



Dear Colleague,

Welcome to the Institute for Defense and Government Advancement's 8th Annual **Future Ground Combat Vehicle Summit!** The FGCV Summit is driven by emerging ideas and initiatives from leading stakeholders across the rapidly evolving Ground Combat Vehicle community.

IDGA's FGCV is an industry staple that provides the ground combat vehicle community a platform to discuss the most effective means to develop and realize the next generation of combat vehicles for the Joint Force. With the Army's highlight of the need for GCVs modernization, the Next-Generation Combat Vehicle modernization initiative has offered this community the means to massively exceed current levels of capability for GCV fleets.

With near-peer capability development of land forces at an all-time high, the GCV community must collaborate in order to ensure the delivery of next-generation fleets, to include how our current fleets are maintaining their competitive edge across multiple AORs and domains.

Whether it is a careful review of NGCV efforts, fleet modernization priorities, emerging technology and its application on GCVs, IDGA's Future Ground Combat Vehicles Summit serves as a marquee industry event to share in the GCV community's current goals and aims, and we'd be honored to have you in attendance.

Join IDGA's FGCV Summit for the unique opportunity to not only learn from those leading the ground combat vehicle revolution, but also to stake your own place in this rapidly evolving community.

V/r,



Jonathan Sanders
Deputy Divisional Director, IDGA
Program Director, 8th Annual FGCV Summit
Detroit. MI

FUTURE GROUND COMBAT VEHICLE AGENDA CODING:



Enabling GCV Battlefield

Dominance



Improving **GCV Lethality**



Advancing **Mobility and Maneuverability Capabilities**



Leveraging **Robotic and Al Technologies** to Bolster GCVs



Enhancing Protection Capabilities



2020 FGCV SPEAKERS



General Paul E. Funk II Commanding General United States Army Training and **Doctrine Command**



Lieutenant General James F. Pasquarette Army Deputy Chief of Staff G-8, United States Army



Jeffrey White Principal Deputy to the ASA (ALT) US Army



Mr. Robert Miele, SES Executive Technical Director U.S. Army Test and **Evaluation Command**



Colonel Warren Sponsler Deputy Director, Next-Generation Combat Vehicle Army Futures Command



Colonel Christopher Barnwell Chief, Field Experimentation Division Joint Modernization Command, US Army



LTC Jonathan Bodenhamer Product Manager Applique' and Large Unmanned Ground Systems PEO Combat Support and Combat Service Support,



Lieutenant Colonel Rvan Orders Armoured Fighting Vehicles, Army Headquarters Australian Defense Force



Mark C. Hassler II Associate Director, Global Technology Office United States Army Combat Capabilities Development Command



COL Tim Klenske Director for Futures, Major Defense Acquisition Programs, and Special Projects JPEO-CBRND



Daphne Fuentevilla, PhD Director Land and Sea Platforms (Acting) Office of the Undersecretary of Defense for Research and Engineering



Jason Miller Mechanical Engineer Naval Surface Warfare Center, Crane



Ryan Makinson AAAS Science and Technology Policy Fellow Defense Technical Information Center (DTIC)



Major General (R) William Hix



Seved (Reza) Zekavat, Ph.D Professor of Data Sciences. Professor of Physics Worcester Polytechnic Institute (WPI)



Eric Troidl, P.E. Product Support Mechanical Engineer and Team Leader Support Equipment and Vehicles Team, Power and **Energy Division** University of Dayton Research Institute



David Bragg National Security Program Area Lead, Florida Applied Research in Engineering (FLARE) University of Florida



Afsaneh Rabiei Professor of Mechanical and Aerospace Engineering North Carolina State University

Horizon Partners, LLC Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQDA

KEYNOTE SPEAKER HIGHLIGHT



General Paul E. Funk II
Commanding General
United States Army Training and Doctrine
Command

Event Keynote Remarks:
Developing GCV Operational
Doctrine to Enable Continued
Army Mission Success

Gen. Paul E. Funk II assumed duties as the 17th Commanding General, United States Army Training and Doctrine Command, on June 21, 2019. As TRADOC commander, Funk is responsible for 32 Army schools organized under eight Centers of Excellence that recruit, train and educate more than 500,000 Soldiers and service members annually.

