2021 FUTURE FORCE CAPABILITIES CONFERENCE & EXHIBITION

Armaments, Robotics, Munitions, and EOD

October 18 – 21 | Columbus, GA | NDIA.org/FutureForce21
WHO WE ARE

The National Defense Industrial Association is the trusted leader in defense and national security associations. As a 501(c)(3) corporate and individual membership association, NDIA engages thoughtful and innovative leaders to exchange ideas, information, and capabilities that lead to the development of the best policies, practices, products, and technologies to ensure the safety and security of our nation. NDIA’s membership embodies the full spectrum of corporate, government, academic, and individual stakeholders who form a vigorous, responsive, and collaborative community in support of defense and national security. For more than 100 years, NDIA and its predecessor organizations have been at the heart of the mission by dedicating their time, expertise, and energy to ensuring our warfighters have the best training, equipment, and support. For more information, visit NDIA.org

GLOBAL EXPLOSIVE ORDNANCE DISPOSAL COMMUNITY

WHO WE ARE

The Explosive Ordnance Disposal (EOD) committee brings together government, international partners, academia, and industry to address the needs of the EOD warfighter, the civilian Public Safety Bomb Squads, and non-governmental organizations. Through our partnership with the EOD Warrior Foundation, we provide a forum to address the most pressing problems of the EOD warfighters and their families.

LEADERSHIP AND COMMITTEES

COL Leo Bradley, USA (Ret)
Chair, EOD Symposium
Eugene Squires
EOD Committee Chair

MUNITIONS TECHNOLOGY DIVISION

WHO WE ARE

The Munitions Technology Division works to maintain the open exchange of technical information among government and industry programs and technical managers. In addition, the Division identifies changes and trends in policy, guidance, and organizational functions that affect the development, production, maintenance, and demilitarization of munitions. The Division is comprised of two sections, Fuze andInsensitive Munitions & Energetic Materials, and one advisory group, the Industrial Committee of Ammunition Producers.

LEADERSHIP AND COMMITTEES

Nick Perry
Division Chair
COL Moises (MO) Gutierrez, USA (Ret)
Division Vice Chair
Brian Berger
Division Chair
Bruce Webb
Division Vice Chair
Steve Faintich
Small Arms Committee Chair
Alan Kull
USA Committee Chair
Matt Phillips
GARM Committee Chair

ROBOTICS DIVISION

WHO WE ARE

The Robotics Division focuses on security-related robotics technology, covering the development, acquisition, application, integration, and sustainment of unmanned ground systems to improve warfighters’ capabilities and survivability. The Division sponsors the Ground Robotics Champion and Ground Robotics Technology Innovator Awards.

LEADERSHIP AND COMMITTEES

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Bruce Webb
Division Vice Chair
Steve Faintich
Small Arms Committee Chair
Alan Kull
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Matt Phillips
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Division Vice Chair
EVENT INFORMATION

Columbus Georgia Convention & Trade Center
801 Front Avenue
Columbus, GA 31901

WIFI
Network: FFCCE21
Password: PacSciEMC

REAL-TIME Q&A
Slido is an audience engagement platform that allows users to crowd-source top questions to drive meaningful conversations and increase crowd participation. Participants can up-vote the questions they would most like to hear discussed. Simply tap the thumbs-up button to up-vote a question. Top questions are displayed for the moderator and speaker to answer. Ask your question in sessions by going to Slido!

Event code: FFC2021

ATTIRE
Civilian: Business
Military: Uniform of the Day

SURVEY AND PARTICIPANT LIST
You will receive via email a survey and list of participants (name and organization) after the conference. Please complete the survey to make our event even more successful in the future.

EVENT CONTACTS
Meredith Mangas, CMP
Associate Director, Meetings
(703) 247-9467
mmangas@NDIA.org

Sarah O’Hanley
Manager, Exhibits & Sponsorships
(703) 247-9460
sohanley@NDIA.org

George Webster
Program Manager, Divisions
(703) 247-9491
gwebster@NDIA.org

SPEAKER GIFTS
In lieu of speaker gifts, a donation is being made to the Fisher House Foundation.

HARASSMENT STATEMENT
NDIA is committed to providing a professional environment free from physical, psychological and verbal harassment. NDIA will not tolerate harassment of any kind, including but not limited to harassment based on ethnicity, religion, disability, physical appearance, gender, or sexual orientation. This policy applies to all participants and attendees at NDIA conferences, meetings and events. Harassment includes offensive gestures and verbal comments, deliberate intimidation, stalking, following, inappropriate photography and recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome attention. Participants requested to cease harassing behavior are expected to comply immediately, and failure will serve as grounds for revoking access to the NDIA event.

EVENT CODE OF CONDUCT
NDIA’s Event Code of Conduct applies to all National Defense Industrial Association (NDIA), National Training & Simulation Association (NTSA), and Women In Defense (WID) meeting-related events, whether in person at public or private facilities, online, or during virtual events. NDIA, NTSA, and WID are committed to providing a productive and welcoming environment for all participants. All participants are expected to abide by this code as well as NDIA’s ethical principles and practices. Visit NDIA.org/CodeofConduct to review the full policy.

AGENDA

MONDAY, OCTOBER 18

11:00 am – 7:00 pm
REGISTRATION
NORTH HALL LOBBY

1:50 – 2:00 pm
CAPABILITIES KICK-OFF
FOUNDRY ROOM
Brian Berger
President and Chief Executive Officer, GTDS America, LLC
Introducer
Donald Sando
Deputy to the Commanding General and Director of Capabilities Development & Integration, U.S. Army Maneuver Center of Excellence

2:00 – 3:00 pm
CONCEPTS DIVISION EMERGING TECHS
FOUNDRY ROOM
Donald Sando
Deputy to the Commanding General and Director of Capabilities Development & Integration, U.S. Army Maneuver Center of Excellence
Moderator
Jim Stone
Acting Director, Concept Development Division, Maneuver Capabilities Development and Integration Directorate

3:05 – 4:05 pm
ACM STRYKER AND EMERGING ARCTIC CONDITIONS
FOUNDRY ROOM
Donald Sando
Deputy to the Commanding General and Director of Capabilities Development & Integration, U.S. Army Maneuver Center of Excellence
Moderator
Dominick Edwards
Deputy Director, Army Capability Manager, Stryker Brigade Combat Team, Maneuver Center of Excellence

4:10 – 5:10 pm
MANEUVER BATTLE LAB/ACM’S
FOUNDRY ROOM
Donald Sando
Deputy to the Commanding General and Director of Capabilities Development & Integration, U.S. Army Maneuver Center of Excellence
Moderator
COL Christopher Budihas, USA
Director, Maneuver Battle Lab, Maneuver Capabilities Development and Integration Directorate

5:10 – 7:00 pm
RECEPTION
NATIONAL INFANTRY MUSEUM – TRANSPORTATION WILL BE PROVIDED
Donald Sando
Deputy to the Commanding General and Director of Capabilities Development & Integration, U.S. Army Maneuver Center of Excellence
TUESDAY, OCTOBER 19

7:00 am – 6:30 pm
REGISTRATION
NORTH HALL LOBBY

7:00 – 8:00 am
NETWORKING BREAKFAST
CENTER HALL

8:00 – 8:15 am
NDIA OPENING REMARKS
IRON WORKS BALLROOM
MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)

8:20 – 8:35 am
WELCOME REMARKS
IRON WORKS BALLROOM
MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)
Introducer
MG Patrick Donahoe, USA
Commanding General, U.S. Army Maneuver Center of Excellence

8:40 – 9:20 am
KEYNOTE SPEAKER
IRON WORKS BALLROOM
MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)
Introducer
Brian Berger
President and Chief Executive Officer, GTDS America, LLC
Moderator
Honorable Ellen Lord
Former Under Secretary of Defense for Acquisition & Sustainment

