



# 6<sup>TH</sup> T&E SYMPOSIUM VIRTUAL PROGRAM



Science and  
Technology

# T&E SYMPOSIUM AGENDA – JUNE 26, 2024

<b>8:00–8:30 AM</b>	<b>WELCOME/REGISTRATION</b>
<b>8:30–8:40 AM</b>	<b>ADMINISTRATIVE REMARKS AND NATIONAL ANTHEM</b> Mr. Kenneth Moser, DHS, USCIS
<b>8:40–8:50 AM</b>	<b>WELCOME AND INTRODUCTION</b> Mr. James Wells, Director, DHS, Office of Test and Evaluation (DOT&E)
<b>8:50–9:30 AM</b>	<b>KEYNOTE SPEAKER</b> Dr. Dimitri Kusnezov, DHS, Under Secretary for Science and Technology (USST)
<b>9:30–10:00 AM</b>	<b>DIGITAL ENGINEERING</b> SPEAKER: Mr. Kerry Wilson, DHS, S&T, SES
<b>10:00–10:15 AM</b>	<b>BREAK // Visit Poster Sessions</b>
<b>10:15–11:15 AM</b>	<b>PANEL: CYBER RESILIENCE T&amp;E RESOURCES</b> MODERATOR: Ms. Antonia Pulley, CISA PANEL MEMBERS: Dr. Christa Pettie, DoD, NCRC Mr. Dan Thomas, JHU/APL Mr. Jeffrey Perkins, DHS, CBP
<b>11:15–11:45 AM</b>	<b>USCIS ITA SUPPORT TOOL</b> SPEAKER: Mr. Jacques Romain, DHS, USCIS, OT&E
<b>11:45 AM–1:00 PM</b>	<b>LUNCH // Visit Poster Sessions</b>
<b>1:00–2:00 PM</b>	<b>PANEL: T&amp;E OF AI-ENABLED SYSTEMS</b> MODERATOR: Jean Petty, DHS, S&T, OT&E PANEL MEMBERS: Dr. Laura Freeman, Virginia Tech Ms. Carol Pomales, DHS, HSEDI Mr. Brian Henz, DHS, OSE Mr. Brian Nietzold, DHS, TSL
<b>2:00–2:30 PM</b>	<b>FACIAL RECOGNITION T&amp;E</b> SPEAKER: Mr. Arun Vemury, DHS, S&T
<b>2:30–2:45 PM</b>	<b>BREAK // Visit Poster Sessions</b>
<b>2:45–3:45 PM</b>	<b>PANEL: SOFTWARE TEST AND EVALUATION IN THE ERA OF AGILE DEVELOPMENT, DEVSECOPS, AND AI</b> MODERATOR: Mr. Kris Bauer, DHS, S&T, OT&E PANEL MEMBERS: Mr. Robert Borka, PARM, CAE Mr. Brian Forsythe, DHS, MGMT Ms. Angela Mejeur, DoD, DTE&A Mr. Nilo Thomas, DoD, DOT&E Dr. Mark Gillenson, University of Memphis
<b>3:45–4:00 PM</b>	<b>CLOSING REMARKS</b> Mr. James Wells, DHS, S&T, DOT&E



**8:00 AM – 8:30 AM**

***Welcome/Registration***

**8:30 AM – 8:40 AM**

***Administrative Remarks  
and National Anthem***

**Mr. Kenneth Moser, DHS, USCIS**

## DIRECTOR'S WELCOME AND INTRODUCTION

**James Wells**, DHS, Science and Technology (S&T),  
Director, Office of T&E (DOT&E)

Mr. James S. Wells is a member of the Senior Executive Service and assumed duties as the Director of Test and Evaluation for the Department of Homeland Security in July 2021 after serving as the Acting Director since mid-2020. In this role, he is the principal advisor on T&E to the Office of the Secretary, Component Heads, and the Chief Acquisition Officer and acts as the primary liaison with outside parties regarding T&E. His office is responsible for establishing T&E policies, providing independent T&E oversight of major DHS acquisition programs, training the DHS T&E workforce, and advancing the T&E state-of-the-art within DHS.

In July 2014, Mr. Wells joined the Department of Homeland Security's Office of Test and Evaluation as the first Deputy Director for Cyberspace and Homeland Security Enterprise Programs. In addition to managing the T&E oversight of a wide range of major acquisition programs across DHS, he led the development and coordination of the Department's first policies on cyber resilience operational T&E and threat assessment in support of T&E.

Mr. Wells served as the Deputy Director for Cyber and Information Systems for the Deputy Assistant Secretary of Defense for Developmental Test and Evaluation from September 2011 to June 2014. While there he managed a team responsible for the developmental test and evaluation

of major Defense acquisition programs including communications systems, radars, command and control systems, intelligence systems, and business systems.

