FUTURE FORCE
CAPABILITIES
CONFERENCE & EXHIBITION

Armaments, Robotics, Munitions and EOD

September 19 - 22 | Austin, TX | NDIA.org/FutureForce22
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

Connecting Talent with Great Opportunities

This latest member benefit of the National Defense Industrial Association offers qualified defense and national security professionals and employers an intuitive platform to identify the next best opportunity or candidate. With single-sign-on, quick and advanced searches, job alerts, career resources, pre-screen questionnaires, success tracking, and more, the NDIA Career Center is the defense industry’s premier resource for career growth and advancement.

Log in and complete your profile today at Jobs.NDIA.org
ARMAMENTS DIVISION

WHO WE ARE

The Armaments Division provides a forum for industry, military, and government personnel to address issues in order to ensure a superior armament system capability today and in the future. The Division addresses armament operational needs and requirements, approaches and concepts, system integration, weapons, munitions, fire control, and logistic support. Attention is given to total systems, technology application, and state-of-the-art advancements in technology.

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 and Insensitive Munitions & Energetic Materials, and one advisory group, the Industrial Committee of Ammunition Producers.

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.
EVENT INFORMATION

LOCATION

Conference Location
Austin Convention Center
500 E Cesar Chavez St
Austin, TX 78701

Live Demo Location
Reveille Peak Ranch
105 Co Rd 114
Burnet, TX 78611

Network: Austin Convention Center

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: NDIAFFC22

MAKE THE MOST OF YOUR TIME AT THE 2022 FUTURE FORCE CAPABILITIES CONFERENCE AND EXHIBITION WITH THE EVENT APP AVAILABLE ON THE APP STORE FOR APPLE DEVICES AND GOOGLE PLAY FOR ANDROID DEVICES. BY SEARCHING “2022 FUTURE FORCE CAPABILITIES.”

Download this FREE app for complete access to: Agenda | Clickable Floorplan | Exhibitor Listing | Slido | Social Media | Speakers | Timely “Buzz” Event Updates. Build your personal itinerary, contact exhibitors by directly accessing their websites, and more! Whether logged into the event mobile app on your computer or mobile device, your Expo Plan and Itinerary will always be in sync!

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 CONTACT

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

Sarah O’Hanley
Associate Director, Exhibits & Sponsorships
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George Webster
Program Manager, Divisions
(703) 247-9491 | gwebster@NDIA.org

Andrew Peters
Associate Director, Meetings
(703) 247-2572 | apeters@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.

ANTI TRUST STATEMENT

The NDIA has a policy of strict compliance with federal and state antitrust laws. The antitrust laws prohibit competitors from engaging in actions that could result in an unreasonable restraint of trade. Consequently, NDIA members must avoid discussing certain topics when they are together at formal association membership, board, committee, and other meetings and in informal contacts with other industry members: prices, fees, rates, profit margins, or other terms or conditions of sale (including allowances, credit terms, and warranties); allocation of 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.
AGENDA

MONDAY, SEPTEMBER 19

12:00 – 7:00 pm  REGISTRATION
4TH STREET LOBBY, AUSTIN CONVENTION CENTER

2:00 – 3:00 pm  ARMY FUTURES COMMAND CAPABILITY BRIEFING – MISSILES
ROOM 18B-C, LEVEL 4, AUSTIN CONVENTION CENTER
Hunter Blackwell  
Deputy Capability Area Lead-Fires, U.S. Army DEVCOM Aviation & Missile Center

3:00 – 4:00 pm  ARMY FUTURES COMMAND CAPABILITY BRIEFING – NEXT GENERATION TECHNOLOGIES FOR ROBOTICS
ROOM 18B-C, LEVEL 4, AUSTIN CONVENTION CENTER
Dr. Brett Piekarski  
Chief Scientist, Computational & Information Sciences Directorate, U.S. Army DEVCOM Army Research Laboratory
Dr. Elias Rigas  
Mechanical Engineer, U.S. Army DEVCOM Army Research Laboratory

TUESDAY, SEPTEMBER 20

7:00 am – 6:30 pm  REGISTRATION
4TH STREET LOBBY, AUSTIN CONVENTION CENTER

7:00 – 8:00 am  NETWORKING BREAKFAST
4TH STREET LOBBY, AUSTIN CONVENTION CENTER

8:00 – 8:15 am  OPENING REMARKS
BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER
The Hon. David L. Norquist  
President & CEO, NDIA

8:15 – 9:15 am  KEYNOTE SPEAKER
BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER
LTG Thomas Todd III, USA  
Deputy Commanding General, Acquisition & Systems Management, Chief Innovation Officer, U.S. Army Futures Command

9:00 am – 6:30 pm  EXHIBIT HALL OPEN
EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER

9:15 – 9:45 am  NETWORKING BREAK
EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER
9:45 – 10:35 am  GUEST SPEAKER PANEL  
BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER  
Chris Grassano  
Deputy Program Executive Officer, Armaments & Ammunition  
Moderator  
Anthony Sebasto  
Acting Director, U.S. Army Futures Command Armaments Center  
Scott Adams  
Program Manager, Ammunition, Marine Corps Systems Command  
Nathan Hawley  
Director, Munitions and Logistics Readiness Center, U.S. Army Joint Munitions Command

10:35 – 11:20 am  WHY NOT HYPERSONIC WEAPONS?  
BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER  
Dr. Mark Lewis  
Executive Director, Emerging Technologies Institute (ETI)

11:20 am – 12:30 pm  NETWORKING LUNCH  
EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER

4:55 – 6:30 pm  NETWORKING RECEPTION  
EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER

WEDNESDAY, SEPTEMBER 21

7:00 am – 4:55 pm  REGISTRATION  
4TH STREET LOBBY, AUSTIN CONVENTION CENTER

7:00 – 8:05 am  NETWORKING BREAKFAST  
4TH STREET LOBBY, AUSTIN CONVENTION CENTER

8:05 – 8:15 am  OPENING REMARKS  
BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER  
The Hon. David L. Norquist  
President & CEO, NDIA

8:15 – 9:00 am  KEYNOTE SPEAKER  
BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER  
Col Corey Beaverson, USAF  
Prototyping & Experiments Directorate, Office of the Under Secretary of Defense for Research & Engineering (OUSD(R&E))

9:00 am – 3:00 pm  EXHIBIT HALL OPEN  
EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER

9:00 – 9:30 am  NETWORKING BREAK  
EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER
9:30 – 10:15 am  
**KEYNOTE SPEAKER**  
**BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER**  
President Volodymyr Zelenskyy  
President of Ukraine  
*Virtual*  
H.E. Oleksii Reznikov  
Minister of Defence, Ukraine  
*Virtual*

10:15 – 10:40 am  
**MODERN TRENDS & DEVELOPMENTS IN WEAPONS THREATS**  
**BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER**  
Dan Shea  
General Director, Phoenix Defence

10:40 - 10:45 am  
**MAYOR’S WELCOME**  
**BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER**  
The Hon. Micheal J. Bayer  
Vice Chairman, NDIA Board of Directors  
*Introducer*  
Steve Adler  
Mayor of Austin, Texas

10:45 – 11:45 am  
**AWARDS PRESENTATION**  
**BALLROOM D, LEVEL 4, AUSTIN CONVENTION CENTER**  
Glock, Inc.  
The Ambrose Industry Award  
Dr. Brett Bagwell  
The Chinn Award  
Mark McFadden  
The Hathcock Award  
Robert Wheeler  
The Trifiletti Award

11:45 am – 1:00 pm  
**NETWORKING LUNCH**  
**EXHIBIT HALL 5, LEVEL 1, AUSTIN CONVENTION CENTER**

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**THURSDAY, SEPTEMBER 22**

10:00 am  
**DEPARTURE FROM AUSTIN CONVENTION CENTER**

11:30 am  
**ARRIVE AT REVEILLE PEAK RANCH**

11:30 am – 12:30 pm  
**LUNCH PROVIDED BY LARUE TACTICAL**

12:30 – 4:00 pm  
**ATTENDEE SECURITY BRIEF AND DEMO**

2:00 pm  
**EARLY BUS DEPARTURE TO AUSTIN CONVENTION CENTER**

4:00 pm  
**DEPARTURE TO AUSTIN CONVENTION CENTER**
### Robotics
- **Matt Dooley, Division Chair**
- **Level 4, Room 18A**

