

# Verifying Object-Oriented Software: Lessons and Challenges

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**Abstract.** A program verification system for modern software uses a host of technologies, like programming language semantics, formalization of good programming idioms, inference techniques, verification-condition generation, and theorem proving. In this talk, I will survey these techniques from the perspective of the Spec# programming system, of which I will also give a demo. I will reflect on some lessons learned from building automatic program verifiers, as well as highlight a number of remaining challenges.