Funk was born at Fort Hood and graduated from Fort Knox High School. He was commissioned an Armor Officer through ROTC upon graduation from Montana State University.

General Funk has commanded at every level, Company through Corps, including:

- A Company, 2d Battalion, 32d Armor Regiment, 1st Brigade, 3rd Armored Division in Kirchgoens, Germany
- Headquarters and Headquarters Company, 4th Battalion, 67th Armor Regiment, 3rd Brigade, 3rd Armored Division in Kirchgoens, Germany
- 1st Squadron, 7th Cavalry Regiment (GARRYOWEN), 4th Brigade, 1st Cavalry Division at Fort Hood, Texas

- 1st Brigade Combat Team (IRONHORSE), 1st Cavalry Division at Fort Hood, Texas
- 1st Infantry Division (Big Red One) at Fort Riley, Kansas
- III Armored Corps (AMERICA'S HAMMER!) at Fort Hood, Texas

Funk holds a Bachelor of Arts degree in speech communications, from Montana State University, and a Master of Science degree in administration, from Central Michigan University. He is a graduate of the Armor Basic Officer Leaders and Advanced Courses, the Command and General Staff College, and completed his Senior Service College as a fellow at the Institute of Advanced Technology, University of Texas at Austin.

WHY YOU CAN'T MISS OUT ON THIS YEAR'S FUTURE GROUND COMBAT VEHICLES SUMMIT



CONTENT:

The Future Ground Combat Vehicles
Spring Summit will deliver senior-level
briefings that provide a full picture
viewpoint of the challenges and
opportunities currently in the GCV
space. You can expect to hear leaders
and decision makers discuss imminent
needs for the GCV community and their
acquisition, R&D, and S&T priorities in
the near and long term.

NETWORKING:

With each iteration of IDGA's Future Ground Combat Vehicle Summit, we have grown in both size and diversity. This is the event of year to foster and develop relationship with key decision makers across the Services including our academic, industry and Federal Government partners. No other event offers the opportunity to network with a more diverse group of GCV professionals.

EXPERIENCE:

We at IDGA strive to provide our attendees an experience that enhances their learning opportunities, networking and general enjoyment. Customize your experience with interactive learning opportunities covering a wide array of GCV focused topics to ensure your event experience is tailored to your summit goals. We offer plenty of refreshment breaks to process the briefings and network face-to-face with Military and industry leaders to create valuable partnerships moving forward.

PRE-CONFERENCE FOCUS DAY

WEDNESDAY, MAY 27, 2020

0800

Registration & Breakfast

0915

Chairperson Opening Remarks



Major General (Ret.) William Hix

Managing Director, Next Horizon Partners, LLC Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQ, US Army

0915

Developing, Integrating, Fielding and Sustaining Unmanned Ground Platforms to Inform Future Army Ops

The proliferation of unmanned and semi-autonomous capabilities into the Military ecosystem has exploded over the past decade. Providing affordable, operationally relevant automated technology has direct benefit to the Warfighter, and our speaker will highlight these efforts to integrate these capabilities for the benefit of large ground combat systems.



LTC Jonathan Bodenhamer

Product Manager Applique' and Large Unmanned Ground Systems

PEO Combat Support and Combat Service Support



LETHAL



1000

ASA(ALT) Ground Combat Vehicle Priorities to Meet Future Army Needs

ASA(ALT) provides our soldiers a decisive advantage in mission sets through the delivery of the world's best equipment and services by leveraging next-gen technology that meets the US Army's needs. The Army's prioritization of the Next-Generation Combat Vehicle Modernization effort requires constant collaboration between our Service leaders and Acquisition professionals, and this session will highlight ASA(ALT)'s ongoing efforts to meet the Army's current and future ground combat vehicle fleet needs.



Jeffrey White

Principal Deputy to the ASA (ALT)





1045

Morning Networking Break

1130

Event Keynote Remarks: Developing GCV Operational Doctrine to Enable Continued Army Mission Success



General Paul E. Funk

Commanding General United States Army Training and Doctrine Command





1215

Keynote Remarks: Accelerating NGCV CFT Modernization Efforts: Current Lines of Efforts & Updates

The demands of a modern battlefield, from sensing and processing data, to moving around in different types of physical terrains and domains, the Army has forged a new way of thinking about ground vehicles. The Next-Generation Combat Vehicle CFT aims to push vehicle development into the future of the Service's needs, and this session will highlight some of these ongoing efforts.



