Using Symbolic PathFinder for Automated Test Generation
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Abstract
We will describe Symbolic PathFinder (SPF), a symbolic execution tool for Java bytecode. We will discuss some of the theory and current implementation of SPF, as well as its application to automatic test generation. SPF has been used for finding software errors at NASA, in academia and in industry, most notably at Fujitsu Labs.

About the Speaker
Corina Pasareanu, PhD, is a senior researcher at NASA Ames Research Center, in the Robust Software Engineering Group. She is affiliated with Carnegie Mellon University, the Silicon Valley campus. At Ames, she is investigating the use of abstraction and symbolic execution in the context of the Java PathFinder (JPF) model checker, with applications in test-case generation and error detection. She is also working on using learning techniques for automating assume-guarantee compositional verification. Together with her colleagues, she has developed Symbolic PathFinder, a symbolic execution tool for Java bytecode that is built on top of JPF. Corina is an Associate Editor for the ACM TOSEM Journal and she is the co-chair for the 26th International Conference on Automated Software Engineering (2011). Corina has published numerous articles in the areas of software engineering and formal methods and she has served on program committees for conferences such as ICSE, FSE, ISSTA, CAV, etc. She has recently received the ICSE 2010 Most Influential Paper Award.