9:00 am – 6:30 pm
EXHIBIT HALL OPEN
EXHIBIT NORTH AND SOUTH HALLS

9:20 – 10:30 am
NETWORKING BREAK
EXHIBIT NORTH AND SOUTH HALLS

10:30 – 11:00 am
BUDGET BRIEF
IRON WORKS BALLROOM
MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)
Introducer
Nicholas Perry
Director, Strategy & Strategic Planning, Northrop Grumman Corporation
Moderator
Jay Brannam
Executive Director, Munitions Industrial Base Task Force

11:00 am – 12:30 pm
NETWORKING LUNCH
EXHIBIT NORTH AND SOUTH HALLS
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
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<tbody>
<tr>
<td>12:30 – 12:55 pm</td>
<td>An Army Robotics and Autonomous Systems Update</td>
</tr>
<tr>
<td>2:00 – 2:25 pm</td>
<td>Long-Life Gun Barrel Tests</td>
</tr>
<tr>
<td>1:30 – 1:55 pm</td>
<td>Autonomous Robotic Systems Act as Force Multipliers to Improve Warfighting Safety and</td>
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<tr>
<td></td>
<td>Increase Operational Tempo</td>
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<tr>
<td>1:00 – 1:25 pm</td>
<td>Integrated Quality Management Reduces Risk for Armament, Robotic, and Munitions</td>
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<td>Manufacturers</td>
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<tr>
<td>2:25 – 2:55 pm</td>
<td>NETWORKING BREAK – EXHIBIT HALL</td>
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**Tuesday Concurrent Breakout Sessions**

**Room 205**

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<thead>
<tr>
<th>Session Title</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>An Army Robotics and Autonomous Systems Update</td>
<td>Matt Dooley (Chief Executive Officer, Fielding, LLC), Dr. Bob Sadowski (Senior Robotics Scientist, Research, Technology, and Concepts Center, U.S. Army Futures Command), David Oatley (Product Director, Cave Sensors/Weapons)</td>
</tr>
<tr>
<td>PM Soldier Lethality Panel</td>
<td>COL Scott Madore, USA (Project Manager, Soldier Lethality, U.S. Army Modulator), Mika Miller (Founder and Chief Executive Officer, T5 Technologies)</td>
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<td>23931 MIM Frangible Energetic Projectiles for Medium-Caliber Weapons</td>
<td>Howard Kent (Chief Executive Officer, Amor Development Group LLC)</td>
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<td>and Munitions Manufacturers</td>
<td>Andrew Tweedell (Vehicle Research Engineer, DEVCOM Army Research Laboratory, Human Research and Engineering Directorate)</td>
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<tr>
<td>24014 Human Autonomy Interactions for Intelligent Weapons Systems</td>
<td>Leo Bradley (Founder, L.I. Bradley Consulting, LLC)</td>
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<tr>
<td>24041 The Development and Status of the Fire and Ordnance Control for</td>
<td>John Martins (Director, International Programs, MBDA, Inc.)</td>
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<tr>
<td>Unmanned Systems (FOCUS)</td>
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<td>24073 Range Extension for the Anti-Access Battlefield</td>
<td>Jerry Coburn (Senior Director, Business Development, Sierra Nevada Corporation)</td>
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<tr>
<td>24074 Enabling Explosive Ordnance Disposable Operations in the Electrodynamic Spectrum</td>
<td>David Barnhard (Director, Business Development, Kutta Technologies, Inc.)</td>
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<td>3:00 – 3:25 pm</td>
<td>Considerations for Lethality Packages on Unmanned Ground Vehicle Platforms: Arming a Killer Robot</td>
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<tr>
<td>3:30 – 3:55 pm</td>
<td>Small Ground Robotic Vehicles: TP Point Observers</td>
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<tr>
<td>4:00 – 4:25 pm</td>
<td>FENRIS: Persistent Autonomous ISR in the Arctic and Beyond</td>
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<tr>
<td>4:30 – 4:55 pm</td>
<td>Gaining Decision-Making Advantage through Force Design and Mission Integration</td>
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<tr>
<td>5:00 – 5:30 pm</td>
<td>Networking Reception</td>
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**TUESDAY CONCURRENT BREAKOUT SESSIONS**

**SYCAMORE ROOM**

**SMALL ARMS**

**IRON WORKS BALLROOM AB**

**GARM**

**ROOM 205**

**UESA**

**EOD**

**MES**

**ROBOTICS**

**DISTRIBUTION D SESSIONS**

**CLOSED TO MEDIA**

**DISTRIBUTION D SESSIONS**
WEDNESDAY, OCTOBER 20

7:00 am – 5:00 pm

REGISTRATION
NORTH HALL LOBBY

7:00 – 8:00 am

NETWORKING BREAKFAST
CENTER HALL

8:00 – 8:15 am

OPENING REMARKS
IRON WORKS BALLROOM

MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)
Introducer

B. H. “Skip” Henderson, III
Mayor of Columbus, Georgia

8:20 – 9:05 am

KEYNOTE SPEAKER
IRON WORKS BALLROOM

MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)
Introducer

Brian Berger
President and Chief Executive Officer, GTDS America, LLC
Moderator

COL Wendell Leimbach, Jr., USA
Director, Joint Intermediate Force Capabilities Office, U.S. Department of Defense

9:00 – 3:00 pm

EXHIBIT HALL OPEN
EXHIBIT NORTH AND SOUTH HALLS

9:10 – 9:40 am

NETWORKING BREAK
EXHIBIT NORTH AND SOUTH HALLS

9:40 – 10:25 am

FOREIGN COMPARATIVE TESTING (FCT) PROGRAM OVERVIEW
IRON WORKS BALLROOM

MG James Boozer, USA (Ret)
Executive Vice President, National Defense Industrial Association (NDIA)
Introducer

COL Randy Everett, USA (Ret)
International Armaments Cooperation Staff Officer, U.S. Army Combat Capabilities Development Command

10:30 – 11:30 am

AWARDS PRESENTATION
IRON WORKS BALLROOM

Small Arms Committee Chinn Award
Ralph Mazeski

Small Arms Committee Hathcock Award
MSGT Kevin Owens, USA

Small Arms Committee James R. Ambrose Award
Vista Outdoor

Gun & Missile Systems Committee Robert Trifiletti Award
Ralph Campoli

Defense User Recognition for Excellence Award
Dan Deguire

Ground Robotics Champion
MAJ Cory Wallace, USA

Armaments Division Professional Service Award
COL Hector Gonzales, USA

Armaments Division Professional Service Award
COL Andrew Lunoff, USA

11:30 – 1:00 pm

NETWORKING LUNCH
EXHIBIT NORTH AND SOUTH HALLS

AN ONLINE COMMUNITY FOR DEFENSE PROFESSIONALS

NDIA Connect is a members-only benefit that's bustling with information, conversation, and activity stimulated by defense professionals from industry, government, and academia. Log in today to explore the platform’s various functionalities and contribute to our collective mission in support of the warfighter. From anywhere and at any time, use NDIA Connect to network with colleagues, collaborate on projects, and stay connected.

