

*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**  
Anticipating Rare Events of Major Significance:  
An Unclassified Workshop

Final Agenda

**DAY 1: DECEMBER 17, 2021**

**SESSION 1 — IMPORTANCE AND SCOPE**

10:30 AM **Introduction and Expectations of the Workshop**  
Christopher Barrett, Committee Chair  
University of Virginia Biocomplexity Institute

10:45 AM **Sponsor Remarks**  
Theodore Plasse  
Defense Threat Reduction Agency

**SESSION 2 — MATHEMATICAL FOUNDATIONS**

11:00AM **Alon Orlitsky**  
University of California, San Diego

11:30 AM **BREAK**

**SESSION 3 — DETECTION, INDICATIONS AND WARNINGS**

11:45 AM **Arvind Satyam**  
Pano AI

12:05 PM **T. Charles Clancy**  
MITRE Labs

12:25 PM	<b>Elisabeth Pate Cornell</b> Stanford University
12:45 PM	<b>Panel Discussion with Speakers 1-3</b> Robert Schock, Moderator
1:20 PM	<b>LUNCH</b>

#### **SESSION 4 — PLANNING, FORECASTING AND INTELLIGENCE PREPARATION**

2:15 PM	<b>Jeffrey Love</b> U.S. Geological Survey (USGS)
2:35 PM	<b>Nestor Alfonzo Santamaria</b> Organisation for Economic Co-operation and Development (OECD)
2:55 PM	<b>Madhav Marathe</b> University of Virginia Biocomplexity Institute
3:15 PM	<b>Panel Discussion with Speakers 4-6</b> Christopher Barrett, Moderator
3:50 PM	<b>BREAK</b>

#### **SESSION 5 — FIRESIDE CHAT**

3:55 pm	<b>Madeleine Clare Elish</b> Google Research  Michele Wucker, Moderator
4:25 PM	<b>Day One Concluding Remarks</b> Christopher Barrett, Committee Chair University of Virginia Biocomplexity Institute
4:30 PM	<b>ADJOURN DAY ONE</b>

# DAY 2: DECEMBER 21, 2021

## SESSION 6 — PLENARY

10:00 AM **Welcome and Introduction for Day 2**  
Christopher Barrett, Committee Chair  
University of Virginia Biocomplexity Institute

10:05 AM **Sponsor Remarks**  
Theodore Plasse  
Defense Threat Reduction Agency

## SESSION 7 — FIRESIDE CHAT

10:10 AM **Markus Gesmann**  
Insurance Capital Markets Research  
Michele Wucker, Moderator

11:10 AM **BREAK**

## SESSION 8 — MULTISOURCE INFORMATION FUSION, SITUATION ASSESSMENT, AND COURSE OF ACTION SELECTION

11:25 AM **Alice Hill**  
Council on Foreign Relations

11:45 AM **Delores Knipp**  
University of Colorado Boulder

12:05 PM **John Organek**  
Electric Infrastructure Security Council

12:25 PM **Panel Discussion with Speakers 10-12**  
Vicki Bier, Moderator

1:00 PM **LUNCH**

## SESSION 9 — ACTIVE PREVENTION AND DETERRENCE

1:50 PM	<b>Terik Daly</b> Johns Hopkins University Applied Physics Laboratory
2:10 PM	<b>Seth Baum</b> Global Catastrophic Risk Institute
2:30 PM	<b>Robert Axtell</b> George Mason University
2:50 PM	<b>Panel Discussion with Speakers 10-12</b> Justin Kasper, Moderator
3:25 PM	<b>Concluding Remarks</b> Christopher Barrett, Committee Chair University of Virginia Biocomplexity Institute
3:35 PM	<b>ADJOURN WORKSHOP</b>