Colonel Warren Sponsler

Deputy Director, Next-Generation Combat Vehicle CFT

Army Futures Command













Enabling GCV Battlefield **Dominance**





Advancing **Mobility** and Maneuverability Capabilities



Leveraging Robotic and AI Technologies to **Bolster GCVs**



Enhancing Protection Capabilities

1300

Lunch

1400

Overview of Emerging Ground Combat Vehicle Priorities and Areas of Interest

Formerly the Army's Chief Strategy Officer, a retired Major General, and our event Chairman, Major General (R) Hix will provide an overview of emerging ground combat vehicle priorities, advancements, and thrust areas as it relates to the future of US ground forces.



Major General (R) William Hix

Managing Partner, Next Horizon Partners, LLC

Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQDA





TECH

1445

Naval Surface Warfare Center Vehicle Electrification Projects

This session will highlight the ongoing efforts at NSWC to deliver next-generation electrification efforts for their platforms, and will provide a cross-service look into shared solutions to potentially bolster ground platforms.



Jason Miller

Mechanical Engineer

Naval Surface Warfare Center, Crane



TECH

1530

Chairperson Closing Remarks

Major General (R) William Hix

1545

End of Focus Day







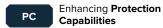
7

Enabling GCV Battlefield Dominance









MAIN DAY ONE

0800

Registration and Morning Networking

0850

Chairperson Opening Remarks



Major General (Ret.) William Hix Managing Director, Next Horizon Partners, LLC Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQ, US Army

0900

T&E Efforts for Army Ground Combat Vehicles

Dr. Miele is responsible for ensuring that Army and OSD senior leaders have the essential information required before weapons and equipment are placed into the hands of Soldiers and throughout the lifecycle of those systems. He directs the test and evaluation for over 400 weapons programs through a 9000 person workforce and a \$2B budget.

- Weapons systems testing efforts for future GCVs
- Ongoing experimentation efforts for current fleet of GCVs
- Guiding ATEC evaluation strategy: vision for future ATEC efforts



Mr. Robert Miele, SES
Executive Technical Director
US Army Test and Evaluation Command

GCV

0945

Driving Advanced Research and Engineering Processes to Bolster DoD Land Platform Capability

This session will highlight USD R&E's efforts to further develop and conduct oversight of DoD technology strategy across the land platform enterprise.

- Land platform priority research areas
- Technological capability to be met to enable future GCV dominance
- · Considerations as to land platform roadmap for the DoD



Daphne Fuentevilla, PhD

Director Land and Sea Platforms (Acting)

Office of the Undersecretary of Defense for Research and Engineering





1030

Networking Break and Demo Drive

1115

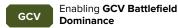
Strategic Overview of Resourcing Efforts and Impact on Advancement of Ground Combat Vehicle Fleets



Lieutenant General James F. Pasquarette Army Deputy Chief of Staff, G-8, United States Army



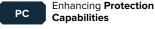












MAIN DAY ONE

1200

Improving CBRN Protection and Sensor Capabilities to Bolster GCVs Survivability

Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense core focus areas contribute to building a more lethal force, and streamline JPEO-CBRND efforts to meet the Joint Service's needs in combating chemical, biological, radiological and nuclear (CBRN) threats. Mr. Bryce will highlight JPEOCBRND's ongoing efforts to bolster current and future GCV fleets, and the technology needs to enable it.

- Improving integrated situational understanding for GCV fleets
- Future directions of the JPEO to better support GCV operations
- Improving physical protection and mitigation capabilities through agile technology fielding



COL Tim Klenske

Director for Futures, Major Defense Acquisition Programs, and Special Projects JPEO-CBRND



1245

Networking Lunch

1345

Understanding the Unique Armoured Fighting Vehicle Needs for the Australian Army

This session will go on to highlight the ongoing development efforts of the Australian Army's Armoured Fighting Vehicle Concepts.

- · Capabilities sought to enable Australian mission success
- · Vision for a 21st century battlefield
- · Partnership efforts to deliver next-generation ground combat vehicle capability



Lieutenant Colonel Ryan Orders Armoured Fighting Vehicles, Army Headquarters

Australian Defense Force







1430

Driving CCDC International Armaments Cooperation Activities to Advance Army GCV Capability

CCDC's Global Technology Office is the Army's centralized organization for global engagement, one that ensures interoperability with US allies and greater international cooperation for GCVs.