Connect.NDIA.org
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<tr>
<td>1:00 – 1:25 pm</td>
<td>24039 Hardware-Enforced Data Separation Security on Autonomous Robotic Systems or: How I Learned to Stop Worrying and Trust the Robot</td>
<td>SYCAMORE ROOM</td>
<td>Matthew Dosmann, Vice President, Strategy, InZero Technologies</td>
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<td>24008 Modular Multi-Mode Seeker</td>
<td>IRON WORKS BALLROOM AB</td>
<td>Gregg Newman, Technical Director, Engineering, BAE Systems of America</td>
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<td>24068 STANREC 4785 Suppressor Testing</td>
<td>ROOM 205</td>
<td>Dr. Leslie James Flaming, Project Lead, Small Arms Signatures Laboratory, Naval Surface Warfare Center – Crane Division</td>
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<td>24036 MK52 Chain Gun (7.62 X 62mm) History, Capabilities, Reliability, and Platform Integration</td>
<td>FOUNDRY ROOM B</td>
<td>Art O'Donnell, Lead, Engineering, Northrop Grumman Defense Systems</td>
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<tr>
<td>1:30 – 1:55 pm</td>
<td>24004 Mobile Minefield: How to Kill Modern Tanks That Have Advanced Protection with Small Robots</td>
<td>IRON WORKS BALLROOM AB</td>
<td>Dewey Akers, Vice President, Sales, Spartan Armor Systems</td>
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<td>23986 Modular Suppressor Test Bed Design of Experiments</td>
<td>ROOM 205</td>
<td>Daniel Clar, General Engineer, Armaments Center, U.S. Army DEVCOM</td>
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<td>23964Suppressor Cleaning</td>
<td>CRANE ROOM C</td>
<td>Zachary Torigian, Mechanical Engineer, Naval Surface Warfare Center – Crane Division</td>
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<td>24054 Intermediate Caliber Virtual-Baffle Suppressor System</td>
<td>CRANE ROOM C</td>
<td>Dr. Philips Burns, Mechanical Engineer, Naval Surface Warfare Center – Crane Division</td>
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<td>Dewey Akers, Vice President, Sales, Spartan Armor Systems</td>
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<td>24068 STANREC 4785 Suppressor Testing</td>
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<td>Dr. Leslie James Flaming, Project Lead, Small Arms Signatures Laboratory, Naval Surface Warfare Center – Crane Division</td>
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<td></td>
<td>24036 MK52 Chain Gun (7.62 X 62mm) History, Capabilities, Reliability, and Platform Integration</td>
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<td>Art O'Donnell, Lead, Engineering, Northrop Grumman Defense Systems</td>
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**Networking Break:**
- Exhibit North and South Halls
# FutureForce21

## Concurrent Breakout Sessions

### Wednesday Concordant Breakout Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>3:00 – 3:25 pm</td>
<td>24019 AI-Enabled and UAS-Supported Terrain- traversability Assessment for Off-Road Navigation of Robotic and Autonomous Systems (RAS)</td>
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<td></td>
<td>Dr. Yoichi Endo, Director, Robotics &amp; Electromechanical Systems, Intelligent Automation, Inc.</td>
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<td>24028 Artificial Intelligence-Enabled Small Arms for Networked lethality</td>
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<td>Load, Fusion Fire Control Team, Small Arms, Armaments Center, U.S. Army DEVCOM</td>
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<td>24045 TRAPS: Empowering FWS-I and Storm Systems</td>
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<td>Capt Howard Mill, USMC, Chief Information Officer, Counter-UAS, Aviation Combat Element Division, Counter Development and Integration</td>
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<td>USMC – APBI</td>
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<td>24060 Revealing Artificial Intelligence-Enabled Small Arms for Networked Lethality</td>
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<td>3:30 – 3:55 pm</td>
<td>24079 Emergent Technologies for Armed Unmanned Systems</td>
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<td></td>
<td>Gus Taylor</td>
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<td>Ernesto Garcia-Lopez</td>
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<td></td>
<td>Special Programs Manager, Strategic Relationships Division, Business Interface Office, Enterprise &amp; Systems Integration Center, Armaments Center, U.S. Army DEVCOM</td>
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<td>Michael Jones</td>
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<td>Lead Engineer, Scramble Effects R&amp;D Group, Naval Surface Warfare Center – Crane Division</td>
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<tr>
<td>4:00 – 4:25 pm</td>
<td>24038 Optionally Manned Semi-Autonomous Howitzer</td>
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<td>Michael Evans</td>
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<td>Program Manager, Fire Projects, AM General LLC</td>
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<td>4:30 – 4:55 pm</td>
<td>24048 Mechanocchemically Assisted Broaching of Refractory-Lined Gun Barrels</td>
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<td>Dr. Jason Davis</td>
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<td>4:55 – 5:00 pm</td>
<td>24014 Perception-Based Robotic Reconnaissance Team Coordination in a Hostile Environment</td>
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<td>Dr. Hambisa Kano</td>
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<td>Principal Scientist, FAST Labs, BAE Systems, Inc.</td>
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<td>Brian Berger</td>
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<td>Matthew Phillips</td>
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<td>Director, Business Development, General Dynamics, Ordnance and Tactical Systems</td>
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<td>Program Director, Ground Combat Systems, Elbit Systems of America</td>
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<td>Tom Harthorn</td>
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<td>Capability Developer, USG CTR, Joint Service Small Arms Program</td>
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**Breakout Session Locations:**

- **Small Arms Room:** IRON WORKS BALLROOM AB
- **GARM:** ROOM 205
- **Robotics Room:** SYCAMORE ROOM
- **UEA:** ROOM 211
- **EOD:** IRON WORKS BALLROOM C
- **MES:** FOUNDARY ROOM B

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**Distribution Notes:**

- **DISTRIBUTION D SESSIONS:** CLOSED TO MEDIA
- **CLOSING REMARKS:** Leo Bradley - Founder, L.E. Bradley Consulting, LLC
- **CLOSING REMARKS:** Matt Dooley - President and Chief Executive Officer, Fidelium, LLC
- **CLOSING REMARKS:** Alan Kull - Senior Manager, Aerospace Systems Engineering, General Atomics

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**Technical Sessions:**

- **AI-Enabled and UAS-Supported Terrain- traversability Assessment for Off-Road Navigation of Robotic and Autonomous Systems (RAS)**
- **Emergent Technologies for Armed Unmanned Systems**
- **Optionally Manned Semi-Autonomous Howitzer**
- **Perception-Based Robotic Reconnaissance Team Coordination in a Hostile Environment**

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**Closing Remarks:**

- **Matthew Phillips**
- **William Nuckols**
- **Tom Harthorn**
- **Matt Dooley**
- **Leo Bradley**
- **Matthew Phillips**

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**Specialties:**

- **Robotics:** AI-Enabled and UAS-Supported Terrain- traversability Assessment for Off-Road Navigation of Robotic and Autonomous Systems (RAS)
- **Emerging Technologies:** Artificial Intelligence-Enabled Small Arms for Networked Lethality
- **Semi-Autonomous Engagement:** Mechanocchemically Assisted Broaching of Refractory-Lined Gun Barrels
- **Optionally Manned:** Optionally Manned Semi-Autonomous Howitzer
- **Perception-Based:** Perception-Based Robotic Reconnaissance Team Coordination in a Hostile Environment

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**Speakers:**

- **Dr. Yoichi Endo**
- **Gus Taylor**
- **Michael Evans**
- **Dr. Hambisa Kano**
- **Matthew Phillips**
- **William Nuckols**

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**Organizations:**

- **Intelligent Automation, Inc.**
- **Naval Surface Warfare Center – Crane Division**
- **BAE Systems, Inc.**
- **GTDS America, LLC**
- **Fidelium, LLC**
- **L.E. Bradley Consulting, LLC**

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**Contact:**

For more information, please contact [NDIA Today](#) at [info@ndia.org](mailto:info@ndia.org).
LIVE-FIRE DEMONSTRATING COMPANIES

THURSDAY, OCTOBER 21

8:30 am
TRANSPORTATION PICK-UP
COLUMBUS, GA, CONVENTION AND TRADE CENTER

9:00 am
ARMOR RESTORATION SHOP
HARMONY CHURCH

11:00 am
TRANSPORT TO SMALL ARMS LIVE-FIRE DEMONSTRATION
PATTON RANGE

12:30 – 4:00 pm
LIVE-FIRE DEMONSTRATION
PATTON RANGE

2:00 pm
EARLY BUS DEPARTS
PATTON RANGE

NDIA has a policy of strict compliance with federal and state antitrust laws. The antitrust laws prohibit competitors from engaging in actions that may lead participants not to deal with a particular supplier, customer or third party. Such actions include agreements or understandings with other industry members to limit competition in markets or customers or division of territories; or refusals to deal with or boycotts of suppliers, customers or other third parties, or topics that may lead participants not to deal with a particular supplier, customer or third party.

