West Texas Cyber Security Consortium

CSRA launches cyber security research

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Drexel University and George Mason University have partnered with the Cyber Security Research Alliance to advance cyber physical system security, according to CSRA press release from March 24. The research and projects developed by this partnership will provide a better understanding of cyber attacks and how to prevent them. Drexel University's Cybersecurity Institute at the Science Center will aid as a center for research, teaching, training and a resource for industry.

Cyber security threats can jam wireless networks and disable the ability of households to contribute energy to the smart grid through solar panels. In addition, traffic sensors on highways can be tampered with to produce false data that can mislead Global Positioning Systems.

Ron Perez, senior fellow and senior director of security of architecture at Advanced Micro Devices, said, "Drexel and George Mason University were both selected from a number of outstanding academic research proposals to participate in and help drive a CSRA-defined project in the area of Cyber Physical Systems Security."

This new alliance will conduct research in areas such as Drexel's Energy Smart Grid, George Mason's water supply, and transportation using surveys and taxonomy. After researching the three main domains of cyber physical systems, "a formal ontology (an advanced structured searchable database) will be created to capture the knowledge of these surveys," Spirios Mancoridis, senior associate dean of computing and professor of computer science in Drexel's College of Computing and Informatics, said.

He continued, "We will make the ontologies available to the research community. We anticipate that this research will direct the attention of researchers to the most significant open problems."

CSRA is working on a project that was started in a 2013 workshop that was organized and sponsored by CSRA and the U.S. National Institute of Standards and Technology. The workshop brought together stakeholders from industry, government and academia

to explore research needs for designing cyber security into solutions for a diverse ecosystem of cyber physical systems. The report from the workshop activities made important recommendations such as the need for a common taxonomy for cyber physical systems security, in order to promote better understanding and collaboration across diverse ecosystems.

CSRA aims to initiate and participate in follow-up projects to explore additional recommendations from the 2013 workshop on cyber physical systems and critical infrastructure security. In addition, CSRA hopes to promote research with government and academic stakeholders in additional cyber security areas, beyond cyber physical systems.

“It is our desire that CSRA will attract as members additional industry stakeholders who share our goals and desire to advance the state of research in the increasingly critical areas of cyber security,” Perez said.

CSRA is a private nonprofit research consortium that studies complex problems in cyber security and development and fosters the research of solutions to critical cyber security issues. Founding members of CSRA include industry-leading technology stakeholders such as the Advanced Micro Devices, Honeywell, Intel Corporation, Lockheed Martin and RSA/EMC.