

# AIRCRAFT SURVIVABILITY WORKSHOP

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#### 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** 

#### **GET INVOLVED**

Learn more about NDIA's Divisions and how to join one at NDIA.org/Divisions



# **COMBAT SURVIVABILITY**

#### WHO WE ARE

NDIA's Combat Survivability Division addresses all aspects of susceptibility reduction (probability of hit), vulnerability reduction (consequences of hit) and the overall survivability discipline, including countermeasures, signature reduction, tactics and training, camouflage, concealment and deception, as well as damage resistance, damage tolerance and combat damage repair. The division also focuses on the transfer of information and technology between the military survivability and civil aviation communities to improve flight safety and to mitigate the effects of terrorist acts.

#### **LEADERSHIP**

#### Chris Bogdan

Division Chair

#### Jack Rau

2022 Workshop Chair/ Communications

#### Mark Couch

Strategic Planning

#### Amy Howell

Secretary

#### Robert Gierard

Awards

#### Gary Wollenweber

Education

#### Thao Nguyen

2022 Symposium Chair



## **EVENT INFORMATION**

#### PLATFORM ACCESS

If you have not received your call in link, please contact Maura Deely at mdeely@NDIA.org.

# SURVEY AND PARTICIPANT LIST

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

#### **EVENT CONTACTS**

Maura Deely Meeting Planner (703) 247-2588 mdeely@NDIA.org Jae YuJacqueline DupreDirector, DivisionsDivision Coordinator(703) 247-2564(703) 247-2575jyu@NDIA.orgjdupre@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.

#### ANTITRUST 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**

#### **WEDNESDAY, MARCH 16**

12:00 – 12:10 pm All times listed are

**EDT** 

**OPENING REMARKS** 

MG James Boozer, USA (Ret) Executive Vice President, NDIA

Jack Rau

Chief Analyst, Phantom Works Boeing

Annual Symposium Chair, Combat Survivability Division, NDIA

12:10 - 12:15 pm

**SPEAKER INTRODUCTION** 

Jack Rau

Chief Analyst, Phantom Works Boeing

Annual Symposium Chair, Combat Survivability Division, NDIA

12:20 - 1:15 pm

HYPERSONICS TUTORIAL

Daniel Millman, Ph.D.

Chief Technology Officer, Stratolaunch

Dr. Carol Putman

Senior Lead Engineer, Advanced Materials, Booz Allen Hamilton

1:15 - 1:25 pm

**BREAK** 

1:25 - 1:55 pm

**HYPERSONICS TUTORIAL** 

Daniel Millman, Ph.D.

Chief Technology Officer, Stratolaunch

Dr. Carol Putman

Senior Lead Engineer, Advanced Materials, Booz Allen Hamilton

2:00 - 2:30 pm

CONTRAIL PREDICTIONS AND MANAGEMENT

Gary Wollenweber

Consulting Engineer, GE Edison Works

2:35 - 2:55 pm

BEYOND OPEN ARCHITECTURE COMPLIANCE: HOW DESIGN-FOR-INTEGRATION SOLVES INTEROPERABILITY FOR SENSORS ON LEGACY AIRCRAFT

**Zachary Dennis** 

Ph.D. Student, George Washington University

2:55 - 3:05 pm

**BREAK** 



3:05 – 3:25 pm AIRCRAFT CYBER-COMBAT SURVIVABILITY (ACCS)

Dr. William Bryant

Technical Fellow, Modern Technology Solutions, Inc.

3:30 – 3:50 pm MICROSOFT'S SIMULATED VIRTUAL ENVIRONMENT

Mark Bolz

Senior Director, Advanced Modeling, Simulation, Serious Gaming, Microsoft National Security, Defense Industrial Base

Team

3:55 – 4:10 pm CLOSING REMARKS

Jack Rau

Chief Analyst, Phantom Works Boeing

Annual Symposium Chair, Combat Survivability Division, NDIA

#### **THURSDAY, MARCH 17**

12:00 – 12:05 pm

**OPENING REMARKS** 

All times listed are

Jack Rau

EDT

Chief Analyst, Phantom Works Boeing

Annual Symposium Chair, Combat Survivability Division, NDIA

12:05 – 1:05 pm ACOUSTICS TUTORIAL

Tim Brown

Associate Technical Fellow, Phantom Works Boeing

1:05 – 1:20 pm **BREAK** 

1:20 – 1:55 pm ACOUSTICS TUTORIAL

Tim Brown

Associate Technical Fellow, Phantom Works Boeing

1:55 – 2:00 pm SPEAKER INTRODUCTION

Chris Bogdan

Senior Vice President, Booz Allen Hamilton Chair, Combat Survivability Division, NDIA

2:00 – 2:30 pm GOVERNMENT KEYNOTE ADDRESS

Lt Gen Eric Fick, USAF

Program Executive Officer for the F-35 Lightning II Joint Program Office

2:35 – 2:55 pm RESILIENT AERIAL REFUELING: SAFEGUARDING THE U.S.

MILITARY'S GLOBAL REACH

Tim Walton

Fellow, Hudson Institute

#### 2:55 – 3:05 pm **BREAK**

#### 3:05 – 3:45 pm **AWARD CEREMONY**

#### **Combat Survivability Award for Lifetime Achievement**

BG Stephen Mundt, USA (Ret)

Senior Vice President, Government Strategy and Development, Airbus Group, Inc.