ROBOTICS

24083
All-Domain Execution and Planning (ADEPT) Framework
Francoin, C.
The ADEPT framework is a design concept which addresses the challenges of adaptive behaviors and intelligent autonomy. ADEPT has had multiple instantiations in software architectures used on a wide variety of autonomous systems and applications including underwater, ground, air, and space vehicles.

24064
Autonomous Robotic Systems Act as Force Multipliers to Improve Warfighting Safety and Increase Operational Tempo
Brown, J.
RE2 Robotics is developing multiple autonomous robotic systems for the DoD to serve as force multipliers, help decrease injuries experienced by warfighters, and increase operational tempo.

23987
Considering for Lethality Packages on Unmanned Ground Vehicle Platforms: Arming a Killer Robot
Coker, P.
To achieve maximum effectiveness, lethality payloads on UGV platforms must be precise, sufficiently powerful, reliable, easily resupplied, modular and intelligent.

23747
Critical Scout - Repurposing Small Ground Robotic Vehicles TP Pinpoint Observers
Kent, H.
A robotic payload that geolocates enemy optics.

24035
Fenris: Persistent Autonomous ISR in the Arctic and Beyond
Crowell, J.
Fenris is a small-scale ruggedized, intelligent unmanned ground vehicle (UGV) designed to provide persistent ISR in the Arctic and beyond. In this talk, CI’s Founder & CEO James Crowell will discuss Fenris’ current progress to date and its promise for the future.

24070
Gaining Decision-Making Advantage Through Force Design and Mission Integration
Walton, T.
This DARPA-sponsored study describes a new model for joint force design and integration, where elements of military capability are able to be composed and tailored by Combatant Commanders to the needs of specific operational challenges close to the time of use. Combined with appropriate command and control processes and systems, this model of mission integration has the potential to provide military advantage against capable adversaries through the surprise generated from force composition and recombination. Mission integration could also reduce the cost of operations and modernization by enabling aggregation of less-expensive weapons systems to realize capabilities provided today by large multimission platforms or formations.

24039
Hardware Enforced Data Separation Security on Autonomous Robotic Systems Or: How I Learned to Stop Worrying and Trust the Robot
Dosmann, M.
As robots become more prevalent and powerful, their cybersecurity is crucial. Hardware enforced data separation closes critical gaps in their security.

24004
Mobile Minefield: How to Kill Modern Tanks That Have Advanced Protection with Small Robots
Akers, D.
They may have passive and active protection from direct fire, artillery fragment, rocket and missile threats, but even the latest battle tanks are vulnerable to the smallest robotic systems. Proposed are commercially developed scale off-road racing vehicles used to create weapons which are armored, armed and equipped with surveillance systems to destroy armored vehicles and other targets.

24058
The Multi-Purpose Expeditionary Platform
Holt, C.
The Multi-Purpose Expeditionary Platform (MPEP) provides the Air Force an innovative, versatile platform for logistics, construction, disaster recovery, and more, along with multiple hydraulic attachment available today.

24019
AI-Enabled and UAS-Supported Terrain-Traverability Assessment for Off-Road Navigation of Robotic and Autonomous Systems (RAS)
Endo, Y.
A computational framework for a RAS that enables real-time construction of a traversability map was developed. Employing a set of customized deep neural networks, the traversability of the region perceivable through an onboard camera and/or a UAS-captured aerial image is automatically inferred and added to an active traversability map, so that the most efficient route can be computed. This computational framework was implemented within ROS-2, and integrated into a custom-made autonomy payload. The successful field-testing using this UGV-mounted autonomy payload paired with a UAS demonstrated the utility of this AI-enabled computational framework for effective off-road navigation of future RAS.
Using CFD to take advantage of shock waves to improve to extend the service life and performance of suppressors. Content related to ongoing developments by both the USG and industry the widespread problem of small arm suppressors becoming ineffective Cleaning effort to the defense community. The presentation will illustrate The purpose of this brief is to present the challenges, trends, Suppressors with audible, thermal, and flash signature reduction back pressure suppressor designed and optimized for the warfighter providing best in class, Audible and Visual characteristics. The end results are a Next Generation, patent pending, low Warfighter. The technology has the ability to be adapted to multiple platforms. 23988 Modular Suppressor Test Bed Design of Experiments Cier, D. A design of experiments was conducted using modular suppressor hardware to assess blast and flash.
Modular Multi-Mode Seeker (Distro D)
Newman, G.
This presentation provides information on Elbit America’s integrated seeker suite that addresses the multi-faceted problem of keeping pace with evolving threats and kill-chain closure in contested regions. This suite of integrated multi-mode sensors and effectors, on distributed platforms and across domains in a networked, configurable battlespace offers an affordable, flexible, WOSA compliant solution.

Shaping the Future of Indirect Fires (Distro D)
Winzell, T.
This presentation provides an overview of the production-ready systems Elbit America offers to the warfighter. Leveraging combat proven systems developed and fielded by Elbit Land in Israel, the ATMOS suite of integrated multi-mode sensors and effectors, on distributed platforms and across domains in a networked, configurable battlespace offers an affordable, flexible, WOSA compliant solution.

Materials, Manufacturing, and Testing of Next Generation Systems (Focus)
Culver, D.
As the military moves toward the future, the need for advanced technology increases. This presentation will discuss the manufacturing and testing of next generation systems, with a focus on materials and processes.

Reinforced Concrete Wall Performance Predicted Using Deep Neural Network
Holgado, D.
Based on test data, two CNN Models are built to predict rc wall performance under contact and near-contact explosions. Obtained predictions show higher accuracy compared with currently available models.

Virtual Gunner
Nuckols, W.
Virtual Gunner reduces the cognitive load and enhances the combat effectiveness of a modern combat vehicle crew with multiple sensor and weapon systems employed in the current and future highly dynamic combat environment.
**Enabling Explosive Ordnance Disposal Operations in the Electromagnetic Spectrum**  
Barnhard, D. | Coburn, J.  
Concepts for multi-domain combined arms operations define threats in the operating environment (OE) in 2025 and beyond as super-empowered through rapid access to information and significant advances in commercial electronics. Electronic support hardware and visualization tools that provide detection, localization and isolation of commercial wireless signals and devices will become necessary to enhance security and situational awareness to mitigate risk. The ability to quickly and safely locate IOIs can also be enhanced by the use of multiple, heterogeneous types of unmanned platforms (UGV, UAV, USV, etc.). This presentation will explore notional use cases that illustrate current and envision future technologies that serve to provide the EOD operator with additional sensing capabilities.

**Enhanced Situational Awareness for the Modern EOD Warrior**  
Makris, A.  
There is an ever-increasing need to enhance the situational awareness of the modern EOD operator as threats expand and improvised explosive devices (IEDs) become increasingly sophisticated, with possible contamination of the target environment by CBRN agents. Additionally, there can be a need for night operations where visible lights are not permitted. To respond to such threats, EOD operators require equipment and detectors across a broad spectrum of threats, as well as a range of camera sensors, which must seamlessly integrate with their current protective ensembles through appropriate interfaces, displays and embedded heads-up-display (HUD). The current presentation introduces two current programs aimed at delivering integrated sensor and HUD capability to EOD operators, having the potential to significantly transform render safe operations and capability under a diversity of operating conditions and threats.

