

# IMPACTS OF (ZERO) TRUST IN DOD MICROELECTRONICS TO COMMERCIAL INDUSTRY WORKSHOP







### 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



# **ELECTRONICS DIVISION**

### WHO WE ARE

The Electronics Division leads the evaluation of current and future challenges while developing proposed solutions to such challenges so that government and industry may access trusted and assured electronics. The Division provides for the exchange of information between the defense and commercial industries, universities, research centers, standards bodies, and government and military representatives on technology spanning advanced R&D, design, manufacturing, and the deployment of defense and national security systems.

### **LEADERSHIP AND COMMITTEES**

Irene Lau

Division Chair

**DIB Policy** 

Mike Fritze Jim Will

**FPGA** 

Nikhil Shenoy

Government Liaison

Allen Tillerson

Trust & Assurance Fzra Hall

Strategy & Emerging Technology

Shawn Fetterolf - Vice Chair

# **EVENT INFORMATION**



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

**EVENT CONTACTS** 

Krystal Heard

Meeting Planner

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George Webster

Program Manager, Divisions

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**PLANNING** COMMITTEE Irene Lau

Chair, Electronics Division

Shawn Fetterolf

Vice Chair, Electronics Division

Grant Meyer, PhD

Committee Member, Electronics Division

**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** 

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**REAL-TIME Q&A** 

slı.do

**Sli.do** 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 Sli.do!

Event code: #Electronics2021

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THURSDAY, SEPTEMBER 9

10:00 – 10:20 am **INTRODUCTION** 

Dr. Devenand Shenoy

Principal Director, Microelectronics, Office of the Under Secretary of Defense for Research & Engineering

Arsenio (Bong) Gumahad II

Director, Command, Control, Communications, Computers, Intelligence, Surveillance, & Reconnaissance (C4/ISR),

Office of the Deputy Assistant Secretary of Defense for Acquisition

10:20 – 10:45 am **MAIN MANUAL** 

Dr. Linton Salmon

Principal Technical Advisor to the Principal Director for Microelectronics, Office of the Under Secretary of Defense for Research & Engineering

10:45 – 11:10 am LEVELS OF ASSURANCE

**Gregory Murphy** 

Senior Technical Leader, Joint Federated Assurance Center (NSA)

11:10 – 11:25 am **BREAK** 

11:25 – 11:50 am ATTACK COUNTERMEASURE ANALYSIS (ACMA)

**Christine Rink** 

Senior Project Leader, The Aerospace Corporation

11:50 am – 12:15 pm CUSTOM IC STANDARD (DESIGN/PERSONALIZATION)

Christine Rink

Senior Project Leader, The Aerospace Corporation

12:15 – 12:40 pm CUSTOM IC STANDARD (FOUNDRY, MASK, ASSEMBLY, TEST)

Dr. Linton Salmon

Principal Technical Advisor to the Principal Director for Microelectronics, Office of the Under Secretary of Defense for Research & Engineering

12:40 – 1:30 pm **FPGA STANDARD** 

**Gregory Murphy** 

Senior Technical Leader, Joint Federated Assurance Center (NSA)

1:30 – 2:00 pm **BREAK** 

2:00 - 3:30 pm

O&A SESSION 1

3:30 – 4:00 pm **BREAK** 

4:00 – 5:30 pm **Q&A SESSION 2** 

FRIDAY, SEPTEMBER 10

10:00 – 11:30 am **Q&A SESSION 3** 

11:30 am – 1:00 pm **BREAK** 

1:00 – 2:30 pm Q&A SESSION 4

2:30 – 3:00 pm **BREAK** 

3:00 – 4:30 pm Q&A SESSION 5

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.



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# **BIOGRAPHIES**



### **CHRISTINE RINK**

Senior Project Leader The Aerospace Corporation

Christine Rink is a senior project leader at The Aerospace Corporation. Christine

has over 20 years of experience in the design and development of microelectronics and has worked in hardware assurance

for more than a decade. She is the ASIC lead for a high-volume, ASIC-focused DoD program. Christine has developed riskbased, data-informed, program-specific solutions to reconcile DoD trust policy and

export control to available state of the art microelectronics technologies, enabling access for U.S. government programs.

Christine holds a B.S. in Biomedical and Electrical Engineering and an M.S. in Electrical Engineering from the University of Southern California.



### DR. LINTON SALMON

Principal Technical Advisor to the Principal Director for Microelectronics Office of the Undersecretary of Defense for Research & Engineering

Dr. Linton Salmon currently serves as the Principal Technical Advisor to

the Principal Director for Microelectronics in Office of the Under Secretary of Defense for Research and Engineering (USD(R&E)). In this role, Dr. Salmon provides technical support for the DoD Microelectronics strategy, including technical guidance for key programs such as SHIP, RAMP, and RAMP-C. Dr. Salmon also leads the team establishing the Quantifiable Assurance (QA) method to provide supply chain assurance for DoD microelectronic components and leads drafting of the standards required to implement QA.