#### 12:30 – 12:50 pm
**Universal Common Controller Panel**
- COL Andy Boston, USA (Ret)
- Consultant/Principal, Multi-Domain Consulting LLC
- Coordinator
- Colin Brodmerkel
- Director, Business Development, Tomahawk Robotics
- MAJ Cory Wallace, USA
- Robot Combat Vehicle Lead, Next Generation
- Combat Vehicle Cross-Functional Team
- Matt Dooley
- Chair, NDIA Robotics Division

**PM Soldier Lethality Session**
- COL Scott Madore, USA
- Product Director, Soldier Lethality, U.S. Army
- Moderator
- David Oatley
- Product Director, Crew Served Weapons, U.S. Army
- Barbara Muldowney
- Deputy Product Manager, Individual Weapons, U.S. Army
- LTC Joshua Headley, USA
- Product Manager, Next Generation Weapons, U.S. Army

#### 1:30 – 1:50 pm
**Joint Service Small Arms Synchronization Team**
- Gus Funcasta
- Chief, Joint Service Small Arms Program Office, Armaments Center, U.S. Army DEVCOM, U.S. Army Futures Command
- Moderator
- MAJ Marcus Farmer, USA
- Maneuver Capabilities & Integration Directorate (MCID), U.S. Army Futures Command
- Christopher Woodburn
- Deputy, Maneuver Branch, Mania Corps
- Capabilities Development Directorate
- LCDR Werner Reschmeier, USN
- Surface Warfare Weapons Branch, OPNAV N96C
- Christopher Graham
- Deputy Chief, Use of Force Office, Office of Specialized Capabilities, Headquarters U.S. Coast Guard
- Eugene Rooke
- Deputy Program Manager, SOF lethality, USSOCOM

### Small Arms
- **Steve Fartech, Committee Chair**
- **Level 4, Ballroom D**

#### 12:50 – 1:10 pm
**JPEO A&A Summary**
- Chris Grassano
- Deputy Program Executive Officer, U.S. Army Joint Program Executive Office Armaments & Ammunition (JPEO-A&A)
- Moderator
- David Oatley
- Product Director, Crew Served Weapons, U.S. Army
- Barbara Muldowney
- Deputy Product Manager, Individual Weapons, U.S. Army
- LTC Joshua Headley, USA
- Product Manager, Next Generation Weapons, U.S. Army

#### 1:10 – 1:30 pm
**Overview of PM MAS**
- LTC Paul Santamaria, USA
- Product Manager, Medium Caliber Ammunition, U.S. Army Joint Program Executive Office Armaments & Ammunition (JPEO-A&A)

#### 1:50 – 2:20 pm
**24534 Rapid Development of Secure Robotic Platforms**
- Dr. Hal Aldridge
- Chief Executive Officer, Secmation

### GARM/Munitions
- **Matthew Phillips, GARM Committee Chair**
- **Dan McLaughlin, Munition Conference Planning Chair**
- **Level 4, Room 18B-C**

#### 24726 Evolving Armament Systems to Support Multi-Domain Operations
- Jonathan Ross
- Director, Strategy & Market Intelligence, Marin Engineering Co., Inc.

#### 24706 Hypersonic Aerial Gunnery Ammunition
- Dr. Ronald Barrett
- Professor, University of Kansas

#### 24735 Non-Lethal Counter-Personnel Tactical Robotic Energetic Delivery Systems (TREDS)
- John Chapman
- Chief Executive Officer, Liberty Dynamic

#### 24826 Modernized GPS and Digital Anti-Jam Contributions to the Range and Lethality Challenge to MDO/JADO
- Justin Wymore
- Customer Requirements Manager, BAE Systems, Inc.

### UEA/GARM/EOD
- **Alan Kull, UEA Committee Chair**
- **Matthew Phillips, GARM Committee Chair**
- **Dan McLaughlin, EOD Committee Chair**
- **Level 4, Room 18D**

#### 24496 Advanced Textiles Bring a New Level of Comfort & Performance to EOD Personal Cooling Systems
- James McLaughlin
- Strategic Business Development, Karron Products, Inc.
The company first entered the civilian market by manufacturing trigger mechanisms for the AR15 rifle. While we haven’t lost touch with our humble beginnings, we have evolved and now also manufacture firearms for sport shooting, hunting, and personal defense. Geissele is also committed to servicing the Department of Defense, law enforcement agencies, and our allies around the world. Our first trigger, the Hi-Speed National Match, was originally designed for target shooting and the CMP and NRA Hi-Power Rifle competition, but was found to have U.S. Military applications and, in 2005, we received a request from the DoD to build a select-fire trigger like the Hi-Speed National Match trigger. Geissele then designed and built the Super Select Fire trigger, which was adopted by entities in the U.S. Special Operations community and became their trigger of choice for M4 carbine-based weapons. Using state of the art machine 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® committed to excellence in everything we do.
**Robotics**
Matt Dooley, Division Chair

**Small Arms**
Steve Faintich, Committee Chair

**GARM/Munitions**
Matthew Phillips, GARM Committee Chair
Don McLaughlin, Munition Conference Planning Chair

**UEA/GARM/EOD**
Alan Kull, UEA Committee Chair
Matthew Phillips, GARM Committee Chair
Leo Bradley, EOD Committee Chair

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**Level 4, Room 18A**

**24835**
Emerging Armament Technologies for Unmanned Systems

Lucious Taylor IV
Chief Engineer, Naval Surface Warfare Center

**NATO Panel**
Mark McFadden
JSIARI Chairman, U.S Head of Delegation to NATO
Dismounted Soldier Systems, Weapons & Sensors Subgroup Moderator

Adam Jacob
Chairman, NATO Dismounted Soldier Systems (DSS)/Weapons and Sensors Subgroup (WSSG) - Suppressor Team of Experts

Matthew Kretlow
U.S. Army Representative to NATO Dismounted Soldier Systems (DSS)/Weapons and Sensors Subgroup (WSSG)

Dr. David Dye
U.S. Navy Crane Representative to NATO Dismounted Soldier Systems (DSS)/Weapons and Sensors Subgroup (WSSG)

Matthew Phillips
U.S. Army Representative to NATO Dismounted Soldier Systems (DSS)/Weapons and Sensors Subgroup (WSSG)

Leo Bradley
Canadian Head of Delegation to NATO Dismounted Soldier Systems (DSS)/Weapons and Sensors Subgroup (WSSG)

**IBAT Presentation & Demo**
Rob Roy
President, Decision Science Incorporated
LaDonna Schneller
IBAT Program Manager, Decision Science Incorporated

**Closing Remarks**
Matt Dooley
Chair, NDIA Robotics Division

**Closing Remarks**
Steve Faintich
Chair, NDIA Small Arms Committee

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**Level 4, Room 18B**

**24723**
Supervised Autonomous Function Executive: An Autonomy Enabler

Dean Barten
Senior Principal Engineer, MTSI

**Closing Remarks**
Don McLaughlin
President, T-Worx Technologies

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**SPONSOR DESCRIPTIONS (CONTINUED)**

**TUESDAY LUNCH SPONSOR**

**GLOCK**
As a global leader in firearms manufacturing, GLOCK provides quality firearms to military, law enforcement, and civilians worldwide. For 36 years in the United States, GLOCK products have become a favorite among many by offering a polymer-based pistol featuring the renowned Safe-Action System. Being a global leader in the industry, GLOCK’s dedication to quality, innovation, and the pursuit of perfection continues to surpass the needs of loyal customers. For more information, visit us.glock.com.

**WEDNESDAY BREAKFAST SPONSOR**

**Nammo**

Nammo is a technology-driven aerospace and defense company specializing in high-performance solutions for customers. As a leading provider of ammunition and rocket motors for military and civilian customers around the globe, Nammo operates through four business units: Commercial Ammunition, Small and Medium Caliber Ammunition, Large Caliber Systems, and Aerospace Propulsion. The company’s portfolio of products includes, but is not limited to: polymer-cased ammunition, true fire-from-enclosure shoulder-launched munitions (M72 FFE), scalable offensive hand grenades, large scale propellant production, and composite solutions.

Nammo is engaged in designing, developing and testing new technologies to enhance existing platforms and systems including long range precision fires; ammunition that’s effective in all environments; hybrid rocket engines; and critical ejection seat pyrotechnic components. With decades of experience Nammo also manages complex projects to safely and securely complete demilitarization processes in an environmentally responsible manner.

