

University Hubs Help SEI Spread Information Assurance Curricula and Methods

Bill Thomas

The Software Engineering Institute (SEI) wants to educate students and professionals around the country in the field of information assurance, but it will need some help to do so.

“We’re a small organization. What we need to do is leverage, in many forms, the infrastructure, capabilities, and relationships that are already there” says the SEI’s Carol Sledge, project manager for survivability and information assurance curriculum and educational outreach.

One way to boost the SEI’s effectiveness is through partnerships with institutions that serve as hubs for universities and community colleges in a region. This approach is helping dozens of institutions in four geographical regions improve the information assurance content in their curricula and the abilities of faculty to teach information assurance:

- Hampton University in Hampton, VA, is a hub educational transition partner working with the SEI to build the capacity to teach information assurance at 22 colleges and universities in Virginia, North Carolina, Maryland, Delaware, and Washington, DC.
- California State Polytechnic University, Pomona (known as Cal Poly Pomona), and Mount San Antonio College (Mt. SAC) in Walnut, CA, are hub partners that help build information assurance capacity at 23 universities in the Cal State system and 109 community colleges in California.
- Texas A&M, Corpus Christi is a new hub partner working to build capacity at community colleges and universities in Texas.
- Moraine Valley Community College in Palos Hills, IL, is the base for a new National Science Foundation (NSF) Regional Center for Systems Security and Information Assurance (CSSIA). The center includes seven partner institutions that offer information assurance training in Illinois, Minnesota, Michigan, Wisconsin, and Ohio. The center collaborates with some 75 other colleges and universities nationally.

The hubs in the mid-Atlantic, California, and Texas are examples of how the SEI is building on existing relationships, which began when representatives of the hub institutions participated in an NSF-funded program at Carnegie Mellon University. The annual program, which started in 2002, provides educational resources to historically black colleges and universities and Hispanic-serving institutions. The program equips faculty members to teach courses in information security. Several SEI technical staff serve as faculty during the month-long program.

“As a result of this training, the department of computer and mathematical sciences is starting a new option on information assurance for graduate students in computer science,” says Mario Garcia, associate professor of computer science at Texas A&M, Corpus Christi.

Robert A. Willis, Jr., chair of the Department of Computer Science at Hampton University and one of the originators of the regional approach, credits the first information assurance symposium held at Hampton in February 2004 with building momentum in the mid-Atlantic. The SEI co-sponsored the symposium and several SEI technical staff members were presenters.

“Faculty who attended the first symposium were excited about the program and some have begun collaborations with faculty from other institutions. As the program continues, individual institutions will be better prepared to offer programs in information assurance and to start the process of certification,” Willis says.

In California, “the SEI’s influence is fueling an already existing collaboration between Mt. SAC and Cal Poly Pomona with valuable information assurance resources such as source experts, curriculum, and relationships,” says John Blyzka, a computer information systems professor at Mt. San Antonio. The two schools are extending that strong, collaborative model to other institutions, he says. The SEI’s curriculum has also been used in small business development workshops hosted by Mt. San Antonio’s Small Business Development Center. Daniel Manson, a computer information systems professor at Cal Poly Pomona, adds that the relationship with the SEI is assisting Cal Poly Pomona in its goal to become a National Center of Excellence in Information Assurance Education.

Recent and Upcoming Information Assurance Symposia

- California State Polytechnic University, Pomona, held a symposium Dec. 11, 2004. For more information see <http://134.71.194.20/iss/ias.asp>, or contact Dr. Dan Manson, 909-869-3244; dmanson@csupomona.edu.
- Texas A&M, Corpus Christi, held a symposium Jan. 29, 2005. For more information contact Dr. Mario Garcia, 361-825-3478; garciam@falcon.tamucc.edu.
- Hampton University, Hampton, VA, will hold its second annual symposium April 2, 2005. For more information contact Robert A. Willis, Jr., at robert.willis@hampton.edu.

The well established courses of the SEI’s CERT Coordination Center (CERT/CC) provide excellent source material for building capacity through the regional hubs. CSSIA, for example, will adapt materials from three courses from CERT/CC into three CSSIA courses. “This is a great opportunity for the SEI to transition its work in information assurance,” Sledge says. “The faculty at CSSIA are very knowledgeable, they have funding and backing from the NSF, and they have an excellent plan in terms of how to develop the materials, transition them to the faculty, and then have a second level of transition to other faculty in the regional area.”

Erich Spengler, director of CSSIA, says increased quality and credibility are two important benefits. “The partnership greatly increases the community and technical college system’s ability to respond to the challenges of adapting, disseminating, and delivering quality, industry-recognized information assurance and cyber security curriculum to students and faculty.”

Sledge is pursuing other opportunities in higher education to transition SEI curricula and methods, including seminars and courses at schools of business. “People are realizing that information security is pervasive, from the board of directors down through the entire business enterprise,” she says. “You don’t just tack it on at the end.”

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