Distinguished Scholar—Junior Award
(Nominees have been in service to the university as instructors, assistant professors, or associate professors for not more than seven years.)

Alex X. Liu, assistant professor of computer science and engineering, is an internationally recognized researcher in network security. His research focuses on developing high-speed algorithms for network security devices such as firewalls and intrusion prevention systems. He is considered a “rising star” in both the security and network research communities. Since joining MSU’s CSE department in 2006, Dr. Liu has established a research group that some say is “among the best in the world on firewall policy analysis.” His work, which has yielded one awarded patent and nine pending patents, has the potential to make a huge impact on the computer network industry.

In recent years, Dr. Liu has greatly expanded his research area. His 2009 NSF CAREER grant focuses on the high-performance evaluation of access control policies. While a large body of research work has been done in this area, the performance issues in access control policy evaluation have not been well understood and have received little attention—until now. Dr. Liu’s proposed research on building high-performance policy evaluation engines fills this gap. Successful completion of the proposed research will have a significant impact on access control research and systems.

He has become very successful at securing funding for his research. In 2010 alone, he obtained three awards from NSF, which is extremely unusual, even for a senior faculty.

Dr. Liu is also a dedicated teacher and mentor who is committed to excellence. One PhD student says: “He always tries his best to guide me and other students through every perspective of our graduate study, and gives tremendous support to make us successful in both study and research.” Given the rapid changes in software development technologies, he always strives to introduce new topics into the undergraduate curriculum, and he redesigned his graduate course material to include many new security topics.

He has published 2 books and more than 60 scientific papers in leading computer science conferences and journals. “Being able to publish in such prestigious venues in several different areas of computer science in just four to five years as an assistant professor is a remarkable accomplishment,” notes one colleague.

In addition, he is very active in providing professional services to his research community. He is an editor of the Elsevier Journal of Computer Communications (COMCOM), has served as a reviewer for various funding agencies, has been invited to give talks at a number of universities and at research labs such as Microsoft Research Asia, and has served on organizing committees and program committees for many premier network and security conferences.

One colleague sums it up best: “I would expect him to become a super star in a few more years . . .”