With the United States division headquartered in Arizona and the corporate headquarters in Norway, Nammo has more than 2,700 employees; operates 28 manufacturing and production sites; and has a presence in 12 countries.
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<thead>
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<th>Time</th>
<th>Session Title</th>
<th>Speaker</th>
<th>Institution</th>
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<td>1:00 – 1:20 pm</td>
<td>Gesture Control for Small UAS and UAV Systems</td>
<td>Pete Moutsatsou</td>
<td>Vice President, Business Development, Pison Technology</td>
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<td>Suppressors Session</td>
<td>Adam Jacob</td>
<td>Chairman, NATO Dismounted Soldier Systems (DBS)/Weapons and Sensors SubGroup (WWSS) Suppressor Team of Experts</td>
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<td>Bang or Pop</td>
<td>Dr. Michelle Swearingen</td>
<td>U.S. Army Corps of Engineers, Engineer Research and Development Center, Construction Engineering Research Laboratory</td>
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<td></td>
<td>Effects of Sound on the Human Ear</td>
<td>Ruth Foutz</td>
<td>U.S. Army Public Health Center</td>
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<td>Human Eye Perception of Flash</td>
<td>Dr. David Dye</td>
<td>NSWC Crane</td>
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<td>Localization of Shooter Position Based on Weapon Signature</td>
<td>Dr. Paul Fedele</td>
<td>U.S. Army, DEVCOM ARL</td>
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<td>Outdoor Acoustics</td>
<td>Timothy Cler</td>
<td>Mechanical Engineer, U.S. Army DEVCOM ARL</td>
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<td>Tactical Advantage by Sound and Visual Suppression</td>
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<td>High-Temperature Evaluation of Suppressor Covers</td>
<td>Dan Saechle</td>
<td>U.S. Army DEVCOM ARL</td>
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<td>Flow Through and Reverse Flow Suppressors - Advanced Designs to Address Modern Suppression Challenges</td>
<td>Ernest Bray</td>
<td>XT Dev Group</td>
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<td>Surefire's Advanced Suppressor Program - Blending Science, Technology, and Experience Infring Nest Generation Signature Suppression to the Warfighter</td>
<td>Barry Dueck</td>
<td>Surefire</td>
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<td>Ryan Steven Glasby</td>
<td>Oak Ridge National Laboratory</td>
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<td>2:20 – 2:50 pm</td>
<td>Networking Break</td>
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**Robotics**
Matt Dooley, Division Chair
Level 4, Room 18A

2:50 – 3:10 pm
24712 - Mission Planning for Multiple Autonomous CBRN Robotic Platforms
Kurt Bruck
Division Manager, Neya Systems

Dr. Brandon Concour  
Chief Executive Officer, Practical Scientific Solutions, Inc.

2:30 – 3:30 pm
24740 - A Literature Review of Simulation Fidelity and Transfer of Training for Autonomous Vehicles
Professor Christopher Johnson  
Assistant Professor, Embry-Riddle Aeronautical University

2:50 – 3:50 pm
24508 - Air Force Civil Engineer Robotic Applications  
Steven Bailey  
Research Engineer, Air Force Civil Engineer Center

3:10 – 4:10 pm
24741 - An Alternate Method for Determining Penetration Limit Velocities Using Residual Velocity Data
Kenneth Hohnecker  
Mechanical Engineer, U.S. Army DEVCOM-AC  
24722 - Full Performance Reduced Range Bullets R2: A Revolutionary Technology for Minimizing Collateral Damage
Kevin Sullivan  
Nostrum, LLC  
24769 - Dynamic Motion of Carbon Fiber Over-Wrapped Rifle Barrels
Timothy Cler  
Mechanical Engineer, Army Research Laboratory

3:30 – 4:30 pm
Closing Remarks
Matt Dooley  
Chair, NDIA Robotics Division

4:10 – 4:30 pm
Closing Remarks
Steve Faintich  
Chair, NDIA Small Arms Committee

**Small Arms**
Steve Fantinch, Committee Chair
Level 4, Ballroom D

2:50 – 3:10 pm
Small Arms Technology Development
Ross Towers  
Lead for Soldier Lethality CFT (A), U.S. DEVCOM Armaments Center  
Moderator
24699 - Small Arms Point Defense Systems (SAPDS)
Matthew Thompson  
Engineer, NSWC Crane  
Suppressor Condensation, Sustainment
Dr. Leslie Fleming  
Engineer, Small Arms Signature Lab, Naval Surface Warfare Center  
24824 - Advancements in Armor Piercing Ammunition
Jay Bell  
Business Development, UDC USA, Inc.  
Matthew Young  
Technical Director, UDC USA, Inc.

2:4714 - Small Arms Point Defense Systems (SAPDS)
Matthew Thompson  
Engineer, NSWC Crane  
Suppressor Condensation, Sustainment
Dr. Leslie Fleming  
Engineer, Small Arms Signature Lab, Naval Surface Warfare Center  
24824 - Advancements in Armor Piercing Ammunition
Jay Bell  
Business Development, UDC USA, Inc.  
Matthew Young  
Technical Director, UDC USA, Inc.

2:30 – 3:30 pm
24890 - Supersonic Extreme Material Penetrator (XMP) and Subsonic Penetrator (SUB-P)
Thomas Campion  
Sales Director, USA, DSG Technology  
24741 - Engaging Underwater Threats with Supercavitating Ammunition
Torgrim Joergensen  
Senior Vice President, Business Development, DSG Technology

2:50 – 3:50 pm
24508 - Air Force Civil Engineer Robotic Applications  
Steven Bailey  
Research Engineer, Air Force Civil Engineer Center

3:10 – 4:10 pm
24727 - An Alternate Method for Determining Penetration Limit Velocities Using Residual Velocity Data
Kenneth Hohnecker  
Mechanical Engineer, U.S. Army DEVCOM-AC  
24722 - Full Performance Reduced Range Bullets R2: A Revolutionary Technology for Minimizing Collateral Damage
Kevin Sullivan  
Nostrum, LLC  
24769 - Dynamic Motion of Carbon Fiber Over-Wrapped Rifle Barrels
Timothy Cler  
Mechanical Engineer, Army Research Laboratory

3:30 – 4:30 pm
Closing Remarks
Don McLaughlin  
President, T-Worx Technologies

**GARM/Munitions**
Matthew Phillips, GARM Committee Chair
Level 4, Room 18B-C

2:50 – 3:10 pm
24554 - Blast Amplifying Projectile Bodies for Medium and Large Caliber Projectiles
Robert Polaron  
Chief Executive Officer, RP Technology LLC

2:4721 - XM813 Bushmaster Chain Gun & Linkless Anti-Hot Technology and Its Integration Into the Stryker MCWS
Jesse Bahrman  
Senior Principal Systems Engineer, Northrop Grumman Corporation  
Vince Virga  
Project Engineer, Robotics Worldwide, Inc.

2:30 – 3:30 pm
24707 - Outgunning the A-10 With an Apache or Fara: New Flight-Safe Discarding Sabot Ammunition for Attack Rotorcraft
Dr. Ronald Barrett  
Professor, University of Kansas

Jonathan Geymer  
Technical Intern, ARA

2:50 – 3:50 pm
24554 - Blast Amplifying Projectile Bodies for Medium and Large Caliber Projectiles
Robert Polaron  
Chief Executive Officer, RP Technology LLC

3:10 – 4:10 pm
24707 - Outgunning the A-10 With an Apache or Fara: New Flight-Safe Discarding Sabot Ammunition for Attack Rotorcraft
Dr. Ronald Barrett  
Professor, University of Kansas

3:30 – 4:30 pm
24833 - Highest Performing, Lowest CSWP MEMS IMU for Precision Guided Munitions
Louis Ross  
Chief Executive Officer, MEI Micro, Inc.

3:50 – 4:10 pm
24707 - Outgunning the A-10 With an Apache or Fara: New Flight-Safe Discarding Sabot Ammunition for Attack Rotorcraft
Dr. Ronald Barrett  
Professor, University of Kansas

4:10 – 4:30 pm
24832 - Assessing Potential Capability Enhancements of Hand Grenades Filled with CL-20 Compared to Current MK3A2 & M67 Hand Grenades
Jonathan Geymer  
Technical Intern, APA

**UEA/GARM**
Matthew Phillips, GARM Committee Chair
Level 4, Room 18D

2:50 – 3:10 pm
24554 - Blast Amplifying Projectile Bodies for Medium and Large Caliber Projectiles
Robert Polaron  
Chief Executive Officer, RP Technology LLC

2:4721 - XM813 Bushmaster Chain Gun & Linkless Anti-Hot Technology and Its Integration Into the Stryker MCWS
Jesse Bahrman  
Senior Principal Systems Engineer, Northrop Grumman Corporation  
Vince Virga  
Project Engineer, Robotics Worldwide, Inc.