**Searchable Ordnance Database**  
Bichutsky, V. | Shaughnessay, A. | Pate, M.  
We present Searchable Ordnance Database (SOrD), a novel framework for ordnance and explosives identification, recognition and intelligence. SOrD provides a mobile-first platform—burstressed by a munitions and explosives data lake and an ordnance data warehouse with more than 100,000 items, and leveraging the latest advancements in AI/ML, AR/VR, LiDAR, and mobile technologies—consisting of a suite of tools that provide EOD personnel with actionable intelligence quickly, easily and efficiently.

| BOARD 1 | **Coaxial OD Sensors - Enabling Crew Served Weapon Gunners to Eliminate Snipers and Other Optically Equipped Observers** | Kent, H. | Armor Development Group, LLC |
| BOARD 2 | **Integration of Modern Suppression Technologies into Mass Production** | Mudgett, C. | B&T USA |
| BOARD 3 | **Resiliency of Caliber .50 Projectiles in Barrels with Irregular Riffing** | Gmyrek, T. | U.S. Department of Defense |
| BOARD 4 | **Inert Fill Replacement** | Bell, J. | UDC USA, Inc. |
| BOARD 5 | **Replacing Tracers With Visible, Thermal and IR Signature on Target Projectile Technology** | Kent, H. | Armor Development Group, LLC |
| BOARD 10 | **Kinesis – Universal Robotic Control** | Brodmerek, C. | Tomahawk Robotics |
| BOARD 13 | **Advanced Demolition Explosives are Needed to Dispose of Insensitive Munitions (IM) to Overcome the Tactical Disadvantage of Current Demolition Explosives** | Wittkamper, B. | Booz Allen Hamilton |
SPEAKER BIOGRAPHIES

BG WILLIAM BORUFF, USA
Joint Program Executive Officer
Armaments & Ammunition Commanding General

Brigadier General William M. Boruff became the Joint Program Executive Officer Armaments & Ammunition (JPX) and the Commanding General, Picatinny Arsenal on July 23, 2021, leading the mission to develop and procure conventional and leap-ahead munitions to increase the warfighter’s combat power. Prior to this, BG Boruff served as the Special Assistant to the Military Deputy/Director, Army Acquisition Corps, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology) Washington, DC. Prior to arriving at the Pentagon, Brigadier General Boruff served as the Deputy Commanding General of the Combined Security Transition Command, Kabul, Afghanistan.

Brigadier General Boruff was commissioned as a second lieutenant in the U.S. Army from the RDCG program at the University of North Carolina at Pembroke, North Carolina, where he received a Bachelor of Science in Accounting as a distinguished military graduate. He joined the Army Acquisition Corps in 1995. His advanced education includes a Master of Science in Acquisition and Contract Management, Florida Institute of Technology, Melbourne, Florida. His military education includes a Master of Science in Strategic Studies from the U.S. Army War College; Air Command and Staff College; Transportation Corps Advanced Course; Multiple Launch Rocket System Cadre Course; and Field Artillery Basic Course.

Brigadier General Boruff has held numerous command and staff positions. His assignments include contingency contracting officer, XVIII Airborne Corps, Fort Bragg, North Carolina; assignment officer, Acquisition Management Branch, U.S. Army Human Resources Command, Alexandria, Virginia; executive officer to the Director, U.S. Army Acquisition Support Center, Fort Belvoir, Virginia; proponent officer, Army Acquisition Executive Support Agency, Pentagon; command, Defense Contract Management Agency-Northern Iraq; deputy director, USAAASC; commander, Defense Contract Management Agency, Combat Vehicles BAE Systems, York, Pennsylvania; project manager, Transportation Systems; director, Contracting Enabler Cell, Combined Security Transition Command Afghanistan; and, Commanding General of the Mission and Installation Contracting Command, Fort Sam Houston, TX.

He was named the Secretary of the Army Acquisition, Technology, and Logistics integrator, working on foreign comparative testing (FCT) programs for the US Army as well as serving as a desk officer for Australia.

Previously, Mr. Everett has been an affiliate instructor at Loyola University located in Baltimore, Maryland where he has taught International Management and Business courses along with Advanced Leadership Technology, Business Policy (Strategic) and Executive Education Seminars.

Mr. Everett is a Retired Colonel after thirty-three years in the United States Military. His final military assignment was Chief, Security Transition Command Afghanistan; director, Contracting Enabler Cell, Combined Security Transition Command Afghanistan; and, Commanding General of the Mission and Installation Contracting Command, Fort Sam Houston, TX.

He was a new graduate from the Armor Officer Basic Course at Fort Knox, Kentucky in 1988. He graduated from the University of Delaware in 1992 with a B.S. in Computer and Information Science and a minor in History. He was commissioned a second lieutenant in the U.S. Marine Corps in 1992 after completing Officer Candidate School. He was a warrant officer in the U.S. Marine Corps in 1992 after completing Officer Candidate School. He was assigned as a Warrant Officer and attended the Armor Officer Basic Course at Ft. Knox, KY in 1993.

He is a graduate of the Armor Officer Basic and Advanced Courses, the United States Naval Command and General Staff College, and Senior Service College Fellowship at Harvard University. He holds a Bachelor of Arts in History, a Masters of Advanced Military Studies, and a Masters of National Security and Strategic Studies.

Mr. William “Randy” Everett is currently employed with the Department of Defense as an Employee at the US Army Combat Capabilities Development Command (CCDC). His focus is on Global Integration working on Foreign Comparative Testing (FCT) programs for the US Army as well as serving as a desk officer for Australia.

A qualified Infantry and Special Forces officer, COL (Ret) Everett’s career focus has primarily been within the arena of international relations, education, training and operations. Previous assignments within Infantry and Special Forces have enabled him to understand operations from the squad to division level.

Assignments within the military have been Detachment Commander of a Special Forces A-Team, Training and Executive officer of an Infantry Battalion, Senior Instructor and Operations Officer of a Training Academy, and Commander of an Infantry Battalion.

Colonel (Ret) Everett joined the military in 1975, and was commissioned as a Second Lieutenant in September 1978. Throughout his thirty-three years of active and traditional service he has visited many countries including: Estonia, Germany, Kuwait, Israel, Bulgaria, Bosnia-Herzegovina and Croatia.

COL WENDELL LEMBACH, JR., USA
Director, Joint Intermediate Force Capabilities Office
U.S. Department of Defense

Col Lembach was born and raised in Baltimore, MD, and graduated from Baltimore's Friends School in 1988. He graduated from the University of Delaware in 1992 with a B.S. in Computer and Information Science and a minor in History. He was commissioned a second lieutenant in the U.S. Marine Corps in 1992 after completing Officer Candidate School. He was assigned as a warrant Officer and attended the Armor Officer Basic Course at Ft. Knox, KY in 1993.

He is a graduate of the Armor Officer Basic and Advanced Courses, the United States Naval Command and General Staff College, and Senior Service College Fellowship at Harvard University. He holds a Bachelor of Arts in History, a Masters of Advanced Military Studies, and a Masters of National Security and Strategic Studies.

He was reassigned to a new position and attended the Armor Officer Basic Course at Ft. Knox, KY in 1993.

In 1997, then Capt Lembach was assigned to his first tour with Marine Corps Systems Command (MCSC) in Quantico, VA as a project officer for the Program Manager for Tank Systems. Subsequently, in 1999 Capt Lembach was sent to the Army Armor Captain’s Career Course (ACC) at Ft. Knox, and then back to 2nd Tank Battalion at Camp Lejeune. While at 2nd Tank Battalion Capt Lembach served as the D Company Commander and assistant operations officer, and as the H&S Company Commander.

From 2002-2004, Maj Lembach was a student at the Naval Postgraduate School (NPS) in Monterey, CA where he received a Master’s Degree in Business Administration with a focus in Systems Acquisition Management. Upon graduation he was reassigned to MCSC and took on responsibilities as the individual Armor and Logistics Team Leader for the Program Manager for Infantry Combat Equipment. While serving in that billet Maj Lembach was selected as an Acquisition Professional Officer (APO) in the first year that the MOS was competitively offered.

In 2006, Maj Lembach was transferred to PM Tank Systems where he served as the M1A1 Project Officer and then as acting Program Manager. In 2007 he was selected to serve as the Program Manager for Tank Systems where he contributed to the development of the FCS, a multi-role, 120mm, Multi-Purpose High Explosive (MP-HE) main gun ammunition. In August of 2010, LtCol Lembach was reassigned to the office of the
DONALD SANDO
Deputy to the Commanding General and Director of Capabilities Development & Integration
U.S. Army Maneuver Center of Excellence Company

Mr. Don Sando was selected to the Senior Executive Service in February 2008 and is currently assigned as the Deputy to the Commanding General and Director of Capabilities Development and Integration for the Maneuver Center of Excellence at Fort Benning, Georgia. As Director, Mr. Sando is responsible for conducting analysis and experimentation for the maneuver force, developing operational concepts and organizational designs, describing required material capabilities, and integrating solutions to support Army, joint, interagency, and multinational organizations.