Mr. Wells served in the Army Test and Evaluation Command from 2003 to 2011, initially as an Army Officer and then as a civil servant. He was an evaluator and team leader for a variety of small unit battle command systems and spent time as the Assistant Technical Director for ATEC. He completed his time there as a Division Chief managing a team responsible for the evaluation of battle command, combat identification, and networked training systems.

Mr. Wells left the US Army in 2005 after ten years of service. While in uniform, he served in a variety of assignments in armor and cavalry units including deployments to Bosnia-Herzegovina in 1996 as a Scout Platoon Leader and to Iraq in 2003 as a Tank Company Commander. He was commissioned as an Armor officer in 1994.

Mr. Wells has a Bachelor of Science in Mechanical Engineering from the United States Military Academy and a Master of Science in National Resource Strategy from the Eisenhower School at the National Defense University. He is a graduate of the Leadership for a Democratic Society at the Federal Executive Institute and holds various government certifications in Test & Evaluation, Systems Engineering, and Program Management. He is an active member of the International Test and Evaluation Association serving as the DHS Advisor to the Board of Directors from 2015 to 2021.

8:50 AM – 9:30 AM

## KEYNOTE SPEAKER

**Dr. Dimitri Kusnezov**, DHS, Under Secretary for Science and Technology (USST)

Dr. Dimitri Kusnezov [Kooz-NETS-off] was confirmed as the Under Secretary for the Science and Technology Directorate (S&T) on September 8, 2022. As the science advisor to the Homeland Security Secretary, Dr. Kusnezov heads the research, development, innovation and testing and evaluation activities in support of the Department of Homeland Security's (DHS) operational Components and first responders across the nation. S&T is responsible for identifying operational gaps, conceptualizing art-of-the-possible solutions, and delivering operational results that improve the security and resilience of the nation.

Prior to DHS, Dr. Kusnezov was a theoretical physicist working at the U.S. Department of Energy (DOE) focusing on emerging technologies. He served in numerous positions, including the Deputy Under Secretary for Artificial Intelligence (AI) & Technology where he led efforts to drive AI innovation and bring it into DOE missions, business and operations including through the creation of a new AI Office.

Dr. Kusnezov has served in scientific and national security positions including Senior Advisor to the Secretary of Energy, Chief Scientist for the National Nuclear Security Administration, Director of Advanced Simulation and Computing and the Director of the multi-billion-dollar National Security Science, Technology and Engineering programs. He

created numerous programs including for Minority Serving Institutions, international partners, private sector and philanthropic entities. He has worked across agencies to deliver major milestones such as DOE's 10-year grand challenge for a 100 Teraflop supercomputer, and first of their kind and world's fastest supercomputers.

Prior to DOE and his pursuit of public service, Dr. Kusnezov had a long career in academia where he published more than 100 articles and edited two books. He joined Yale University faculty where he was a professor for more than a decade in Theoretical Physics and served as a visiting professor at numerous universities around the world.

Before this post, Dr. Kusnezov did a brief postdoc and was an instructor at Michigan State University, following a year of research at the Institut fur Kernphysik, KFA-Julich, in Germany. He earned his MS in Physics and Ph.D. in Theoretical Nuclear Physics at Princeton University and received Bachelor of Arts degrees in Physics and in Pure Mathematics with highest honors from UC Berkeley.



9:30 AM – 10:00 AM

## DIGITAL ENGINEERING

SPEAKER:

**Mr. Kerry Wilson**, DHS, S&T, Director, Systems Engineering and Standards (SES)

The Systems Engineering and Standards Division within S&T is leading the development of the strategy for implementing digital engineering within DHS. This presentation includes an overview of the strategy. As DHS Components continue to make progress in digital engineering, the strategy will help align implementation efforts across the Department. It is designed to foster a shared vision and ignite timely and focused action. The strategy will reflect inputs received from components during outreach that will be conducted in the summer of 2024.





**10:00 AM – 10:15 AM**

***BREAK***

*Visit our Poster Sessions*

10:15 AM – 11:15 AM

## PANEL: CYBER RESILIENCE T&E RESOURCES

MODERATOR:

**Ms. Antonia Pulley**, DHS, Cybersecurity and Infrastructure Security Agency (CISA), Office of the Chief Acquisition Executive

PANEL MEMBERS:

**Dr. Christa Pettie**, Department of Defense (DoD), National Cyber Range Complex, Enterprise Operations Lead

**Mr. Dan Thomas**, Johns Hopkins University Applied Physics Lab (JHU/APL), Asymmetric Operations Sector (AOS)

**Mr. Jeffrey Perkins**, DHS, Customs and Border Protection (CBP) System Analysis and Evaluation Branch Chief, Systems Engineering Division, Office of Acquisition, Enterprise Services

The panel will discuss issues, best practices, and resources for performing cyber resilience test and evaluation. Discussions will include ways to identify cyber resilience T&E resources, how to plan and perform cyber resilience T&E events such as Cyber Table Tops and Adversarial Assessment, and common challenges in these events.