2:30 – 3:30 pm
Legislative Update
Jay Brannam  
Executive Director, Munitions Industrial Base Task Force

Jonathan Geymer  
Technical Intern, ARA

2:50 – 3:50 pm
24554 - Blast Amplifying Projectile Bodies for Medium and Large Caliber Projectiles
Robert Polaron  
Chief Executive Officer, RP Technology LLC

3:10 – 4:10 pm
24707 - Outgunning the A-10 With an Apache or Fara: New Flight-Safe Discarding Sabot Ammunition for Attack Rotorcraft
Dr. Ronald Barrett  
Professor, University of Kansas

3:30 – 4:30 pm
Utility of Drones in Modern Warfare
Stavros Daskos  
President, ING Robotic Aviation, Inc.

4:10 – 4:30 pm
24833 - Highest Performing, Lowest CSWP MEMS IMU for Precision Guided Munitions
Louis Ross  
Chief Executive Officer, MEI Micro, Inc.

4:10 – 4:30 pm
Closing Remarks
Matthew Phillips  
Chair, NDIA GARM Committee
ABSTRACT SUMMARIES

EOD

24496
Advanced Textiles Bring a New Level of Comfort & Performance to EOD Personal Cooling Systems
James McLaughlin

Military operations have increased in hot climates where human performance is highly subject to time limitations. Kennon has demonstrated that a better cooling system, designed to the latest science and advanced textile technology, addresses these requirements with a unique design that flows cold carbon dioxide through a scientifically-tailored and channeled vest or bodysuit.

GARM

24554
Blast Amplifying Projectile Bodies for Medium and Large Caliber Projectiles
Robert Folaron

This presentation discusses a molded projectile body application which enhances explosive filler and fragmentation effects.

24707
Outgunning the A-10 with an Apache or FARA: New Flight-Safe Discarding Sabot Ammunition for Attack Rotorcraft
Dr. Ronald Barrett

This presentation summarizes the latest progress in Flight Safe Discarding Sabot (FSDS) ammunition for attack rotorcraft. This new class of aerial gurney ammunition is shown to possess dramatically more KE on target, greater ranges, flatter trajectories, and tighter CEPs than conventional M50 and PGU-series 20mm ammunition and lower costs than the M789 30mm ammunition as well.

24720
Introduction to the Dual Feed M230LF/XM914 Chain Gun
John Inman

An introduction to the Dual Feed M230LF/XM914 which will allow the operators to carry two different ammunition types. High-level details will be provided on the weapon design, integration requirements, and current development status.
**XM813 Bushmaster Chain Gun & Linkless AHS Technology & its Integration into the Stryker MCWS**

**Jesse Behrens**

This presentation will discuss the development history of the XM813 as well as its design differences between other Mk44 Bushmaster Chain Guns. A high-level overview of the XM813 integration into the Stryker MCWS turret will be provided. In addition, an overview of Nobles Worldwide linkless ammunition handling technology will be presented.

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**Assessing Potential Capability Enhancements of Hand Grenades Filled with CL-20 Compared to Current Mk3A2 & M67 Hand Grenades**

**Jonathan Geymer**

Potential capability enhancement of grenade filled with CL-20 contrasted with conventional fill grenades.

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**Highest Performing, Lowest CSWaP MEMs IMU for Precision Guided Munitions**

**Louis Ross**

Description of the first chip-scale, multi-axis MEMs inertial sensor system platform for precision guided munitions.

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**ROBOTICS**

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**Air Force Civil Engineer Robotic Applications**

**Steven Bailey**

This presentation will inform the audience about the Air Force Civil Engineer Center Airbase Technology Branch’s mission; capability areas; and robotics research, development, test, and evaluation efforts which support Air Force explosive ordnance disposal and civil engineer airmen performing airfield damage repair.

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**Rapid Development of Secure Robotic Platforms**

**Dr. Hal Aldridge**

The operational applications of robotic systems and their software complexity are evolving rapidly necessitating a renewed emphasis on required cybersecurity standards to operate in contested environments. This presentation will discuss DevSecOps and cybersecurity challenges unique to robotic systems and the new technologies available to enable rapid development and cybersecurity certifications/Authority to Operate.

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**Mission Planning for Multiple Autonomous CBRN Robotic Platforms**

**Kurt Bruck**

Neya Systems has been developing a mission planning software suite to task and coordinate fleets of autonomous air and ground CBRN vehicles.

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**Defensive Squad Equipment Transport (DSET): An Autonomous Platform for Ground-Based Warfighter Protection, Supply, Navigation & Evacuation**

**Dr. Brandon Conover**

A robotic, autonomous platform prototype showcases capabilities in Warfighter protection under fire, personnel re-supply, navigational assistance, and emergency evacuation. A unique drivetrain has been coupled with computer vision and robotics resulting in a force multiplier for ground-based units.

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**Supervised Autonomous Function Executive: An Autonomy Enabler**

**Dean Barten**

Certification of autonomous vehicle behavior can be greatly enabled if an independent safety net is placed around the vehicle.

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**One Size Fits None: Integrating Unmanned Systems from the Bottom Up**

**Bryan Clark**

Realizing the benefits of unmanned systems requires an approach for integrating them into teams that establish their tactics, networks, and force compositions in mission time.

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**A Literature Review of Simulation Fidelity & Transfer of Training for Autonomous Vehicles**

**Professor Christopher Johnson**

There is ample research that details the effectiveness of simulation for training human operators for the cognitive demands of high-risk work environments. However, more research is needed to guide practitioners in using simulation to train and test artificial intelligence for autonomous agents such as robotic vehicles, so we conducted a literature review to consolidate what has been published to date on the topic, the details of which are provided herein along with suggestions for filling gaps in the literature.

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**Person Tracking, Re-Identification & Threat Detection by Autonomous Unmanned Systems within Complex Urban Environments**

**Dr. Matt Brown**

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**AFRL Autonomous Collaborative Enabling Technology**

**LtCol Lawrence Ware, USAF**

Autonomous Collaborative Enabling Technologies (ACET) integrates technologies across AFRL to support Autonomous Collaborative Platform Mission concepts as well as Multi-Domain Collaboration.
Gesture Control for Small UAS and UAV Systems
Pete Moutsatsos

Gesture control of small unmanned systems is gaining favor over manual control to enable enhanced situational awareness for warfighters.

Free Space Optics (FSO) Lightwave Non-RF Data Communications for Robotic Systems in RF Denied Environments
Dr. Leo Volfson

Radio frequency (RF) control systems currently used on unmanned systems, representing everything from Predator drones to EOD unmanned ground vehicles, are vulnerable to barrage and deception electronic warfare degradation.

FSO systems operate with impunity in radio-frequency (RF) denied, contested and congested environments, and when RF is undesired, i.e. covert operations, EMCON, or personnel or asset safety during fuel and ordinance transfer.

Such a system would support cooperative sensing functionality via FSO similar to how the F35 uses such sensing over Link 16. Our system could be used as a Non-RF “Link 16” for Robotics in a denied environment.

Emerging Armament Technologies for Unmanned Systems
Lucious Taylor IV

Army Futures Command (AFC)/Combat Capabilities Development Command (DEVCOM)/Armament Center (AC) and Naval Surface Warfare Center, Crane are collaborating in the ongoing Joint Tactical Unmanned Armaments Working Group (JTUAWG). The working group is a network of Army and Navy Laboratories that collaborate to develop small/miniature weapons for smaller Unmanned Systems in the land, air, and sea domains. This multi-domain capability will ultimately save friendly lives by giving small combat units the ability to conduct armed reconnaissance, and optionally engage the enemy with scalable effects, and without exposing warfighters to enemy fire.

Small Arms Point Defense Systems (SAPDS)
Matthew Thompson

The Small Arms Point Defense System project is evaluating multiple enabling technologies for crew-served weapons to improve warfighter performance against small, maneuvering targets.