#### **Combat Survivability Award for Technical Achievement**

Dr. Hsiu Han

MIT Lincoln Laboratory

#### RADM Robert H. Gormley Combat Survivability Award for Leadership

Mr. John Gossett

Air Force Research Laboratory, Systems Technology Office

#### **Professor Robert E. Ball Young Professional Award for Combat Survivability**

Mr. Stephen Sandy

U.S. Naval Research Laboratory

#### 3:50 – 4:10 pm AIRCRAFT COMBAT SURVIVABILITY AND CYBER RESILIENCE

Tom Barnett

Cyber Integration Lead, APEO Engineering & Technology, U.S. Army PEO Aviation

#### 4:10 – 4:20 pm CLOSING REMARKS

Jack Rau

Chief Analyst, Phantom Works Boeing

Annual Symposium Chair, Combat Survivability Division, NDIA

#### 4:20 pm ADJOURN





## KEYNOTE SPEAKER



#### LIEUTENANT GENERAL ERIC FICK

Program Executive Officer F-35 Lightning II Joint Program Office

Lt Gen Eric T. Fick is the Program Executive Officer for the F-35 Lightning II

Joint Program Office in Arlington, Virginia. The F-35 Lightning II Joint Program Office is the Department of Defense's agency responsible for developing, delivering and sustaining the F-35A/B/C, the nextgeneration strike aircraft weapon system for the U.S. Air Force, Navy, Marine Corps, seven international partners and six current foreign military sales customers.

Lt Gen Fick entered the Air Force in September of 1990 after graduating from the University of Notre Dame with a Bachelor's degree in Aerospace Engineering. He has served as a Logistics Plans and Programs Officer, F-16 Fighting Falcon Mechanical Systems Engineer, Computational Fluid Dynamics Research Engineer, Joint System Program Office Chief of Test, Air Staff Branch Chief, Deputy Chief of the Air Force Senate Liaison Office and Director of Global Reach Programs, Office of the Assistant Secretary of the Air Force for Acquisition. Lt Gen Fick

has commanded at squadron and group levels and previously served twice as an Air Force Program Executive Officer. Additionally, he has logged more than 350 hours in the T-38 Talon, F-15 Eagle, F-16 and other military and civilian experimental aircraft.

Prior to his current assignment, Lt Gen Fick was the Deputy Program Executive Officer for the F-35 Lightning II Joint Program.



# **SURVIVABILITY** SYMPOSIUM

Advancing Weapon Systems Survivability to Achieve Land,

Join senior-level defense industry professionals and their government counterparts as they engage in a technical dialogue and exchange information related to technological advances, operational experiences, current and future threats, system reliability, and other aircraft survivability topics. Over the course of three days in a classified environment, attendees will collaborate to unlock the keys to enhancing survivability across a multi-domain battlespace. This symposium offers a unique opportunity for learning with its extensive agenda and inclusion of relevant tutorials and presentations. Mark your calendars for this highly anticipated event.

November 1 – 3 | Monterey, CA | NDIA.org



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# NDIN LEADING THE WAY IN ENGAGEMENT. **NETWORKING, AND NATIONAL DEFENSE**

PLAN AHEAD FOR SUCCESS | 2022 FEATURED MEETINGS, CONFERENCES, AND EVENTS



#### **DLA LAND & MARITIME SUPPLIER CONFERENCE & EXHIBITION**

April 6 - 7, 2022 | Columbus, OH

Logistics | Supply Chain | Support Equipment | Small Business



#### 65<sup>™</sup> ANNUAL FUZE CONFERENCE

May 10 - 12, 2022 | Renton, WA

Fuze | Missiles | Munitions Technology | Safety & Arming Devices | Warheads



#### MUNITIONS EXECUTIVE SUMMIT

April 6 - 7, 2022 | Parsippany, NJ

Munitions Technology | Energetic Materials | Fuze | Technology



#### 2022 JOINT NDIA/AIA SPRING INDUSTRIAL SECURITY CONFERENCE

April 25 - 27, 2022 | Clearwater Beach, FL

Industrial Security | Insider Threat | Cybersecurity/CMMC | NISPOM Updates



#### 22ND ANNUAL SCIENCE & **ENGINEERING TECHNOLOGY** CONFERENCE

April 26 - 28, 2022 | Miami, FL

Defense Research & Development | Science & Technology



#### INTEGRATED PRECISION **WARFARE REVIEW (IPWR-22)**

May 4 - 5, 2022 | Arlington, VA

Acquisition and Policy | Precision Capability | Air & Missile Defense



#### BREAKTHROUGH **ENERGETICS 2022**

May 4 - 5, 2022 | West Lafayette, IN

Science & Engineering Technology | Propellants | Explosives | Modeling & Simulation



#### 2022 SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE & EXHIBITION (SOFIC)

May 16 - 19, 2022 | Tampa, FL

Communications | Light Vehicles | Small Arms | Special Operations



#### **TRAINING & SIMULATION** INDUSTRY SYMPOSIUM (TSIS)

June 15 - 16, 2022 | Orlando, FL

Training | Simulation | Modeling | Acquisition/Funding



#### **2022 CBRN DEFENSE CONFERENCE AND EXHIBITION**

July 26 - 28, 2022 | Baltimore, MD

Combat Architecture | Defensive Measures | Demilitarization | Preparedness | Industrial Base



#### 2022 SPACE WARFIGHTING INDUSTRY FORUM (SWIF)

August 17 - 18, 2022 | Colorado Springs, CO

Defense Research & Development | Science & Technology



#### I/ITSEC 2022

November 28 - December 2, 2022 | Orlando, FL

Simulation | Training | Virtual Reality

\*All Classified | \*\*Partially Classified