



UMass Lowell Computer Science Colloquium Announcement

Speaker: Dr. Christian Skalka
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Date: March 6, 2002

Time: 3:00pm - 4:00pm

Place: Olsen Hall 311
Refreshments are served at 2:30pm

Types For Programming Language-Based Security

Due to the recent proliferation of mobile code, modern programming language (PL) designers have an increased interest in incorporating security mechanisms into high-level PLs. Such security is called PL-based security. In this talk, I describe some popular forms of PL-based security, and show how type systems can be used to enhance and enforce security mechanisms in PLs. Type systems are a form of static analysis, where the runtime behavior of programs is conservatively approximated at compile/link time. In languages with security features, such analysis can detect security violations statically, thus eliminating the need for costly runtime checks, and can improve programmer understanding of security policies. Some novel advanced techniques for type system development will also be discussed.