Determining Representative Travel Distances for Small Arms Ammunition
Shawn Spickert-Fulton

This presentation will look at the effect of drag on max range estimates for training ammunition.

Full Performance Reduced Range Bullets R2: A Revolutionary Technology for Minimizing Collateral Damage
Kevin Sullivan

A new small caliber ammunition with reduced range, reduced ricochet using a eutectic core.

An Alternate Method for Determining Penetration Limit Velocities Using Residual Velocity Data
Kenneth Hohnecker

This presentation will demonstrate an alternative method for determining penetration limit velocities of small arms projectiles from test data. The method uses the residual velocity of the projectile after penetrating the target in order to obtain a more accurate limit velocity prediction as compared to traditional binary regression models (i.e., methods that only record penetration or no penetration).

The Theory Behind DEVCOM Armaments Center’s Gelatin Terminal Assessment Process
Gavin McFarland

This presentation will provide the theory behind how DEVCOM AC dissects, analyzes, and assesses terminal data from gelatin block testing.

Engaging Underwater Threats with Supercavitating Ammunition
Torgrim Joergensen

DSG’s patented supercavitating ammunition is designed to initiate a cavitation bubble at its nose which reduces the skin friction drag on the supercavitating round, allowing the bullet to travel at high speed through the water. Additionally, the use of tungsten material allows this ammunition to offer exceptional armor piercing capability against multi-layer structures, structures of unique materials, and improved body armor materials.
Dynamic Motion of Carbon Fiber Over-Wrapped Rifle Barrels
Timothy Cler
Testing barrel whip and dispersion correlations of Carbon Fiber over-wrapped barrels.

Supersonic eXtreme Material Penetrator (XMP) and Subsonic Penetrator (SUB-P)
Thomas Campion
DSG’s patented supersonic “eXtreme Material Penetrator (XMP)” ammunition is designed to defeat hard targets. These projectiles have a very high Ballistic Coefficient and are very accurate (Sub 1 MOA). The SUB-P version is the same projectile loaded for subsonic performance.

Advancements in Armor Piercing Ammunition
Jay Bell
UDC has been working on advanced Armor Piercing Projectiles in 308 to 338 Calibers.

UEA

Hypersonic Aerial Gunnery Ammunition
Dr. Ronald Barrett
This presentation summarizes the latest progress in hypersonic ammunition for fixed- and rotary-wing attack aircraft. This new class of aerial gunnery ammunition is designed to cut times of flight and CEP dramatically while maintaining extremely flat trajectories and high levels of KE on target while introducing no increase in recoil forces to the airframe.

Evolving Armament Systems to Support Multi-Domain Operations
Jonathan Ross
Our focus is on the continued evolution of armament solutions to support multi-domain operations by providing operators with the flexibility to configure platforms to safely carry and release multiple stores types and increase stowed kills.

Non-Lethal Counter-Personnel Tactical Robotic Energetic Delivery Systems (TREDS)
John Chapman
TREDS (Tactical Robotic Energetic Delivery System) is an energetic payload delivery system for integration on small tactical vehicles/platforms and small manned and unmanned systems (UxS). A multi-mission payload capability fosters discretion and pinpoint accuracy with optimized system size, weight, and power consumption.

Modernized GPS and Digital Anti-Jam Contributions to the Range and Lethality Challenge to MDO/JADO
Justin Wymore Sr.
This presentation will discuss the role of precision geolocation in achieving weapons lethality at extended ranges and with autonomous loitering munitions; the trade space between the guidance, navigation, and control (GNC) components required to achieve that precision; define and distinguish absolute precision PNT; define the Radio Frequency (RF)-challenged conditions impacting the effectiveness of GPS-based PNT solutions; and present a model by which to understand, prioritize, and defeat those threats.

Lone Wolf: Weaponized Quadruped Unmanned Ground Vehicle (Q-UGV)
Bhavanjot Singh
Weaponized Small Quadruped Unmanned Ground Vehicles (Q-UGVs) can help provide lethality and significant capability enhancement over difficult terrain and small spaces.
24494
Scorpion Mobile Mortar System
Michael Cherry
Director of Product Development
Scorpion Mobile Mortar system is a fully digital, INSANELY FAST mobile mortar system that revolutionizes how mortars are used on the battlefield. This 81mm/120mm interchangeable mortar system has a shoot and scoot capability that fires eight rounds on target (from park to drive away) in under two minutes.

24497
Zinc EPR Slug
Tyler Holland
5.56mm APO, DEVCOM-AC
Feasibility study to investigate potential materials that can be used to replace copper as the primary material for slugs in lead free ammunition. Performance impacts related to this change are analyzed.

24539
Eliminating Threading For Medium Caliber Projectile Assembly With Advanced Adhesives
Harry Arnon
CEO, Hernon Manufacturing, Inc.
Threads need structures to fit into better dedicated to fragments and energetics. Whenever you thread on a nut to a bolt or stud, you sacrifice the areas of the thread height and supporting structures behind the threads in your internal volume package.

24542
Countering The Root Cause Behind Barrel Erosion With Nano-Particulate Refractory Metals
David Tubb
CEO, TUBB Precision, Inc.
A Barrel Treatment That Does More Than Treat The Symptoms Of Barrel Erosion And Wear

24547
Advanced Condition Based Maintenance Retrofits For Ammunition Production.
Howard Kent
CEO, Armor Development Group LLC.
We’re not talking predicting the future by analyzing the past: It’s about affordable real time networked parametric monitoring.

24550
Dual Purpose Armor Penetrating And Personal Defense Handgun Ammunition
Cameron Hopkins
CEO, Super Vel Ammunition, Inc.
Defeating threats wearing soft body armor and highly effective without armor.

24553
Frangible Ammunition For Explosive Ordnance Disposal Missions:
Sueax Larreau
Director Of Ammunition, Maxim Defense Ammunition
Frangible ammunition for explosive ordnance disposal missions because sometimes you want more than one shot.

24570
The Fastest Way For Governments Around The World To Obtain US Military Standard Ammunition
Jerry Luger
International Sales, OLIN Winchester
An educational introduction to commercial sales from lcaap and second source manufacturers.

24573
Rapid Deploying Shoulder Support Speed Bar For Spade Grip Weapons:
Howard Kent
CEO, Armor Development Group LLC.
Rapid deploying shoulder support speed bar for spade grip weapons: the same functionality as the MK93 mount version, except for the rest of us.

24579
Variations in bolt face and extraction forces in small caliber weapon systems due to cartridge case material
Raymond Chaplin
Mechanical Engineer, CCDC-AC
A study on the impact on bolt face and extraction forces due to changes in cartridge case materials. Brass, Polymers, and high strength steel cases are compared.

24581
Howard Kent
Consultant, Armament Mechanical LLC
Because why not test multiple non-conflicting items at once?

24634
Robotic TRAP T-360 Ultra-Light ROWS
John Warner
Strategic Account Manager, IEC INFRARED SYSTEMS / PRECISION REMOTES
The T-360 is a lightweight remotely operated weapon system used on robotic UGV, LTAV, APC, and MRZR to increase lethality and soldier fire suppression accuracy.
Combat Optimized Ballistic Remote Armament (COBRA)
Alexander Smith
U.S. Army, CCDC AC

COBRA is a purpose built remote weapon station designed with size, weight, and power as key considerations.

5.56mm Single Barrel Externally Powered Weapon for Remotely Operated Systems
Alexander Smith
U.S. Army, CCDC AC

US Army DEVCOM Armaments Center has been working with McNally Industries LLC to develop a lightweight single barrel externally powered 5.56mm weapon for arming small remotely operated ground and aerial platforms.

PATCH: Encrypted, Off-Grid Texting, Geolocation & Activity Monitoring
Maeve Garigan
CEO, Roper

PATCH is a waterproof, body-worn device that is styled as a US flag patch. Packed with next generation AI-enabled sensor technology, PATCH provides leap-ahead capability in automated identification friend or foe (IFF), situational awareness and secure tactical communication, and is the result of three years of internal research and development, with multiple peer-reviewed technical papers published and patents filed.

Infrared search and track (IRST) for long-range, wide-area detect and avoid (DAA) on small unmanned aircraft systems (sUAS)
Dr. Stephen Snarski
Director, Autonomous Systems, Modern Technology Solutions, Inc.

This paper describes ongoing research and development work demonstrating the potential for airborne long-range infrared target detection (infrared search and track, IRST) to meet critical requirements for small unmanned aircraft systems (sUAS) detect and avoid (DAA).

