

## **Stony Brook Receives Cyber-Security Research Grant** *Receives \$2.1 million DoD award for five year project*

STONY BROOK, N.Y. July 13th, 2007—Stony Brook University’s Computer Science Department, through the efforts of Professors Scott D. Stoller, R. Sekar, and C.R. Ramakrishnan, will receive \$2.1 million from the Office of Naval Research for Advanced Research on Software Security. This project is funded through the Department of Defense’s 2007 Multi-Disciplinary University Research Initiative (MURI). Thirty-six awards were made nationwide across several scientific disciplines. Stony Brook won one of the four awards in the area of Cyber Security. *Moreover, Stony Brook received the only single-institution award among the 36 awards.*

According to Professor Stoller, “Computer security is an issue for everyone, from individuals to large organizations. This project gives us an exciting opportunity to address some of the fundamental problems and contribute to the solution.”

“A number of security problems faced today, including malware, spam, and targeted cyber attacks, can be traced to the lack of effective solutions for managing trust. Specifically, there is a lack of practical techniques or tools to correlate the trustworthiness of a certain piece of data with the security privileges exercised while processing it,” added Professor R. Sekar, also an award recipient. “As a result, users can’t always prevent their software and information assets from being corrupted or compromised by malicious sources on the Internet. This project is aimed at tackling this problem,” added Sekar.

“Large software systems comprise many independent pieces that interact with each other. The service-oriented architecture clearly delineates the interactions, and makes it possible for us to address the problem of security in a wide variety of computer and software systems, ranging from operating systems to large application software,” said Professor Ramakrishnan, the third Award Recipient.

The project will develop languages, techniques and tools for managing, enforcing, and maintaining trust relationships in systems with service-oriented architectures. The techniques will be implemented as stand-alone tools and integrated into a prototype system that will be an experimental test-bed for evaluation of the techniques. The framework will accommodate services that interact across a variety of interfaces, including network communication channels, shared memory, and shared databases. Therefore, it will apply to many legacy systems as well as explicitly service-oriented systems such as Web services. The project will focus on issues of trust management, information flow tracking, trust analysis and assurance, and policy enforcement.

“We are really excited about this new funding opportunity,” said Distinguished Professor Arie Kaufman, Chair of the Computer Science Department and Chief Scientist of CEWIT, the University’s Center of Excellence in Wireless & Information Technology, “The research under this MURI funding has the potential to revolutionize the field of software security satisfying the ever increasing users’ demand for secured systems, added Kaufman”

“CEWIT takes a great deal of pride in the accomplishments of its associated faculty, says Dr. Satya Sharma, the Director of the Center. 2007 has been a great year for CEWIT faculty as well as our PhD students,” added Sharma.