11:15 AM – 11:45 AM

## USCIS ITA SUPPORT TOOL

SPEAKER:

**Mr. Jacques Romain**, DHS, US Citizenship and Immigration Services (USCIS), Applied Technology Division, OT&E Branch Chief

ITA integrated tool to support governance for Continuous Integration/Continuous Delivery (CI/CD) Agile Development programs.

USCIS team will provide a short demo of the tool and open the floor for Questions and Answers with panel discussion including: Mr. Pramod Dhakal, Mrs. Nilli Khanna, Mr. Edward Whiteman, Mr. Jermaine Williams.



**11:45 AM – 1:00 PM**

***LUNCH***

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# LUNCH OPTIONS

There are several places to eat within walking distance of USCIS. They are directly across the street from the front entrance—no need to drive.

## **Burgers @ Apollo**

## **The Real Milk & Honey Eatery & Bar**

## **Subway (Sandwich)**

## **La'Caj Seafood**

## **Spot Food Hall:**

**Gong Cha Camp Springs**

**Just Sub Wing**

**Korean Tacos**

**Soulmate**

**Tekken Punch**

**Thai Yum!**

**Xtreme Ramen & Bun**

## **Bon Appetit!**

1:00 PM – 2:00 PM

## PANEL: T&E OF AI-ENABLED SYSTEMS

MODERATOR:

**Ms. Jean Petty**, DHS, S&T, Office of Test and Evaluation (OT&E), Cyber Resilience T&E Coordinator

PANEL MEMBERS:

**Dr. Laura Freeman**, National Security Institute, Virginia Tech

**Ms. Carol Pomaes**, DHS, AI Support Homeland Security Systems Engineering and Development Institute (HSSEDI) from the MITRE Corporation

**Mr. Brian Henz**, DHS, S&T Office of Science and Engineering (OSE), Senior Science Advisor

**Mr. Brian Nietzold**, DHS, S&T, Transportation Security Laboratory (TSL), Test Engineer

The panel will discuss how T&E of AI-enabled systems including Large Language Models (LLMs) are different from T&E of systems without those capabilities, and what is new that T&E professionals need to consider; what skills are missing in the T&E workforce to plan and execute T&E of AI-enabled systems; what challenges exist and possible ways to deal with vendors' proprietary systems; and the issues related to trust and bias in AI-enabled systems.

2:00 PM – 2:30 PM

## FACIAL RECOGNITION T&E

SPEAKER:

**Mr. Arun Vemury**, DHS, S&T, Senior Advisor for Biometrics and Identity Technologies

Enhancing and Evaluating the Accuracy of Facial Biometrics Systems at DHS

- Overview of the Biometric and Identity Tech Center (BI-TC)
- BI-TC's biometric and identity technology testing and standards activities
- S&T research and standards work on disaggregating performance based on user demographics
- Working with industry to understand threats and potential attacks on facial recognition systems





**2:30 PM – 2:45 PM**

***BREAK***

*Visit our Poster Sessions*

2:45 PM – 3:45 PM

## PANEL: SOFTWARE TEST AND EVALUATION IN THE ERA OF AGILE DEVELOPMENT, DEVSECOPS, AND AI

### MODERATOR:

**Mr. Kris Bauer**, DHS, S&T, OT&E, Deputy Director, Cyber and Homeland Security Enterprise

### PANEL MEMBERS:

**Mr. Robert Borka**, DHS, Management Directorate, Deputy Executive Director, Office of Program Accountability and Risk Management (PARM), Component Acquisition Executive (CAE)

**Mr. Brian Forsythe**, DHS, Chief Information Office, Director, Enterprise Technical Engineering Division

**Ms. Angela Mejeur**, DoD, Under Secretary of Defense for Research and Engineering, Software Technical Director, Office of Developmental Test, Evaluation, and Assessments (DTE&A)

**Nilo Thomas**, DoD, Office of the Director, Operational Test and Evaluation, Software & Artificial Intelligence Advisor

**Dr. Mark Gillenson**, The University of Memphis, University Research Professor supporting the DHS T&E Community of Best Practices

The panel will discuss the current and future state of software acquisition and modernization within the DHS and DoD including implications for a new test and evaluation (T&E) paradigm. We will consider how policy and guidance can support transformation in software T&E. We will discuss modern software development strategies, tools, and technologies that enable continuous and integrated T&E at speed with capability development. We will also consider how AI capabilities could be leveraged to improve software application testing.



**3:45 PM – 4:00 PM**

# *CLOSING REMARKS*

James Wells, DHS, S&T DOT&E



# Science and Technology