Mr. Sando graduated from the United States Military Academy at West Point, New York, in 1981. He holds a Master of Science degree in Operations Research from the Air Force Institute of Technology, and a Master of Science degree in Strategic Studies from the Army War College.

Mr. Sando culminated over 26 years of active duty service as Director of the Infantry Futures Group, U.S. Army Infantry Center, Fort Benning, Georgia. His awards and decorations include the Distinguished Service Medal, the Legion of Merit, and the Combat Infantryman’s Badge.

Ms. Lord is a former Vice Chairman of the National Defense Industrial Association, as well as a former Director of the U.S. – India Business Council. She has served on the industry steering committee for the Center for New American Security’s (CNAS) task force on “Strategy, Technology and the Global Defense Industry,” as well as CNAS’s DoD-Industry collaborative project “Future Foundry: Forging New Industries for Defense,” which was formed to examine key technological trends and challenges facing the global defense industry. Ms. Lord has also served on the Board of Trustees of the U.S. Naval Institute Foundation.

Ms. Lord earned a Master of Science degree in Chemistry from the University of New Hampshire, as well as a Bachelor of Science degree in Chemistry from Connecticut College.
EXHIBITOR DESCRIPTIONS

908 DEVICES
908 Devices is democratizing laboratory mass spectrometry with simple handheld and desktop devices. These devices are used at the point-of-need to interrogate unknown and invisible materials and provide quick, actionable answers to address some of the most critical problems in life sciences research, bioprocessing, pharma / biopharma, forensics and adjacent markets.

ADS, INC.
ADS, Inc. provides equipment, procurement, logistics, and supply chain solutions. We offer access to the largest product and service selection, the broadest array of procurement and contract options, and world-class expertise and support to assist you—every step of the way.

AERO PRECISION
Aero Precision is a leading manufacturer in the firearms industry. With roots in Aerospace, our quality and attention to detail are unmatched. When building something that flies, there is no margin for error. Aero always delivers extremely high-quality, American-manufactured rifles and components that your soldiers can count on.

AIMLOCK
Specializing in the development of organic autonomous precision strike weapon systems, AIMLock enhances speed, accuracy, and reduced cognitive load for deployment of lethal fires from unmanned systems. AIMLock’s CORE engine offers decision accelerating autonomy in target detection, classification, identification, sensor fusion, and target prioritization, and shortened sensor-to-shooter times.

AIMPOINT INC.
For over 40 years, Aimpoint has been the world leader in design and manufacture of electronic red dot sights for sporting and service applications. Soldier tested and combat proven – don’t settle for anything less.

APPLIED RESEARCH ASSOCIATES (ARA)
ARA is an international research and engineering company globally recognized for deploying technically-excellent, in-depth and diversified research, engineering, and technical support services to provide answers to complex and challenging problems in the physical sciences. We have a broad range of technical expertise in defense technologies, civil engineering, computer software and simulation, systems analysis, environmental technologies, and blast testing and measurement.

B&T USA
B&T USA, a Florida-based firearms, silencer and accessories manufacturer holding under license of B&T AG SWITZERLAND, which was founded in 1991 as a designer and manufacturer of the industry’s most advanced suppressors. Under the leadership of Karl Brügger, B&T AG has evolved into a world leader in the design, manufacture, and sale of the most technologically advanced, high performance weapons systems in the world. For more information on B&T USA, visit: www.bt-arms.com

BARRETT
Barrett Firearms Manufacturing, Inc. (Barrett) is the world leader in large-caliber and long-range rifle design and manufacturing. Our products are used by civilian sport shooters, law enforcement agencies, the United States military, and over 70 State Department approved countries. The Barrett Quality Management System has received the prestigious ISO 9001:2015 certification for the design and manufacture of firearms, ammunition, and accessories, and to provide training for those systems.

BREN-TRONICS, INC.
Supporting the Warfighter and EOD teams for 48+ years, all made in the US. Lithium-Ion batteries for every major military robot platform, small to large ground robots, air and sea. Chargers that get power from solar, vehicles, and other batteries in any climate between -40C / 80C. High power 24V Li-ion batteries start to power military vehicles (6T) & high energy power for mobile/fixed silent watch applications (>3 kWh). Winner: Conformal Wearable Battery (CWB) that also uses our ABC charger.

CEIA USA
CEIA Ground Search Metal Detectors provide overall superior performance in the areas of detection distance, soil compensation capability, and immunity to external interference. CEIA USA provides nationwide sales, service, and customer support to customers in North America. Dynamic solutions are the foundation of CEIA USA’s commitment to customer satisfaction. For more information about CEIA USA, visit www.ceia-usa.com

DANIEL DEFENSE, INC.
Founded in 2000 by Marty Daniel, Daniel Defense, Inc. has grown to over 350 employees. Daniel specializes in the production of world class small arms to include complete weapons systems and best in class components such as their Cold Hammer Forged Barrels provided to USSOCOM. Daniel has an unmatched production capability which is ISO 9001:2015 accredited and is located in Black Creek, GA near the port of Savannah.

DARLEY DEFENSE
Since 1908, W.S. Darley & Co. has been dedicated to serving the world’s Fire and Emergency Services and Defense organizations. Darley remains a family owned and operated business. Our entire company is committed to customer satisfaction. Darley is dedicated to excellence and offers a diverse line of quality products and services through progressive design, manufacturing and worldwide distribution.

EOD GEAR
In order to achieve mission success you need the gear that performs to the level you operate. Focusing on your mission should not include hoping your gear will perform as promised. It’s wrong to compromise on gear which could cause mission failure. EOD Gear understands the consequences you face and can guide you to the best gear that works within your budget allowing you to focus on the target in front of you and win the fight.

EOS DEFENSE SYSTEMS USA, INC.
EOS is an industry leader in Remote Weapon Station (RWS) technology and manufacturing. Continuously investing to improve currently fielded and developing systems. We have built a strong reputation as a provider of weapon systems technology for over 25 years to not only the USA and Allied Countries.

FEDERAL RESOURCES
Federal Resources serves the vast global military and government markets facing critical defense developments and other challenges. Federal Resources excels in locating and delivering the exact tools teams require to proceed, quickly and efficiently. Awarded with multiple contract vehicles and trusted partner relationships, FR can assist you with the steps for a successful mission solution, on time and on budget.

GENERAL DYNAMICS – OTS
General Dynamics Ordnance and Tactical Systems manufactures large-, medium- and small-caliber direct and indirect-fire munitions; and is a leader in the development and production of lightweight tactical vehicles, weapons and armament systems. The company also produces propellants and non-lethal and force-protection products. More Information about General Dynamics Ordnance and Tactical Systems is available online at www.gd-ots.com.

GHOST ROBOTICS
Ghost Robotics™ is revolutionizing legged robotics and the market for autonomous unmanned ground vehicles (O-UGVs) used in unstructured terrain and harsh environments. O-UGVs are rugged and unstoppable. Beyond all terrain operation, a core design principle for our legged robots is size-scalability, and reduced mechanical complexity with total software (SDK) control when compared to other legged and traditional wheeled and tracked UGVs on the market.

HDT GLOBAL
A provider of highly-engineered mobile military and emergency response solutions, HDT Global is widely recognized for its industry-leading production of state-of-the-art, fully integrated deployable solutions. With advanced systems currently being used by the U.S. and allied military units stationed worldwide, HDT’s products include robotic systems, environmental control systems, generators, heaters, air filtration devices, parachutes, aerial delivery systems, and robotics.