Prior to serving as a technical advisor in OUSD(R&E), Dr. Salmon served as program manager in the MTO office at DARPA. In this capacity, Dr. Salmon initiated and

managed programs in integrated circuit design (CRAFT), hardware security (SSITH), Monolithic 3-D Technology (3D-SoC), and a joint government/industry program to drive microelectronics research in universities (JUMP).

Prior to joining DARPA, Dr. Salmon spent 15 years in executive roles directing development of CMOS technology from the 130nm node through the 7nm node at Texas Instruments, Advanced Micro Devices, and GlobalFoundries. He focused on development of semiconductor processes, technology enablement, design/technology interaction, and ramping of developed technology into production in 300mm wafer fabrication factories in the United States. Europe, and Asia.

Prior to joining AMD, Dr. Salmon was Vice President for Research and Technology Transfer at Case Western Reserve

University, interfacing between faculty and external entities in the commercialization of university-led research. Prior to CWRU, Dr. Salmon was associate professor of electrical engineering and physics and Associate Dean of Engineering at Brigham Young University where his research areas included CMOS processes, micro-battery research, advanced packaging, and MEMS.

Dr. Salmon began his career directing development of III-V materials and processes for DoD and commercial applications at Hughes Research Laboratories and Rockwell International.

Dr. Salmon earned his B.S. in Physics at Stanford University and his M.S. and PhD in Applied and Engineering Physics at Cornell University.



## JOIN THE CONVERSATION













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

PLAN AHEAD FOR SUCCESS | 2021-22 FEATURED MEETINGS, CONFERENCES, AND EVENTS



### **2021 CBRN DEFENSE CONFERENCE AND EXHIBITION**

August 16 - 18 | Baltimore, MD

Biological | CBRN | Combat Architecture | Defensive Measures | Domestic Preparedness | Nuclear Defense | Radiological | Research & Development



### **2021 UNDERSEA WARFARE** FALL CONFERENCE

September 27 - 29 | Groton, CT

Aviation USW | C4I | Mine Warfare | Undersea Sensors & Vehicles | Warfighter Performance



### 24<sup>TH</sup> ANNUAL SYSTEMS & MISSION ENGINEERING CONFERENCE

October 4 - 7, 2021 | Orlando, FL

Engineering & Manufacturing | Human Systems Integration | Security Engineering | Systems Architecture Systems



### **2021 FUTURE FORCE CAPABILITIES CONFERENCE** AND EXHIBITION

October 18 - 21 | Columbus, GA

Autonomous Systems | GARM | Live Fire | Multi-Domain | Small Arms | Explosive Ordnance Disposal



### PRECISION STRIKE TECHNOLOGY SYMPOSIUM (PSTS-21)\*

October 19 - 21, 2021 | Laurel, MD

Hypersonics | Cruise Missiles | Non-kinetic Strike | Stand-off Weapons



### 2021 AIRCRAFT SURVIVABILITY SYMPOSIUM\*

November 2 - 4 | Monterey, CA

Combat Survivability | Concealment and Deception | Countermeasures | Urban Warfare | Vulnerability Reduction



### 32<sup>ND</sup> ANNUAL NDIA SO/LIC **SYMPOSIUM**

November 3 - 4, 2021 | Washington, DC



### 2021 JOINT NDIA/AIA FALL INDUSTRIAL SECURITY CONFERENCE

November 8 - 10 | Chantilly, VA

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



### I/ITSEC 2021

November 29 - December 3 | Orlando, FL

Simulation | Training | Virtual Reality



### 2022 TACTICAL WHEELED **VEHICLES CONFERENCE**

February 28 - March 2 | Norfolk, VA

Autonomous Vehicles | Electric Drive | Modernization & Sustainment | Acquisition



### **2022 UNDERSEA WARFARE SPRING CONFERENCE**

March 28 - 30 | San Diego, CA

Aviation USW | C4I | Mine Warfare | Undersea Sensors & Vehicles | Warfighter



### **2022 PACIFIC OPERATIONAL** SCIENCE & TECHNOLOGY (POST) **CONFERENCE\*\***

March 7 – 9 (Unclassified), 9 – 10 (Classified) | Honolulu, HI

Regional Security | Science & Engineering Technology | Technology Engagement



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

May 10 - 12, 2022 | Seattle, WA

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



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

May 16 - 19 | Tampa, FL

Communications | Light Vehicles | Small Arms | Special Operations \*All Classified | \*\*Partially Classified

Special Operations Forces | Strategic Competition

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