



**Decision support for monitoring and mitigation of natural disasters (landslides, mudflows, and floods) in Southeastern Asia using Cyber-enabled Collaboration, Analysis, Navigation and Observation Environments (CyberCANOE) [WP5]**

**Jason Leigh**

University of Hawai'i at Mānoa

**Jason Haga**

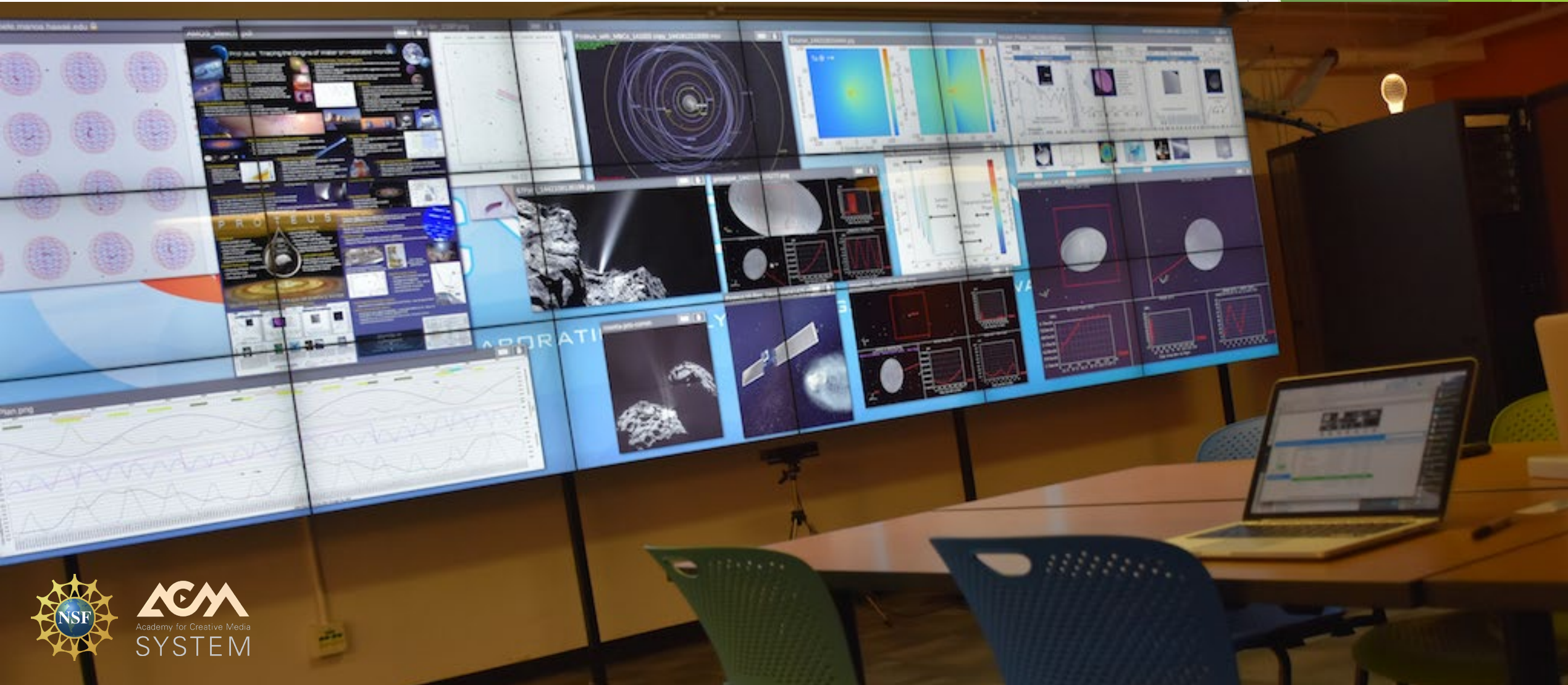
Advanced Industrial Science and Technology (AIST)

# Goals

- ▶ To provide training to S.E. Asian countries in the construction, installation deployment and use of the CyberCANOE in research & development in landslide decision making and mitigation.
- ▶ CyberCANOE is a big data networked collaboration platform that allows teams of researchers to work over distance to make sense of large amounts of complex and disparate data- such as in landslide research & mitigation.
- ▶ Invite collaborators from Laos, Cambodia, Vietnam, Thailand, Japan and US in the areas of landslide monitoring and mitigation, and computer science to jointly develop solutions leveraging the CyberCANOE technology.
- ▶ Develop design prototypes of revolutionary new approaches.



# CyberCANOE: Cyber-enabled Collaboration Analysis Navigation & Observation Environment



# The CyberCANOE & SAGE2

Cyber-enabled Collaboration Analysis Navigation &  
Observation Environment





# Kickoff Workshop at AIST in Japan

- ▶ Attendees from Laos, Vietnam, Thailand attended.
- ▶ Introduced usage scenarios of how the technology can be applied to research, development for better decision making for landslide events.

# Training at Thammasat University, Thailand

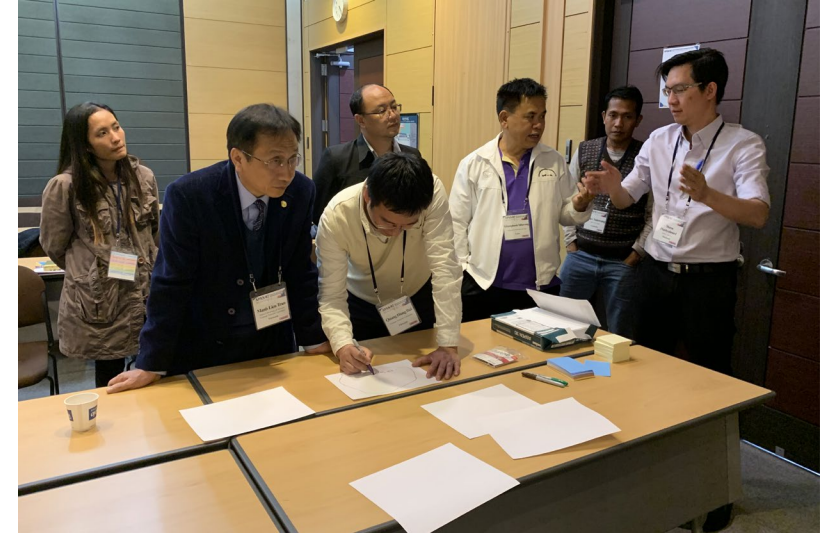
- ▶ 43 students (37 men, 6 women) were trained to build, use and deploy CyberCANOE and use it in various scientific, engineering, and decision making scenarios.





# Design Workshop at APAN 47, Korea

- ▶ Attendees from previous workshop invited new members to attend- in particular geoscientists.
- ▶ Identification of critical landslide scenarios that can benefit from leveraging the CyberCANOE's capabilities.
- ▶ Brainstorm possible designs of of those solutions.
- ▶ Design a prototype to validate the concepts.
- ▶ Planning for a prototype to be shown in next workshop (in Thailand, Vietnam or Japan).



# landsage.info

- Institute of Technology of Cambodia
- National University of Laos
- Walailak University, Thailand
- Mahidol University, Thailand
- Thammasat University, Thailand
- Vietnam National University
  
- National Institute of Advanced Industrial Science and Technology, Japan
- University of Hawai'i at Mānoa, USA

