SURA’s Hallmark: Science of Collaborative Research

SURA can facilitate multi-institutional collaborations, develop standards and frameworks, enable comparisons of multiple models and provide HPC, data archiving and visualization support.
OUTLINE

• SURA at a Glance
• Coastal and Environmental Research
• Science of Collaboration
• New Opportunities

Evolving Better Ways to Predict Coastal Threats
SURA at a Glance

• A 501(c)(3) founded in 1980 to “collaborate on transformational research, education and training of next generation scientists and engineers” and development across disciplines, first 13 and now 62 Research Universities in 19 states, DC and Canada.

• Governed by Board of Trustees, (Executive Committee) and Council of Presidents, based in Washington DC with 16 professional staff.

• Research Programs/Initiatives in Nuclear Physics (JLab), Information Technology, Coastal & Environmental Research, and Minority Outreach.

• Original focus to design, bid for, build and manage JLab.

• Formed Jefferson Science Associates LLC to win April 2006 DOE recompetition
Coastal & Environmental Research Program

With funding from NOAA’s U.S. Integrated Ocean Observing System Program, SURA has facilitated strategic collaborations to build and guide the Coastal and Ocean modeling Testbed (COMT). The initial, $4 million grant to support the vision of distributed, open-access, community science was awarded in 2010, with renewal funding ever since.
Coastal & Environmental Research Program

Understanding and Modeling Risk and Resilience in Complex Coastal Systems

• Interdisciplinary workshop – October 29 & 30, 2014
  – Created a SURA Consortium for Coastal and Environmental Resilience.
  – Detailed and prioritized R&D needs.
  – Established groundwork for a major multi-institutional program.
  – Defined a user group base that will benefit from innovative products.

• Participation in collaborate demos for resilience assessments in parallel with R&D.
• Transition nearshore coupled modeling results to the U.S. Navy, U.S. Army, and NOAA.
Science of Collaboration


- Some major benefits
  - Reduce risk and increase creativity and agility
  - Meet sponsors requirements with multidisciplinary and integrated teams.
  - Increase patents, quality of publications, and number of publications.

- Collaboration challenges that SURA overcomes
  - Competition within working sectors.
  - Conflicting missions, objectives, and motives.
  - Advancing both research and operations.
New Opportunities

• Engage a robust Development & Relations Committee to research new opportunities for collaborative projects for SURA member institutions

• Advance the assessment of risk and resilience in complex coastal systems

• Develop and test decision-support tools for resilience management.

• Apply tradespace analytics and big data mining methods.

• Sponsor Ocean Waves, COMT, and Coastal Resilience Workshops to help transition research results to operations and facilitate innovative approaches to problems of societal relevance.