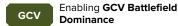
- · Supporting international armaments cooperation to better align support CCDC, AFC, and ASA(ALT) GCV needs
- · Acquiring assessing mature technologies from the industry of friendly foreign nations to meet current acquisition and/or operational needs
- Domestic and foreign technologies of current interest



Mark C. Hassler II
Associate Director, Global Technology Office
United States Army Combat Capabilities Development Command



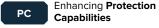












MAIN DAY ONE

1515

Afternoon Networking Break

1545

Improving Armor and Protection Capabilities While Reducing Weight

Advancing protection capabilities for current GCVs is of the highest priority, and our invited speaker will highlight their efforts to improve protection capabilities without adding on undue weight. Providing improved armor capabilities for ground combat vehicles at lower weights

- · Reducing weight of armor without sacrificing protection: engineering challenges to be met
- · Efforts to advance composite metal foam capabilities for ground combat vehicle insertion



Afsaneh Rabiei

Professor of Mechanical and Aerospace Engineering North Carolina State University

PC

1630

Chairperson Closing Remarks



Major General (Ret.) William Hix

Managing Director, Next Horizon Partners, LLC

Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQ, US Army

1645

Post Conference Networking









Enabling GCV Battlefield Dominance









Enhancing Protection Capabilities

MAIN DAY TWO

0800

Registration and Morning Networking

0850

Chairperson Opening Remarks



Major General (Ret.) William Hix
Managing Director, Next Horizon Partners, LLC
Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQ, US Army

0900

Resilient Systems in a Contested Environment

As our platforms become more inter-connected and capable, their threat vector inevitably will grow, elevating their ability to be attacked by adversaries for their gain. This session will highlight ongoing efforts to engineering resilient platforms for GCVs.

- Engineering and technology challenges to be met to enable resilient systems
- · Challenges associated with A2/AD
- · Partnership efforts to bolster UF capability and utilization



David Bragg

National Security Program Area Lead, Florida Applied Research in Engineering (FLARE) University of Florida





TECH

0945

Advancing Army Ground Combat Vehicle Warfighting Concepts and Modernization Efforts

The U.S. Army Joint Modernization Command provides insight about future ways of fighting, future technology, and force structure during realistic live, constructive, and/or simulated training exercises, providing a unique viewpoint as to the role of NGCV in the future battlespace.

- Efforts to assess Army ground combat vehicle warfighting capabilities and concepts
- Necessary next steps to improve ground combat vehicle effectiveness
- · Challenges associated with defining warfighting concepts for unidentified future areas of operation



Colonel Christopher Barnwell

Chief, Field Experimentation Division, Joint Modernization Command US Army







1030

Networking Break and Demo Drive











MAIN DAY TWO

1115

The Future of Battlefield Situation Awareness via Vehicular Intensified Early Warning (VIEW)

This talk presents the foundations of Vehicular Intensified Early Warning (VIEW) technology. VIEW is realized via an integration of a Wireless Local positioning System (WLPS) and sensor data-enabled crowd source-based situation awareness. WLPS allows active vehicular localization. WLPS maintains accurate and real-time decision making via a fusion of comprehensive data acquisition, data analysis, and data management. Installed on combat vehicles, VIEW offers an immediate "view" to battlefield commanders and operators to support secure, safe, and efficient operation, and avoid tragic self-destructive incidents in complex battlefield media.



Seyed (Reza) Zekavat, Ph.D

Professor of Data Sciences, Professor of Physics Worcester Polytechnic Institute (WPI)





1200

Fuel Desulfurization for Vehicles and Fuel Cells



Eric Troidl, P.E.

Product Support Mechanical Engineer and Team Leader, Support Equipment and Vehicles Team, Power and Energy Division University of Dayton Research Institute



1245

Networking Lunch

1345

Aggregating Ground Combat Vehicle Data to Rapidly Deliver Next-Gen Technology Development

The Defense Technical Information Center has served the information needs of the Defense Community for nearly 70 years, delivering the tools and data needed to empower the research and engineering enterprise to accelerate ongoing technological developments. Yhis session will highlight some of their collaborative research efforts.