KGM TECHNOLOGIES
KGM Technologies is a U.S. based SDVOSB company, and a leader in the weapon suppressor industry with products that support 22LR to .50 BMG, bolt action, semi-auto, and full-auto weapons. KGM’s innovative designs and cutting-edge manufacturing processes specialize in small arms suppressor technology, weapon enhancements, material science and high-level research and development. We are the largest most innovative suppressor technology company in the US.

L3 HARRIS
Next-generation robotic systems - going into harm’s way so you don’t have to. L3Harris develops cutting-edge robotic solutions for austere and harsh environments, drawing upon more than 20 years of research in advanced robotics. Driven by the continuous feedback of active duty operators, L3Harris builds powerful, versatile platforms that ensure mission success.
LEIDOS INNOVATIONS CENTER

The Leidos Xpose Portable X-Ray (Xpose XP) CR and DR Imaging System, provides a unique multi-function capability in a single kit. The Xpose XP is both a real-time imager and a flat-bed scanner for single and mosaic digital imaging panels. The Xpose XP can be used wired, wirelessly, or unwired/unpowered for operations in denied areas and environments where minimal electronic signature is desired. The Xpose XP is lightweight, compact and IP67 rugged for use in any extreme environment.

LMT DEFENSE

Est. in 1980, Lewis Machine & Tool Company (LMT®) manufactures M4 type carbines, 7.62 x 51 rifles, and M203 40mm launchers. LMT is 100% US made and an ISO 9001:2015 registered US Govt. GSA contractor. Models include the MWS classified by the UK MOD as the L129A1 DMR and the 5.56 x 45 monolithic rifle with ambidextrous features, classified as the MARS-L, Modular Ambidextrous Rifle System. Light. Our products are currently in service with the US Govt., SOCOM, and 40 countries around the world.

MARATHON TARGETS

Marathon: COTS Autonomous Ground Robots since 2008. Our 6th Gen COTS Autonomous Robotic Target transforms live fire training from simple ‘marksmanship practice,’ into training against an Army of AI-driven robots. Lethality triples “in just one day” as ARTs react to fire by autonomously scattering for cover - or self-organizing and counterattack. Upgrading ranges to “Robot-Capable Ranges” huge construction cost avoidance. Bulletproof ARTs go 30 miles/charge. Rental fleets on 4 continents.

MAXIM DEFENSE INDUSTRIES

MAXIM DEFENSE INDUSTRIES (MDI) is a Global Burlington-based Defense Company recognized for its R&D in precision weapons systems & advanced technologies. In association with the US Department of Defense, we have created powerful and innovative firearms for the public and military sector.

MEDI-ENG

Med-Eng provides solutions for Explosive Ordnance Disposal (EOD) and related blast threats. Its Bombsuits are trusted by the Army, Navy, Air Force and Marines for EOD, Unexploded Ordinance (UXO), Demining and Counter-IED. Med-Eng offers Hook And Line systems and specialized tools for EOD, UXO, Search and Tactical operations. Its Blast Sensors for the warfighter record detailed systems and specialized tools for EOD, UXO, Search and Tactical (UXO), Demining and Counter-IED. Med-Eng offers Hook And Line tools/toolkits and solutions. Our strengths are working with end-users at DoD, federal, state and local levels to manufacture, integrate, develop and/or supply custom toolkits to meet mission needs.

MICRO-X INC.

Micro-X is an ASX-listed hi-tech company developing and commercializing Cold Cathode Carbon Nano-Tube emitter technology operating across global health, defense and homeland security domains. The technology enables X-ray tubes to be manufactured with significant reductions in weight, size, and power requirements. Originating in the medical sector the technology has transferred into the Counter EED market providing the development of leading-edge, stand-off X-ray technology.

MISTRAL INC.

Mistral Inc. serves as a “bridge” between the User requirements and innovative, relevant and ready solutions for the challenges faced while out in the field. Continuous analysis of capability gaps and existing technologies enables Mistral to stay ahead of the problems faced by Users today, tomorrow and into the future.

MITHIX PRO

Mithix Pro is a SDVO Small Business USA owned Manufacturer specializing in EOD, Combat Engineer, Special Ops and Demining. Counter-UXO, IED and Boothe Trap tools/toolkits and solutions. Our strengths are working with end-users at DoD, federal, state and local levels to manufacture, integrate, develop and/or supply custom toolkits to meet mission needs.

NATIONAL ARMAMENTS CORPORATION

NATIONAL ARMAMENTS CORPORATION (NAC) serves as the industry partner for the Department of Defense Ordnance Technology Consortium’s (DCTC) and the Aviation and Missile Technology Consortium (AMTC). Our robust, transparent, and unique collaboration approach, once considered a novel and unrealistic concept, has evolved into a well-established process through which our DoD stakeholders acquire the innovative Armament technologies needed to maintain U.S. technological superiority.

NATIONAL DEFENSE INDUSTRIAL ASSOCIATION (NDIA)

NDIA engages thoughtful and innovative leaders to promote the best policies, practices, products and technology for warfighters and others who ensure the safety and security of our nation. NDIA offers 25 chapters, 27 divisions for corporate involvement, award winning publications, and numerous conferences and trade shows annually. Corporate and individual memberships are available. US government and military are welcome to join free of charge.

NOVO USA

NOVO DR Ltd. offers the highest image quality in the portable digital radiography industry. The ruggedness and reliability of our systems combined with amazing X-Ray Images make them the best in the market. Our intuitive and easy to use products have been designed and engineered by our incredibly professional and highly experienced team! We put a strong emphasis on the following points: Highest image quality, Reliability, Easy to Use, Professional Support.

OTIS TECHNOLOGY

Otis Technology is known for manufacturing the most advanced firearms maintenance systems. The superior Breech-to-Muzzle® design combined with unmatched quality has positioned Otis as the gun care system of choice with the US Military, Hunters, Shooters and Law Enforcement professionals worldwide. Made in the USA, Otis Technology is AMERICA’S GUN CARE.

PATRIOT PRODUCTS, LLC

We specialize in the design and manufacture of Range Equipment (RTADS/TADSS), and are known for delivering custom solutions for military applications, expert field services – including maintenance of legacy systems, and standing behind our work with a full warranty ensuring client satisfaction is guaranteed. We pride ourselves on our loyalty and commitment to our customers, and hope you will let us do what we do best. Our mission will not be complete until your mission is accomplished.

PENDAR TECHNOLOGIES

Pendar X10™ offers breakthrough, short-range standoff Raman chemical identification capabilities for EOD, HAZMAT, Narcotics, Forensics, and more. It can be used at a standoff distance of up to 6 feet (2 meters), mitigates fluorescence and has minimal ignition risk with black powder and sensitive primitives. Simple point-and-shoot technology requires little training and delivers results within seconds. Pendar X10™ can be mounted on a UGV to put further distance between the operator and threat.

POINT ONE USA, LLC

Point One provides advanced EOD training, highest quality kits, systems, and training aid products such as hostage, WMD, underwater devices, ordnance, and clandestine laboratories. Our decades of experience in the SOF and EOD communities within joint, multi-agency, and national level environments ensure we are the best choice to provide the services offered, to include exercise support and research and development. As an SDVO/OSB, we are dedicated to preparing operators and bomb technicians in advancing capability.

QINETIQ, INC.

QinetiQ, Inc. provides cutting-edge technology and revolutionary products to the defense, security and military markets. Our product offerings include tactical land vehicle and aircraft protection, sensors to protect soldiers, unmanned robots in a variety of sizes and with varying capabilities and power and control systems. Customers rely on our products to enhance security, aid in personal safety, streamline operations, increase situational awareness and improve efficiencies.

RECONROBOTICS, INC.

ReconRobotics® is the world leader in tactical, throwable micro-robots. Worldwide, nearly 7,000 ReconRobotics® robots have been deployed to the U.S. military and international friendly forces, federal, state and local law enforcement agencies, bomb squads and fire/rescue teams. Each day, they use the company’s mobile Recon Scout® and ThrowBot® devices to protect their personnel, minimize collateral damage, and gain immediate reconnaissance within dangerous and hostile environments.