Hexavalent Barrel Chrome Replacement
Zachary Torigian
Weapons Engineer, U.S. Army DEVCOM-AC

The purpose of this brief is to present the challenges, toxicity concerns, methodology and preliminary data from the US Army Hexavalent Barrel Chrome Replacement effort to the defense community. The presentation will illustrate the need for hexavalent chrome alternatives for small arms. The brief will contain technical content related to ongoing developments by both the USG and industry to develop alternate coatings, platings, and/or surface treatments to replace hexavalent chrome.

Lightweight, Heat-Emissive Design for Extending Barrel Life
Kenneth Decker
Business Development/Operations, TacomHQ

Using geometric structuring to dissipate heat, lighten, accurize, and prolong the service life of small arms barrels.

Compact Lightweight Freeform GRIN Optics for Small Arms Fire Control
LTC Robert Dionisio, USA (Ret)
DEVCOM-AC

The government is designing freeform gradient-index (GRIN) optics that will enable a reduction in the number of lens elements required to reproduce color-corrected imagery to benefit squad, crew-served, and sniper fire-control systems by reducing the size, weight, and complexity of the optics used in fire-control systems.

CATALYST: Encrypted, Off-Grid Texting, Geolocation & Activity Monitoring
Maeve Garigan
CEO, Roper

CATALYST is a waterproof, body-worn device that is styled as a US flag patch. Packed with next generation AI-enabled sensor technology, CATALYST provides leap-ahead capability in automated identification friend or foe (IFF), situational awareness and secure tactical communication, and is the result of three years of internal research and development, with multiple peer-reviewed technical papers published and patents filed.

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Pressure Discriminating Cartridge Chamber
Brian Hoffman
Chief Engineer, NSWC Crane Weapons Systems Division

The pressure discriminating cartridge chamber allows for reliable passive system response to the inadvertent use of higher-pressure ball ammunition encountered during training activities or other firing events expecting the use of lower-pressure blank ammunition.

Wheel Placement Reasoning in Rugged Off-road Terrain
Andrew Capodieci
Director of Robotics, Neya Systems, LLC

Neya is advancing the state of the art in off-road planning by developing wheel and track placement reasoning modules that enable Robotic Combat Vehicles (RCVs) to navigate rugged off-road terrain.

Improving the Machinability of Refractory-Lined Gun Barrels
Dr. Jason Davis
Mechanical Engineer, NSWC Crane

Early results of a study focused on using a recently discovered mechanochemical effect to assist in the rifling of refractory-lined gun barrels.
Rizse Autonomous Inspection Drone (RAID) for Fixed-Wing Aircraft

Colby Harvey
CEO, Rizse

The Rizse Autonomous Inspection Drone (RAID) is an air system that utilizes a 3D LiDAR and high-resolution camera to inspect fixed-wing aircraft in 20 percent of the current manual processes. The data is processed through an Artificial Intelligence system to locate and classify the damage type, enabling faster turn-around time for maintenance events.

Artificial Intelligence Automated Malicious Location Detection Solution

Angela Henderson
Founder & CEO, RescueTrek Corp.

The SMARTExit Sign is an enhanced Artificial Intelligence Situational Awareness solution. It is a game-changer in tracking and accountability for safety and response during an Active Shooter scenario.

NSWC-Crane Small Arms Flash Signature Kit

Dr. Leslie Flemming
Engineer, Naval Surface Warfare Center Crane

NSWC-Crane has an updated flash kit that takes advantage of additive manufacturing and commercially of the shelf components. The hardware and software package are available via a CRADA with NSWC-Crane.

Supervised Autonomous Function Executive: An Autonomy Enabler

Dean Barten
Senior Principal Engineer, MTSI

Certification of autonomous vehicles would be enabled if an independent safety net was provided.

Methods for Evaluating Blowback in Suppressed Weapon Systems

Jonathan VanBurskirk
R&D Engineer, NSWC Crane

A poster summarizing methods for measuring the increase in blowback provided by the addition of a suppressor on a weapon system.

Novel Small Arms Projectiles

Jonathan VanBurskirk
R&D Engineer, NSWC Crane

A poster covering various novel projectile technologies being explored in NSWC Crane’s Small Arms Emerging Technologies Branch.
**PRESIDENT VOLODYMYR ZELENSKYY**

President Volodymyr Zelenskyy was elected President of Ukraine on April 21, 2019 and was sworn into office as the 6th President of Ukraine on May 20, 2019.

Born in Kryvyi Rih, Ukraine on January 25, 1978, he graduated from Kyiv National Economic University with a law degree in 2000. From 1997-2003 he was an actor, performer, script writer, and producer. He served as Executive Producer and Co-Founder of the stand-up comedic production company, Studio Kvartal 95, from 2003 to 2011. Zelenskyy won more than 30 international television, media and film awards reprising his broadcasting repertoire. His experience saw him become Chief Executive of PJSC’s Inter TV Station from 2011-2012, thereafter returning in 2013-2019 to helm his company.

But it was his role as Ukraine’s fictional president on Servant of the People, a hit satirical yet anti-corruption television series, premiering in 2015 that won him national acclaim and widespread support. From the outset of hostilities in Donbas, Zelenskyy and Kvartal 95 rendered support to the Armed Forces with funds and equipment on the front line across military lines of service.

And although it was his first political foray in Ukraine, Kvartal 95 officially registered Servant of The People as a political party in Ukraine in 2018, in a move that culminated in a landslide victory over the incumbent in the 2019 presidential election with 73 percent of the vote. Zelenskyy used his inaugural address to call for national unity and to announce the dissolution of the Verkhovna Rada or Supreme Council. The move ensured that a presidential victory could also confer a legislative mandate, as Servant of the People did not occupy any parliamentary seats. Snap elections were held on July 21, and Zelenskyy characterized the contest as “perhaps more important than the presidential election.”

Servant of the People won an absolute majority, capturing 254 of 450 seats. The result marked the first time in Ukraine’s post-Soviet history that a single party could control the legislative agenda.

In late 2021, Russia began a massive buildup of troops and materiel along its border with Ukraine, launching an unprovoked invasion on February 21, 2022.

Zelenskyy has since continued to rally support from the international community, warning that a “new Iron Curtain” was descending on Europe.

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**LTG THOMAS TODD III, USA**

**Deputy Commanding General, Acquisition and Systems Management, Chief Innovation Officer, U.S. Army Futures Command**

LTG Thomas H. Todd III began his service as the Deputy Commanding General for Acquisition and Systems and the Chief Innovation Officer at U.S. Army Futures Command in July 2020.

