CSR / CIMES Newsletter – December 2013

CIMES researchers and DHS student interns conduct evaluation studies in support of USCG underwater acoustic imaging capabilities. CIMES HEAR lab (Hawaii Experimental Acoustic Range) researcher, Tom Fedenczuk and DHS-funded student interns are evaluating the performance of the Coda Octopus, a 3D underwater acoustic imaging system, for the US Coast Guard Research and Development Center in New London, CT. The team began controlled evaluations at the Hawaii Acoustics Tank and is now performing field tests at Honolulu Harbor and Keehi Lagoon. The system can image centimeter-scale objects in three dimensions and stitch the data into georeferenced mosaics. The HEAR lab is evaluating the system’s ability to detect small changes in harbor settings such additions to pier pilings, recognition of objects at various depths and distances, and the ability to integrate all of the data into one dataset for quick visualization and analysis. This will assist the USCG in determining the effectiveness of the system in real operational scenarios. For more information about the Coda Octopus evaluation study, please contact Tom Fedenczuk at TMF@Hawaii.edu.

CSR hosts seminar by Dr. Mitchell Erickson on Science and Technology in Disasters. Dr. Mitch Erickson, DHS S&T Directorate, and former Director of the National Urban Security Technology Laboratory (NUSTL), recently presented a seminar entitled Science and Technology in Disasters, Preparedness Opportunities Revealed by Sandy at Stevens Institute of Technology. Dr. Erickson’s talk emphasized the role of the science community in informing and shaping the Hurricane Sandy Rebuilding Task Force’s recommendations, and the critical role of technology in moving forward with managing disasters. Dr. Erickson’s presentation highlighted various scientific proposals to protect critical infrastructure and to mitigate the impacts of extreme weather events against urban and coastal communities. Please visit the following link to review an abstract of Dr. Erickson’s seminar: Science and Technology in Disasters.

CSR / CIMES News Highlights for 2013:
We are pleased to share with you CSR and CIMES research achievements and center activities from this past year. Please click on the links below to review the Center’s news highlights for 2013. For a complete archive of the Center’s newsletters, CLICK HERE.

Research, Tools and Technology Development:
- Stevens signs licensing agreement with Sonardyne, Inc. for use of Passive Acoustic Detection System.
- CIMES signs MOU with Battelle for UPSV.
- Multi-use technology promotes strategic CSR/IOOS partnership.
- Helping the Coast Guard Meet the Challenges of Arctic Ice
- USCG R&D Center supports continued development of CSR’s MAGELLO Emergency Response Tool.
- CIMES workshop inspires collaboration on the development of an acoustic detector equipped Wave Glider.
- Stevens Center for Maritime Systems first to provide current monitoring data into NOAA’s PORTS® system.
CSR SRI students conduct research on Detection Technology Synergies, HF Radar Data Integration and CBP Trade Facilitation.

CIMES studying pirate activities using Hawaii Experimental Acoustic Range.

UAF researchers conduct common operating picture exercise in Barrow.

CIMES conducts unmanned aircraft field exercise in the Arctic.

DHS CDG Maritime Systems Fellow and CSR researchers conduct multi-sensor vessel detection experiment.

Stakeholder Engagement Activities:

- VADM Robert C. Parker and VADM Manson K. Brown, discuss USCG technology needs with CSR researchers.
- CSR annual review and stakeholder meetings focus on CSR technologies and Caribbean Testbed.
- CIMES hosts DHS S&T Under Secretary for a demonstration of the Center’s Unmanned Port Security Vessel.
- Commander, Sector New York, Captain Gordon Loebl, visits CSR and tours Stevens Davidson Lab.
- CIMES researchers brief Lieutenant Generals from U.S. Air Force and NORAD.
- CSR USCG, CBP and NUSTL stakeholders discuss data transition and on-going center projects in July Stakeholder meeting.
- CSR meets with CBP AMOC and USCG PACAREA to discuss sensor data transition.
- Stevens hosts regional summits and national symposiums focused on strategies to strengthen U.S. resilience.
- MIREES Directors provide briefings at co-hosted NATO-DHS Information Exchange Workshop.
- Stevens faculty and students become official members of the USCG Auxiliary.

Education:

- Students attend NJOHSP tabletop exercise focused on operational coordination in crisis events.
- DHS CDG Fellowship students defend ‘s Theses.
- DHS CDG Fellows Alex Pollara and Grace Python participate in field based internships with the USCG.
- CSR hosts 4th annual Summer Research Institute for engineering and science students.
- CBP hosts tour of Port New York/Newark for SRI students and CSR researchers.
- DHS CDG Fellow assumes Visiting Researcher position with CMRE.
- CIMES ’s Degree student, under the mentorship of Dr. John Allen, presents DHS-funded research at Oceans ’13.

News and Media:

- NY Times features ocean observation research conducted by CSR partners from Rutgers University, COOL Lab.
- CIMES UPSV featured in Huffington Post article and in other news sources.
- CIMES research partner awarded Entrepreneur of the Year.
- Stevens Davidson Laboratory provides expertise on Storm Surge forecasts and the impacts of Hurricane Sandy on ABC Good Morning America and other media outlets.
- Dr. Michael Bruno quoted in NY Times article on the safety and security of large cruise ships.

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MIREES is a National DHS Science and Technology Center of Excellence in Port and Marine Security.