# Twentieth Advanced Development for Security Applications Workshop (ADSA20):

## Design, Development, Testing, Deployment and Operation of Effective Systems

# Workshop Objectives

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# So What? Who Cares?

- How to design, test, deploy and operate effective security systems?

- "This is a difficult problem …," Matthew Merzbacher, May 15, 2019.

- ADSA20 purpose
  - Define effective
  - Discuss how to design, test, deploy and operate more effective security systems
  - Examine related problems (e.g., protecting soft targets)

# ADSA Format

- This is a workshop, not a conference
  - Speakers are instructed to begin with "So What? Who Cares?" (elevator speech)
    - Crawford bears responsibility for format (and agenda)
  - Conversation and questions are expected at all times, especially during presentations after first slide
  - Optimal presentation ends after first slide
- Public domain – no SSI or classified material
- No speaker introductions; read handouts
- Everyone participates (switch to this venue)
- No picture taking, recording

# Effective?





PUT LONG BEACH
FOR A GOOD NIGHT'S

If you need quiet for a good night's rest, please help yourself to these complimentary earplugs.

Just call the front desk if you need any extras.

Sweet Dreams!

Sincerely,
The Courtyard by Marriott
Downtown Long Beach, CA

# Effective?

# Effective?

# Effective?



Does solving one problem lead to another?

# Effective?

- ## Working?
  - No incidents
  - Passengers getting on planes on time
- ## Possible issues?
  - Passengers: wait times, theft, divestiture
  - PD<100% (per Inspector General, AIT)
  - PFA>0% (per observation)
  - Adaptability slow (per GAO report)
  - Number of TSOs
  - Other vectors onto plane
  - Displacement to soft targets (Sri Lanka)
- ## Enhancements?
  - Purpose of ADS20
  - New technologies and procedures

# More Possible Measures

- No incidents, no reports of failed attempts, passengers getting on planes, no profiling, all vectors protected

- #threats, min mass, PD, PFA, positive predictive value, footprint, weight, life-cycle costs, human-in-the-loop, adaptability to new threats, deterrence, third party support, networkable, displacement to soft targets

- Satisfy multiple stakeholders: passengers, airlines, airports, congress, TSA, lawyers, ACLU, tax payers
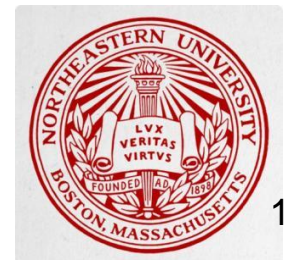
# ADSA21 – Save the Date

- November 5-6, 2019
- Theme: TBD
- Contact me if you:
  - Have suggestions for topics
  - Want to present

# "ADSA" For Customs and Border Protection

- CBP-ADEPT02
  - July 17-18, 2019
  - Topics: An adaptive adversary: Integration of equipment and data; Collection and use of meta-data; Deterrence/hardening; Insider threats; Conops; Adaptation of TSA technologies; Economics – incentives' Simulation tools; War gaming applications
- Contact me if want to present or attend

# Acknowledgements

- Northeastern University (NEU)
- Awareness and Localization of Explosives-Related Threats (ALERT) DHS Center of Excellence
- Department of Homeland Security (DHS)
  – Doug Bauer (DHS, retired) – started ADSA
- Presenters
- Participants
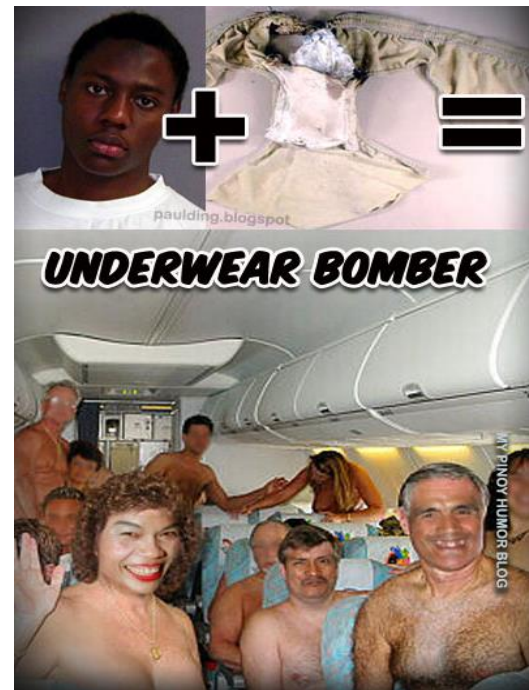
# Logistics

- Tiffany Lam, lead
- Sara Baier
- Deanna Beirne
- Natalie Camacho
- Kristin Hicks
- Anne Magrath
- Pooja Ravichandran

# Final Remarks

- "Terrorism causes a loss of life and a loss of quality of life," Lisa Dolev, Qylur

- Need improved technology

- Thank you for participating

# BACKUP SLIDES

# DHS Tactics

- Augment abilities of vendors with 3$^{rd}$ parties
  - Academia
  - National labs
  - Industry other than the vendors
- Create centers of excellence (COE) at universities
- Hold workshops to educate 3$^{rd}$ parties and discuss issues with involvement of 3$^{rd}$ parties
  - Algorithm Development for Security Applications (ADSA)
- Forage for technology in other fields

# Archival Materials

- Final reports and presentations from previous ADSAs
    - CT segmentation, reconstruction, ATR
    - Adaptive ATR (AATR)
    - CLASP (video tracking of PAX/DVI)

    https://myfiles.neu.edu/groups/ALERT/strategic_studies/