In these executive roles, he is responsible for technology integration and capabilities development in the Army’s research laboratories and centers. He previously served in numerous roles as Special Assistant for Acquisition and Systems Management to the Commanding General, U.S. Army Materiel Command, Program Executive Officer for Army Aviation, Deputy Commanding General of Research, Development and Engineering Command, Senior Commander of Natick Soldier Systems Center, and Modernization Advisor to the Director, Army Capabilities Integration Center. Todd led Army and Joint programs at all echelons, delivering advanced capabilities to soldiers, joint services, other government agencies, and over 60 foreign allied nations. He developed and delivered advanced capabilities CH-47F, H-60M, H-60V, AH-64E, Improved Turbine Engine, MQ-1C Gray Eagle ER, UH-72 Lakota, EMARSS-E, and the Black Hawk Aircrew Trainer. His joint assignments include: Defense Contract Management Agency Special Programs Multi-Service Team, Chief of Contracts, Joint Task Force Bravo, Honduras. Operationally, he served with A Co 3/501st Aviation Regiment in the Republic of Korea and 4th Squadron, 6th Cavalry Brigade, Fort Hood, TX. Todd is a 1989 graduate of The Citadel. He is an honor graduate of the Army’s Initial Entry Rotary Wing training and a graduate of the Kiowa and Black Hawk Maintenance Test Pilot courses. He holds Masters of Science degrees in Contract Management and Strategic Studies from the Florida Institute of Technology and the U.S. Air War College, respectively. His awards and badges include the Legion of Merit (2 Oak Leaf Cluster), the Defense Meritorious Service Medal, the Meritorious Service Medal, the Joint Service Commendation Medal and other Army and joint commendations and awards. He is an Air Assault graduate and a Senior Army Aviator, rated in the UH-1 Iroquois, OH-58 A/C Kiowa, UH-60 A/L/M Black Hawk and CH-47 D/F Chinook.
Scholarship in 1995. He enlisted in the Air Force in 1992 as a signals intelligence analyst and was granted a Reserve Officer Training Corps (ROTC) scholarship. Following commissioning, he served as a measurement and signatures intelligence analyst supporting operations Allied Force, Northern Watch, Southern Watch, and Enduring Freedom. Later, he served in various flight test engineer capacities supporting E-3C, T-38A, C, KC-135R, KC-10A, C-5M, C-17A, YAL-1, F-16C/D, F-35A, and electronic warfare tests. As an engineer assigned to B-1B maintenance, he deployed in support of operation Enduring Freedom as Officer in Charge of an aircraft maintenance recovery team to return a B-1B to flying status following a Class-A mishap and damage sustained during combat operations. Later, he served as Operations Officer during the Airborne Laser first chemical carry, first light-in-flight, and system demonstration. Additionally, he was a member of the initial government cadre that transitioned F-35A operations from the contractor facility to Edwards AFB, CA; in this capacity he assisted with the delivery of the first three aircraft and conducted elevated-risk flight sciences and envelope expansion testing. He serves as the Operations Officer at the Benefield Anechoic Facility where he was responsible for antenna pattern measurements, electromagnetic interference compatibility tests, and classified electronic warfare tests. Additionally, Beaverson was responsible for the development, operations and maintenance of the Digital Integrated Air Defense System model, an F-16 systems integration laboratory, and F-35 manned flight simulators. He was then selected to serve as an Operating Location commander responsible for classified electronic warfare test capabilities. While assigned to the Pentagon, he directed the planning, programming, budgeting, and security of Special Access Programs for a $3.8 billion dollar investment over the Future Years Defense Program. Additionally, Beaverson served as the Program Element Director of Mission Prototypes, Office of the Under Secretary of Defense for Research and Engineering, Prototyping and Experiments Directorate) under the Office of the Under Secretary of Defense for Research and Engineering, Prototyping and Experiments Directorate, and leads the execution of Foreign Comparative Technology programs.

Beaverson served as commander, 47th Cyberspace Test Squadron, Joint Base San Antonio, TX. The squadron conducts test and evaluation of offensive and defensive cyber weapon systems and evaluates the resiliency and survivability of other weapon systems vital to executing the core functions of the Air Force in a cyber-contested environment.

He enlisted in the Air Force in 1992 as a signals intelligence analyst and was granted a Reserve Officer Training Corps Scholarship in 1995.
Monitor for advanced weapon technologies and was the primary Air Force interface to Congress, the Office of the Secretary of Defense, Combatant Commanders and other services on the joint development of advanced weapons capabilities.

Serving as a Detachment commander at Hanscom AFB, MA, he guided test and evaluation involvement within command & control, intelligence, surveillance, reconnaissance, and nuclear command, control, and communications acquisition activities across three Program Executive Officer’s portfolios valued at more than $31 billion dollars. Beaverson has more than 380 hours flying time in 28 different aircraft types.

**H.E. OLEKSIII REZNIKOV**

*Minister of Defence, Ukraine*

H.E. Oleksii Reznikov is a Ukrainian lawyer and has served as the Minister of Defence of Ukraine since November 2021.


In 2000 he established the law firm Pravis, that was later merged in 2006 with the law firm Magister and Partners, named the foremost law firm in Russia and the CIS. In 2011-2014, he served as Head of Litigation Practice at Egorov, Puginsky, Afanasiev and Partners. He served as an attorney and partner at Magisters.

In 2008-2014, he served in various capacities at the Kyiv City Council. On June 2014, he was elected Deputy Mayor – Secretary of Kyiv City Council VII. From 2015 to 2016, he was the Head of the Ukrainian National delegation to the Congress of Local and Regional Authorities of the Council of Europe, and Deputy Chairman of the Mayor of the Anti-Corruption Council.

He served as a Member of the Reformation Team for the Decentralization, Local Government and Regional Policy of the Ministry of Regional Development, Construction, and Communal Services of Ukraine; and as an advisor to Kyiv City's Mayor.

From April 2016 to September 2018 he served as Deputy Head of the Kyiv City State Administration, exercising power through the Kyiv City State Administration on the implementation of state policy in the areas of local self-government, domestic policy, international relations, tourism, advertising, protection of cultural heritage, education, culture, social protection, youth and sports. He was responsible for the implementation of reforms in the areas of decentralization, local government and other areas of life of the city of Kyiv.

In November 2018, he renewed his legal practice as a partner at the law firm, Asters. He specialized in alternative dispute resolution, including: expert opinions, negotiation, facilitation, conciliation, mediation, fact-finding, preliminary independent assessment, pre-trial dispute resolution sessions and preparation of settlement agreements.

In 2005 and in 2019 he served as a member of the Supervisory Board of the State Savings Bank of Ukraine, or JSC Oschadbank.

In September 2019, he represented Ukraine in the working subgroup on political issues of the Trilateral Contact Group regarding a settlement to the war in Donbas. In March 19, 2020 he became a member of the National Security and Defence Council of Ukraine. On May 5, 2020 he was appointed as the first deputy of the Ukrainian delegation to the Trilateral Contact Group.

On March 4, 2020 he was appointed as Deputy Prime Minister, Ministry for Reintegration of the Temporarily Occupied Territories of Ukraine. And on November 4, 2021, Reznikov was appointed as Minister of Defence of Ukraine.

**DAN SHEA**

*General Director, Phoenix Defence*

Dan Shea is a U.S. Army veteran who has been involved in military small arms and defense contracting for over 45 years. Shea is a certified government expert on small arms, and a Master Armorer certified as an armorer instructor on the following weapons systems: M16 series, AK47 series, M203, GP25, M249/MK46, M240, M60 series, M2HB, MK19, NSV, PKM, DShk, KPVT, RPG7, Carl Gustav M3 84mm, AGS-17/BGA-30, M134 Minigun, most shoulder-fired or tripod-mounted weapons systems. Shea designed and implemented the 1997 and 1999 Silencer trials. He founded Long Mountain Outfitters, LLC, a small arms specialty sales and training company in Henderson, NV. He has served as the Editor-In-Chief and Technical Editor of Small Arms Review for the past 27 years and the newer, international Small Arms Defense Journal for 14 years.
CONVENTION CENTER MAP

**FLOOR 1**  EXHIBIT HALLS, BALLROOMS AND MEETING ROOMS

- Exhibit Hall/AM & PM Break/Lunches/Reception/Poster Sessions
- Registration

**FLOOR 4**  GRAND BALLROOM, MEETING ROOMS

- General Session/Breakout
- Capability Briefings/Breakout Rooms (18A, 18BC, 18D)
## EXHIBITORS BY COMPANY

As of 9/9/2022

<table>
<thead>
<tr>
<th>Company</th>
<th>Booth</th>
</tr>
</thead>
<tbody>
<tr>
<td>908 Devices</td>
<td>405</td>
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<tr>
<td>ACTinBlack US, LLC</td>
<td>413</td>
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### EXHIBIT HALL FLOORPLAN

![Exhibit Hall Floorplan Image]
EXHIBIT HALL HOURS

TUESDAY, SEPTEMBER 20
9:00 am – 6:30 pm

WEDNESDAY, SEPTEMBER 21
9:00 am – 3:00 pm

EXHIBITOR DESCRIPTIONS

908 DEVICES 405
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.

ACTINBLACK US, LLC 413
ACTinBlack (ACT) is a leading developer and manufacturer specializing in Advanced Night Vision Optics. In addition to producing high-quality Night Vision Equipment, ACT is a recognized researcher in the field of Night Vision Technologies.

ADS, INC. 423
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 513
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 205
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. 422
Aimpoint red dot sights are trusted by hunters, sport shooters, military, and law enforcement officers around the world. Over 2 million sights have been supplied to the United States military since 1997. Today, Aimpoint is recognized globally as the most rugged, reliable, and efficient electronic sighting system in the world. When your life depends on your equipment, don’t settle for anything less.

ALTAEROS 315
Altaeros’ autonomous ST-Flex aerostats outperform tethered drones and traditional aerostats without requiring a ground crew for day-to-day operations. Our tactical aerostats are designed to lift heavy payloads (ISR, Radar, Communications & more) for long durations while providing significant OPEX savings.

