**Cyber Beacon 2024 – Learning from the Past; Preparing for Tomorrow**

**Day One Sequence of Events (17 October)**

**9:00-9:30 Opening Remarks** Andy Walsh, Interim Chancelor National Defense University, College of and Cyberspace

**9:30-10:15 Opening Keynote** Carole House, Special Adviser for Cybersecurity and Critical Infrastructure Policy, National Security Council (NSC)

**10:15-10-45 Break**

**10:45-11:45 History of Information and Cyberspace Panel**

This panel examines the history of information and cybersecurity within the context of warfare with a focus on the development of the cyberspace domain. This panel provides insight into the key milestones of the development, use, and transformation of the cyberspace domain and the relationship between and with the physical space domains.

**Moderator:** John Curan, Executive Editor, MeriTalk

**Panelists:**

Dr Michael Warner, Command Historian, US Department of Defense

Jason Healey, Senior Research Scholar at Columbia University's School for International and Public Affairs

Connie Uthoff, Program Director of the Cybersecurity Strategy and Information Management Master's Program /College of Professional Studies at The George Washington University

Geronimo Frank Nuño, Associate Professor, National Defense University, College of and Cyberspace

**11:45 - 12:15 Morning Keynote** Ylli Bajraktari – CEO Strategic Studies

**12:15-1:15 Lunch**

**1:15-2:15 Future and Predictions Panel for Information and Cyberspace Panel**

As digital infrastructure becomes increasingly integral to global security, the landscape of cyber warfare is poised for transformative change over the next 60 years. This panel, will delve into the anticipated evolution of cyber conflict, examining emerging technologies, strategic doctrines, and potential geopolitical shifts. Discussions will explore the implications of these developments for national security, international relations, and policymaking.

**Moderator:** Mr. Patrick Tucker, Technology Editor for Defense One

**Panelists:**

Dr. Mark Stanley, NASA \*CIC Alum

COL Nancy Blacker JD, Chairman of the Joint Chief's of Staff's (CJCS), National Defense University, College of and Cyberspace

COL (Ret.) Justin D. Considine, U.S. Army, Instructor, National War College, National Defense University

Dr. Matthew Rogers, Office of the Technical Director, Future Technologies Branch, Cybersecurity Information Security Agency

**2:15-3:15 Cyberspace and Academia**

Abstract: The past two decades have seen significant evolution in the field of cyber education, driven by rapid technological advancements and the growing importance of cybersecurity across various sectors. This moderated panel, featuring distinguished academic professors, will explore the transformative changes in cyber education. The discussion will address the development of cyber curricula, the integration of interdisciplinary approaches, the rise of online and hands-on learning methods, and the increasing collaboration between academia, industry, and government. Panelists will share insights on the challenges and opportunities in preparing the next generation of cyber professionals, highlighting innovative teaching practices and the impact of emerging technologies on education. By reflecting on past experiences and looking towards future trends, this session aims to provide a comprehensive understanding of how cyber education has adapted to meet the demands of a rapidly changing digital landscape.

**Moderator:** David DiMolfetta, Cybersecurity Reporter, Nextgov/FCW

**Panelists:**

Dr. Olga Livingston, Virginia Technical University (Invited)

Dr. Shiu-Kai Chin, Emeritus Professor, Syracuse University

Dr. Diane Burley, Vice Provost for Research and Innovation, American University

Dr. Jim Chen, National Defense University College of Information and Cyberspace

**Break 3:15-3:45**

**3:45-4:45 Cyberspace and Research** **Panel** – How did we get here and where are we going?

The complicated domain now known as cyberspace began as the dream of researchers and academics who wanted to share information faster and work on “cool science projects.” What was once the domain of geeks and nerds has grown into a domain of international strategic interests. Cyberspace and digital technology is now foundational to U.S. strategic, security, economic, and foreign policy interests. This panel will explore how to computers connected at MIT Lincoln Labs in 1965 has led to the world of today and discuss how future research will impact cyberspace in the future.