- · DTIC GCV efforts
- DTIC collaborative efforts to spur advanced results
- Technology suggestions as a result of collaboration and data collection



Ryan Makinson

AAAS Science and Technology Policy Fellow Defense Technical Information Center (DTIC)





1430

Chairperson Closing Remarks



Major General (Ret.) William Hix

Managing Director, Next Horizon Partners, LLC

Former Director of Strategy, Plans & Policy, Deputy Chief of Staff G-3/5/7 HQ, US Army

1445

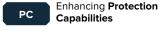
End of FGCV Conference











SPONSOR THIS SUMMIT

The Future Ground Combat Vehicles Spring Summit is a unique and annual opportunity to participate, share knowledge and connect with those leading the next-generation of Ground Combat Vehicle platforms and capabilities.

6 REASONS IDGA'S FGCV 2020 CAN BENEFIT YOU!

- Generate new sales leads
- Launch new products or services
- Demonstrate thought leadership

- ▼ Enter new markets
- Build customer loyalty
- ▼ Position your company brand

To learn more about available opportunities, contact:



Vinny Rama
Sales Director - North America
P: 212-885-2770
E: vinny.rama@iqpc.com

PAST SPONSORS









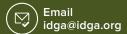




PRICING & REGISTRATION

EASY WAYS TO REGISTER







Register Online www.idga.org/events-groundcombatvehiclesspring

Active U.S. Government, Military, and Law Enforcement

NO COST TO ALL MILITARY AND GOVERNMENT EMPLOYEES

3 Day All-Access Pass: Main Conference + Focus Day All Active Federal Employees, to include Military Personnel, will be granted free admission to our event. However, in order to logistically support this event, we must require online pre-registration. Onsite registration will not be permitted and online registration will close on 5/15/20. Limited Passes Available.

Academia, Non-Profit, and Foreign Military	Register & Pay By Sept. 18, 2020	Standard Pricing
2 Day Main Conference	\$995 Save \$400	\$1,395
3 Day All-Access Pass: Main Conference + Focus Day	\$1,495 Save \$400	\$1,895
Focus Day	\$595	

Vendors, Consultants, and Solution Providers	Register & Pay By Sept. 18, 2020	Standard Pricing
2 Day Main Conference	\$1,115 Save \$400	\$1,515
3 Day All-Access Pass: Main Conference + Focus Day	\$1,865 Save \$400	\$2,265
Focus Day	\$750	

TEAM DISCOUNTS

NUMBER OF ATTENDEES	SAVINGS
Groups of 3 to 4	10% off
Groups of 5+	15% off

^{*}Discounts apply to registrations submitted together, at the same time. Cannot be combined with any other discount

*IQPC reserves the right to determine who is considered an End-User or a Vendor upon registration for an event. Those who are determined a vendor will be denied access to End-User pricing. These prices are featured as a limited time only promotion. IQPC reserves the right to increase these prices at its discretion.

Please note multiple discounts cannot be combined. A \$99 processing charge will be assessed to all registrations not accompanied by credit card payment at the time of registration.

MAKE CHECKS PAYABLE IN U.S. DOLLARS TO: IQPC

*CT residents or people employed in the state of CT must add 6.35% sales tax.

Team Discounts: For information on team discounts, please contact IQPC Customer Service at 1-800-882-8684. Only one discount may be applied per registrant.

Special Discounts Available:

A limited number of discounts are available for the non-profit sector, government organizations and academia. For more information, please contact customer service at 1-800-882-8684.

Details for making payment via EFT or wire transfer:

Bank Name: JP Morgan Chase & Co. Name on Account: Penton Learning Systems LLC dba IQPC

Account #: 937-332641 ABA/Routing #: 021000021 Reference: 25410.008

Payment Policy: Payment is due in full at the time of registration and includes lunches and refreshment. Your registration will not be confirmed until payment is received and may be subject to cancellation. For IQPC's Cancellation, Postponement and Substitution Policy, please visit www.iqpc.com/cancellation

Special Dietary Needs: If you have a dietary restriction, please contact Customer Service at 1-800-882-8684 to discuss your specific needs.

©2020 IQPC. All Rights Reserved. The format, design, content and arrangement of this brochure constitute a trademark of IQPC. Unauthorized reproduction will be actionable under the Lanham Act and common law principles.