

Invited Keynote Speech (Abstract)

Doing More with Contracts: Towards Automatic Tests and Proofs

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Abstract. Equipping software with contracts, especially in the case of library components, opens up a whole range of applications. I will describe two of them, part of current work in the chair of software engineering at ETH. The first is automatic, “push-button” testing of contract-equipped components. The second is mathematical proof that such components satisfy their contracts. In both cases the effort is made more interesting by the existence of library versions that are fully contracted” thanks to the use of model classes based on set-theoretical concepts. Both the tests and the proofs apply to actual libraries as used in practical software development.