**Moderator:**  Jason Miller, Executive Editor, Federal News Network

**Panelists:**

Cheri Caddy, Senior Advisor for Cyber Security, Office of Cybersecurity, Energy Security, and Emergency Response

Dr. Sarah Muccio, Air Force Laboratories

Karen Uttecht, MIT Lincoln Laboratory

Dr. Gwyneth Sutherlin, National Defense University College of Information and Cyberspace

4:45-5:30 Closing Keynote - Steven Hernandez, Department of Education CISO

5:30-5:45 Closing Remarks NDU-P

5:45-7:30 Reception

Day Two Sequence of Events (18 October)

**9:00-9:15 Opening Remarks** Dr. Matthew Easley, Associate Dean of Joint Warfighting, National Defense University College of Information and Cyberspace

**9:15-9:45 Opening Keynote** Kevin M. Mulvihill, Acting Principal Deputy Chief Information Officer, Department of Defense

**9:45-10:15 Break**

**10:15-12:15 Tracks**

***International Perspectives in Cyberspace – Room MH 155 (Plenary Room)***

*Track Leads: MAJ Abdullah H. Clark, Assistant Professor, National Defense University-College of Information and Cyberspace and LTC Keith Caldwell Instructor, National Defense University-College of Information and Cyberspace*

In an increasingly interconnected world, cyberspace has emerged as a critical arena for international cooperation and competition. The international perspectives on cyberspace panel will explore a range of international perspectives on cyberspace, examining issues such as cybersecurity, digital governance, and the impact of technology on global affairs. By bringing together experts from diverse backgrounds, the panelists hope to foster a nuanced understanding of the challenges and opportunities presented in the cyberspace domain. Panel themes include**, Cybersecurity:** Discuss international efforts to address cyber threats, including state-sponsored attacks, ransomware, and critical infrastructure protection; **Digital Governance:** Examine global norms and regulations governing cyberspace, such as data privacy, freedom of expression, and digital inclusion; **Geopolitics of Technology:** Explore the role of technology in shaping international relations, including power dynamics, economic competition, and national security; **Emerging Trends:** Discuss emerging technologies and their implications for cyberspace, such as artificial intelligence, blockchain, and the Internet of Things.

***Data and AI track – Room MH 184***

*Track Lead: Dr. Linda Jantzen, Assistant Professor, National Defense University-College of Information and Cyberspace*

Deploying artificial intelligence (AI) systems securely requires an understanding of the skills and resources required, the infrastructure on and with which the systems will interact, and the vulnerabilities in AI systems and how to mitigate them. In this panel we will discuss some of the attack vectors unique to AI systems and explore best practices for to protect and defend the AI systems. Panelists will bring expertise in the areas of AI and cyber education, policy/governance, and collaboration.

***Information Operations - Room MH 196***

*Track Lead: Joseph R. Cheravitch, Assistant Professor, National Defense University-College of Information and Cyberspace*

The purpose of this track is to acquaint the audience with current issues affecting the information environment, including state-sponsored online influence campaigns, the intersection between cyber and information operations, and a range of other relevant topics. The discussion will also highlight current issues affecting the United States' ability to counteract adversarial information operations, especially ahead of this year's presidential election. Following a presentation by several subject matter experts from the Department of Defense, Office of Information Operations Policy (OIOP), audience members will be encouraged to ask questions.

***Zero Trust Architecture - Room Dr. Roxanne B. Everetts Seminar Room, MH 152***

*Track Lead: Dr. Amy S. Hamilton, Visiting Faculty Chair from Department of Energy*

The DOD is dependent on the security of the defense industrial base (DIB). The theft of intellectual property from the DIB has been increasing and cyber security remains a challenge. Zero Trust principles advocate for continuous verification of every user, device, and network component, transcending traditional perimeter-based security. By assuming a hostile environment and enforcing strict access controls, ZT minimizes the attack surface, enhancing resilience against all threats. Effective identity management, including multi-factor authentication and least privilege access, is crucial in Zero Trust implementation.

***Cyber Threats (Clearence required) - Lincoln Hall SCIF (3rd Floor)***

*Track Leads: CDR Deanna Fisher, Senior Fellow, National Defense University-College of Information and Cyberspace and Jonathan Beasley, Associate Professor of Practice, National Defense University-College of Information and Cyberspace*

The past two decades have witnessed transformative changes in the realm of cyber policy, shaped by the rapid advancement of technology and the escalating complexity of cyber threats. This moderated panel of esteemed cyber experts will delve into the evolution of cyber policy, offering a comprehensive analysis of the milestones, challenges, and future directions in this critical field. The discussion will cover key topics including the development of international cyber norms, the impact of major cyber incidents on policy formulation, the role of public-private partnerships, and the integration of cybersecurity into national security strategies. By examining case studies and drawing on the diverse experiences of our panelists, this session aims to provide valuable insights into how past lessons can inform future policy-making to enhance global cyber resilience and security

**12:15 –12:30 Break**

**12:30-12:45 Student Contest Awards** James Schmeling, NDU Foundation President

**12:45-12:55 Dedication of Artifacts** Dr. Frederick Moxley

**12:55-13:15 Closing Keynote** Harry Wingo, Deputy Director, Office of the National Cyber Director (ONCD)

**13:15 Cake cutting and lunch**