SIERRA NEVADA CORP

Sierra Nevada Corp is a trusted leader in best-of-breed, open architecture engineering in Space Systems, Commercial Solutions, and National Security and Defense. SNC is recognized among The Top 10 Most Innovative Companies in Space, as a Tier One Superior Supplier for the U.S. Air Force and is the only aerospace and defense firm selected as a 2020 US Best Managed Company.

SMALL ARMS DEFENSE JOURNAL

Small Arms Defense Journal is a bimonthly publication focused on small arms, accessories, soldier gear, new products, industry news, and defense trade show reviews. Small Arms Review is a 10 issue annual. It includes exercise support and research and development. As an SDVO/OSB, we are dedicated to preparing operators and bomb technicians in advancing capability.
improvements, while advancing customer service, productivity and the complex business requirements facing manufacturers. Teledyne FLIR strives to strengthen public safety and well-being, military personnel protect and save lives, promote efficiency in commercial markets. Our products help first responders and applications in government & defense, industrial, and commercial markets. Teledyne FLIR offers a diversified portfolio that serves a number of customers including to Mars, and is recognized among The Top 10 Most Innovative Companies in Space. SNC is also a Tier One Superior Supplier for the U.S. Air Force and is the only aerospace and defense firm selected as a 2020 US Best Managed Company. In the past decade, SNC has delivered state-of-the-art products to customers worldwide, including more than 6,000 space systems, subsystems and components. SNC has participated in more than 450 missions to space, including to Mars, and is recognized among The Top 10 Most Innovative Companies in Space. SNC is also a Tier One Superior Supplier for the U.S. Air Force and is the only aerospace and defense firm selected as a 2020 US Best Managed Company. From engineers and scientists to cybersecurity experts and software developers, SNC’s workforce of more than 4,000 dreams, innovates, inspires and empowers the next generation to transform humanity through technology and imagination.

SOUTHERN MACHINE WORKS

SMW is a make-to-print contract CNC machining concern providing machined components to Aerospace, Defense, and Commercial industries for over half a century. We provide precision CNC machining, fabrication, and welding services in an AS9100D + ISO9001:2015 and an ITAR controlled environment. Our central USA location is logistically advantageous for short transit times to all USA location(s). We offer prototype assistance, and excel at low, medium, and high-volume production machining.

SUREFIRE, LLC

Located in Fountain Valley, California, SureFire LLC is the leading manufacturer of high-performance flashlights, weapon-mounted lights and other tactical equipment for those who go in harm’s way, or anyone who demands the ultimate in quality, innovation and performance. SureFire illumination tools are used by more SWAT teams and elite special operations groups than any other brand. SureFire is an ISO 9001:2015-certified company.

TELEDYNE FLIR

Teledyne FLIR offers a diversified portfolio that serves a number of applications in government & defense, industrial, and commercial markets. Our products help first responders and military personnel protect and save lives, promote efficiency within the trades, and innovate consumer-facing technologies. Teledyne FLIR strives to strengthen public safety and well-being, increase energy and time efficiency, and contribute to healthy and intelligent communities. Learn more at teledyneflir.com

TIP TECHNOLOGIES

TIP Technologies’ suite of integrated modules offer a complete range of quality and compliance functions, while supporting the complex business requirements facing manufacturers today. Companies use our solutions to achieve measurable improvements, while advancing customer service, productivity and profitability. With real-time visibility into the production process, users can accelerate their reaction to a shift in quality and become more proactive about improving operational efficiencies.

TOMAHAWK ROBOTICS

Tomahawk Robotics is the leading innovator of control solutions that transform how humans and unmanned systems work together to make the world more safe and secure. From the battlefield to remote industrial sites, our technology safeguard users working under the most extreme and stressful conditions. Vekins is the only multi-domain, cross-architecture, AI-enabled control system that unlocks intuitive interaction with remote environments from across the room or around the world.

TRIJICON

Backed by a limited-lifetime warranty, Trijicon’s aiming systems are proven on the range and in the field. As a result, Trijicon has earned the trust of those who are most in need of aiming accuracy and dependability. Our customers include the United States Navy, Marine Corps, Army, Air Force, and United States Special Operations Forces; United States Government, as well as state and local Law Enforcement.

TSSI

For more than 40 years, TSSI has provided the highest quality equipment & solutions for military, law enforcement, and disaster response professionals worldwide. TSSI maintains an extensive inventory of best selling items and has established partnerships with the industry’s leading suppliers. TSSI is known for having the highest standards of integrity & professionalism. Long-term and comprehensive contracts include: DLA Tailored Logistics Support (TLS) and GSA.

T-WORX HOLDINGS, LLC

T-Worx Holdings has developed the Intelligent Rail® platform (aka “Paticinity Smart Rail”) - a patented platform technology that powers, connects, and communicates data from rifles and weapon-mounted accessories to the soldier, squad, and command centers on and off the battlefield. Developed under US Army SBIR funding and direction and selected as the NATO Powered Rail STANAG in 2015, the Smart Rail is mature and ready for insertion on all next generation weapons and legacy small arms platforms.

UDC USA

UDC produces small & medium caliber ammunition of several types, as well as support munitions and demolition products. UDC is headquartered in Tampa, Florida with offices and facilities in the Kansas City, Missouri, USA metro area. UDC specializes in munitions manufacturing, prototyping and testing, full rate production, modernization of legacy weapon systems, and training and equipping of foreign military or indigenous defense forces.

UNIT SOLUTIONS

UNIT Solutions is dedicated to being the pre-eminent non-lethal training solution for law enforcement and military worldwide. Based on direct feedback from military and law enforcement professionals, we have custom engineered an affordable solution to directly address existing training challenges, and provide the best training system on the market for realistic force-on-force and decision-making training.

ZEROPoint, INCORPORATED

Zero Point offers innovative EOD and C-WMD products, training, and services. Our products and in-house Engineering services enable effective identification, diagnostics, disablement, and disposal of threats in hazardous situations all manufactured to meet superior quality. Our goal is to provide total mission solutions designed to defeat today’s evolving threats. When you use a Zero Point product or service, Defenders are better prepared helping them come home safely.

Sponsors Descriptions

GEISSEL

Geissele Automatics is an American firearms and firearms parts manufacturer located in North Wales, Pennsylvania. William Geissele Geissele founded Geissele Automatics in 2004. Geissele is comprised of a team of highly-trained and dedicated individuals, whose mission statement is short: We Manufacture Confidence. The company first entered the civilian market by manufacturing trigger mechanisms for the AR15 rifle. Throughout the years, while we haven’t lost touch with our humble beginnings, we have evolved from manufacturers of trigger mechanisms to manufacturers of rifles and pistols for sport shooting, hunting, and personal defense. Beyond our civilian customers, Geissele is committed to servicing the U.S. Department of Defense, U.S. Federal Law Enforcement Agencies, and our allies around the world. In fact, while our first trigger, the Hi-Speed National Match, was originally designed for target shooting and the CMP and NRA Hi-Power Rifle competition, it was found to have U.S. Military applications in semi-automatic sniper weapons and, in 2005, we received a request from the Department of Defense to build a select-fire trigger like the Hi-Speed National Match trigger. Geissele then designed and built the Geissele Super Select-Fire trigger, which was eventually adopted by entities in the U.S. Special Operations community and then became their trigger of choice for M4 carbine-based weapons. Using state of the art technology and the most modern materials, we engineer, develop, and produce solutions to meet the unique and complicated needs of the modern-day warfighter. In short, We Are Weaponmakers® and we are committed to excellence in everything we do.

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KGM Technologies
Live Fire Demonstration

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Northrop Grumman
Monday Reception at the National Infantry Museum

Textron Systems
PUSHING PAST POSSIBLE
Tuesday Breakfast

General Dynamics
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Tuesday Reception

PACSCI EMC
WIFI

QinetiQ
Registration and Lanyards

RMII
Patriot

LOCK PERFECTION
Tuesday Lunch