this date, please bring your completed registration form with you to the conference to register on-site.

### MAIL

Registration Forms may be mailed to: NDIA, Event #8380, 2111 Wilson Blvd., Suite 400, Arlington, VA 22201. Please do not mail any registrations after February 15. After this date, please bring your completed registration form with you to the conference to register on-site or register online. Registrations will not be taken over the phone. Payment must be made at the time of registration.

### **CANCELLATIONS**

Cancellations before 01/18/08 receive a full refund. Cancellations between 01/18/08 - 02/15/08 receive a refund minus a \$75 cancellation fee. No refunds for cancellations received after 2/15/08. Cancellations must be made in writing to Phyllis Edmonson via email at pedmonson@ndia.org. Substitutions welcome in lieu of cancellation!

### **SPECIAL NEEDS**

NDIA supports the Americans with Disabilities Act of 1990. Attendees with special needs should contact Phyllis Edmonson, Meeting Planner, at (703) 247-2577, or via e-mail at pedmonson@ndia.org.

### **CONFERENCE ATTIRE**

Appropriate dress for this conference is coat and tie for civilian and uniform of the day for military.

### **EVENT #8380** ► NDIA REGISTRATION FORM

NATIONAL DEFENSE INDUSTRIAL ASSOCIATION	► 2111 WII SON BOU	I FVARD, SUITE 4	00
ĀRLINGTON, VĀ 22201-3061 ►(703) 522-182			
2008 GROUND ROBOTICS CAPABILITIES CONFE SAN ANTONIO, TX MARCH 3-6, 2008	RENCE & EXHIBITION		
Ways to sign up: 1. Online with a credit card 2. By fax with a credit card 3. By mail with a check or	at www.ndia.org - Fax: 703-522-1885		Address change needed
NDIA Master ID/Membership #		,	
(if known—hint: on mailing label above your name)	(last 4 di	igits – optional)	
Prefix(e.g. RADM, COL, Mr., Ms., Dr., etc.)			
Name First	MILast		
Military Affiliation	Nickname_ (for Meeting		
Title	, -		
Organization			
Street Address			
Address (Suite, PO Box, Mail Stop, Building, etc.)_			
CityState	Zip	Country _	
Phone	ext	Fax	
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Alternate Street Address			
Alternate Address (Suite, PO Box, Mail Stop, Bui	lding, etc.)		
City State	Zip	Country	
* By your signature above you consent to a Divisions and affiliates (NTSA, AFEI, PSA, Chapters, Divisions and affiliates do not se	NCWG, WID) via regula	ar mail, e-mail, i	telephone, or fax. NDIA, its
CONFERENCE	Early	Regular	Late
REGISTRATION FEES Government/Academia/Allied <sup>1</sup>	(before 01/18/08) □\$550	□\$605	(after 02/15/08) □\$665
Industry NDIA member and affiliates (AFEI, NTSA, PSA, WID)	<b>□</b> \$745	□\$820	<b>□</b> \$895
Industry non-NDIA member <sup>2</sup>	□\$795	□\$875	□\$965
Cancellations before 01/18/08 receive receive a refund minus a \$75 cancellat 02/15/08. Substitutions welcome in lie <sup>1</sup> Includes a free three-year NDIA mem military and government employees (Government membership. <sup>2</sup> Includes a free one-year NDIA membership.	ion fee. No refunds feu of cancellations! bership and subscripting first time members of	or cancellation otion to Nation only).   No, d	al Defense magazine for o not sign me up for the
PAYMENT OPTIONS  ☐ Check (Payable to NDIA - Event #83	American Express	vernment PO/  □ Diners (	Training Form # Club □ Cash
Credit Card Number		Exp. Date	9
Signature			



By completing the following, You Help Us Understand Who Is Attending Our Meetings.

## PRIMARY OCCUPATIONAL CLASSIFI-CATION. Check ONE.

- ➤ A. Defense Business/Industry
- ➤ B. R&D/Laboratories
- ➤ C. Army
- ➤ D. Navy
- ► E. Air Force
- ► F. Marine Corps
- ➤ G. Coast Guard
- ➤ H. DOD/MOD Civilian
- I. Government Civilian (Non-DOD/ MOD)
- ▶ J. Trade/Professional Assn.
- ► K. Educator/Academia
- L. Professional Services
- ► M. Non-Defense Business
- N. Other

## CURRENT JOB/TITLE/POSITION. Check ONE.

- ➤ A. Senior Executive
- ➤ B. Executive
- C. Manager
- ➤ D. Engineer/Scientist
- ► E. Professor/Instructor/Librarian
- F. Ambassador/Attaché
- ➤ G. Legislator/Legislative Aide
- ➤ H. General/Admiral
- ► I. Colonel/Navy Captain
- rs, J. Lieutenant Colonel/Commander/ Major/Lieutenant Commander
  - ➤ K. Captain/Lieutenant/Ensign
  - L. Enlisted Military
  - O. Other

Year of birth		

QUESTIONS, CONTACT:

Ms. Phyllis Edmonson, Meeting Planner

Phone: (703) 247-2577

E-mail: pedmonson@ndia.

org

Mail Registration To: NDIA - Event #8380 2111 Wilson Boulevard Suite 400 Arlington, VA 22201



NATIONAL DEFENSE INDUSTRIAL ASSOCIATION 2111 WILSON BOULEVARD, SUITE 400 ARLINGTON, VA 22201-3061 (703) 522-1820 (703) 522-1885 FAX WWW.NDIA.ORG

2008 GROUND ROBOTICS CAPABILITIES CONFERENCE & EXHIBITION PLACE HOLDER FOR POSTAGE

TO REGISTER, VISIT: WWW.NDIA.ORG/MEETINGS/8380