APPLIED RESEARCH ASSOCIATES (ARA) 310
ARA is an international research and engineering company globally recognized for applying 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.

BARRETT 414
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. 211
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 to start/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 411
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

DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER (DSIAC) 323
The Defense Systems Information Analysis Center (DSIAC) is a component of the U.S. Department of Defense’s (DoD’s) Information Analysis Center. As an information and knowledge resource for DoD, DSIAC leverages expertise and knowledge from other Government agencies, research laboratories, industry, and academia to help solve the toughest scientific and technical problems of the Defense Systems community.

DTC 311
DTC Communications is the world leader in mission critical communications at the tactical edge. DTC’s Software Defined Mesh Radios provide the Warfighter, the Special Forces Operator, and Uncrewed Systems with the greatest performance and reliability. Recently, DTC’s IVAS Radio surpassed Industry standards culminating in an $11.2m award. Spectronic, a DTC Company, is well known in the SOFIC community for world-class Covert Surveillance solutions. We look forward to seeing you at Booth 306.

ENVIRONICS USA 212
Envirionics has over 30 years of experience in improving CBRN safety around the world with its in-house technologies, and portable and fixed monitoring solutions. Different organizations in over 50 countries, from civil defense and homeland security to the military, have already selected Envirionics as their partner in CBRN threat detection.

EXPLOTRAIN LLC 324
Explotrain provides patented training and simulation technologies for battlefield effects, C-IED, EOD, live fire, field maneuvers, MOUT, indirect fire, drone-based attacks, and role player augmentation. Technologies include a new UXO and chemical weapon simulation system, MILES compatible propane/OXY and pneumatic powered blast simulator for OPFOR and battlefield FX, long range remote control via dedicated transceiver or tablet-based, and wireless monitoring of high-fidelity EOD/IED training.

NOBLE SUPPLY & LOGISTICS 204
Noble Supply & Logistics is a global supply chain, logistics, mission support, and technology solutions provider for the U.S. military, federal, state, and local governments. The company distributes 13,000 brands of Aerospace, C5ISR, CBRNe, Expeditionary, MRO, and Tactical equipment. Noble streamlines procurement, reducing the cost of readiness while responding to today’s challenges rapidly.

FJORD DEFENCE 210
Fjord Defence specializes in a system approach around weapon mounts and customized integration within ground, vehicle and boat applications. We develop weapon accessories with decades of experience, military background, and a user focused organization. We always bring the elements of user friendliness, high precision, low weight, and modularity into our products to deliver something more than “just another piece of equipment”. We want to be a recognized as added value to a weapon system.

GENERAL DYNAMICS - OTS 505
General Dynamics Ordnance and Tactical Systems is a global systems developer and manufacturer of munitions, weapons and tactical systems across the entire air, land, and sea battle spectrum. It is the purpose of GD-OTS to empower the United States Armed Forces and its Allies through readiness and innovation to protect what is most important, the warfighter. We are dedicated to our people, our products and our processes to ensure that every day we are Delivering the Best to the Best™

GHOST ROBOTICS 305
Ghost Robotics™ is revolutionizing legged robotics and the market for autonomous unmanned ground vehicles (Q-UGVs) used in unstructured terrain and harsh environments. Our Q-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 shelter systems, water filtration, environmental control systems, generators, heaters, air filtration devices, and robotics.

HUXWRX SAFETY CO.

HUXWRX Safety Co. is the result of years of research, development, and commitment towards the advancement of suppressor systems. The proprietary technology we’ve designed mitigates sound and flash signature while reducing exposure to toxic fumes without sacrificing weapon functionality. The simplicity and effectiveness of these systems is why armed forces and law enforcement agencies worldwide recognize the benefits of our technology and are adopting HUXWRX as their suppressor standard.

KGM TECHNOLOGIES

KGM Technologies is the largest designer and manufacturer of weapon suppressors in the country. We are protecting the hearing of shooters everywhere and significantly enhancing the capability of our war-fighters. Our patented technologies and advanced manufacturing methods have allowed KGM to set the new standard of suppression. Additional information can be found at www.kgm-tech.com

L3HARRIS

The large robot supplier for the UK Ministry of Defence and the U.S. Air Force, L3Harris’ highly intuitive and ruggedized robotic systems are deployed worldwide to tackle challenging missions so humans don’t have to. Offering best-in-class manipulation, unparalleled precision and human-like dexterity, the T7 and T4 push the envelope of robotic capability. By sharing an intuitive haptic controller, our robots streamline operation, reduce training time, and minimize through-life cost.

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.

LONG CAPTURE

Long Capture promotes the advancement of commercial companies and their technology through government funding programs such as the Small Business Innovative Research (SBIR), Small Business Technology Transfer (STTR), and other strategic opportunities. By leveraging its network of government officials, industry partners, and universities, Long Capture drives growth for clients in the DoD space.

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.

NATIONAL ARMAMENTS CONSORTIUM

The National Armaments Consortium (NAC) serves as the industry partner for the Aviation and Missile Technology Consortium (AMTC), the Department of Defense Ordnance Technology Consortium’s (DOTC), and the Naval Energetic Systems and Technologies Consortium (NEST). 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. U.S. government and military are welcome to join free of charge.

NOVO DR INC.

NOVO DR Inc. 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! For more information please visit website: www.novo-dr.com
OTIS TECHNOLOGY

Otis Technology is known for manufacturing the most advanced firearms maintenance systems. The superior Breach-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.

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.

RADICAL FIREARMS/ RADICAL DEFENSE

Radical Defense is dedicated to delivering cutting-edge capabilities into the hands of soldiers and Law Enforcement. They provide innovative solutions to battle major issues with modern weapons. The most common issues that we have tackled head on are: Heat, thermal signatures, end user serviceability, longevity and reliability. Radical Defense is a true manufacturer with modern CNC and Additive manufacturing. They are capable of true RND, engineering, manufacturing and full production.

SMALL ARMS DEFENSE JOURNAL

Distributed at defense trade shows worldwide, 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 publication. Our aim is to provide a forum for all aspects of Class 3 interests and the military small arms industry. Semper Fi highlights the charitable works and fellowship of the Marine Corps League and covers league and chapter events across the U.S.A.

SMARTRAYVISION

SmartRayVision Portable EOD X-Ray is designed, developed and manufactured by SharpLogixx LLC. Made in the USA in Green Bay Wisconsin, the SmartRayVision system is the #1 selling EOD kit in the country. SharpLogixx LLC is a leading technology company focused on advanced research and development of X-Ray equipment and specialized software.

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’s UIS Division comprises the largest global provider of tactical unmanned ground vehicles as well as leading nano and Class-1 unmanned aircraft systems. We design and build the most trusted, rugged, easiest-to-operate drones and robots – from 1.2 ounces to 500 pounds – used to safeguard life and property around the world. Whatever the mission, our advanced platforms are out there every day supporting US and international military, law enforcement, and industrial users.

THE UNIVERSITY OF KANSAS

The University of Kansas Aerospace Engineering Department supports advanced weapon system RDT&E via its Aircraft Design Lab. Its investigators claim a number of DoD “firsts,” including guided and hypersonic aerial gunnery, Micro Aerial Vehicles (MAVs), and Hovering Missiles. KUAE works with Government labs and corporations to conceive and prove unique weapon systems and licenses critical patents and trade secrets. The Lab has worked for years with all branches of the DoD, DARPA and NASA.

TRIJICON, INC

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.

UDC USA

UDC produces small & medium caliber ammunition of several types, support munitions and demolition products. UDC is headquartered in Tampa, Florida with offices & facilities in the Kansas City, Missouri, metro area. For 2022 we are introducing a new line of Armor Piercing rounds. 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.
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<td>September 19–22, 2022, Austin, TX</td>
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<td>Undersea Warfare Fall Conference*</td>
<td>September 26–28, 2022, Groton, CT</td>
<td>Aviation USW</td>
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<td>Precision Strike Technology Symposium (PSTS-22)* Secret – NOFORN</td>
<td>October 18–20, 2022, Laurel, MD</td>
<td>Precision Capability</td>
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<td>2022 Inensitive Munitions &amp; Energetic Materials (IMEM) Technology Symposium</td>
<td>October 18–20, 2022, Indianapolis, IN</td>
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<td>2023 Tactical Wheeled Vehicles Conference</td>
<td>February 27–March 1, 2023, Columbus, OH</td>
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*All Classified | **Partially Classified