

Program Analysis for JavaScript Web Applications

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Abstract

JavaScript supports a powerful mix of object-oriented and functional programming, which provides flexibility for the programmers but also makes it difficult to reason about the behavior of the programs without actually running them. One of the main challenging for program analysis tools is to handle the complex programming patterns that are found in widely used libraries, such as jQuery, without losing critical precision. Another challenge is the use of dynamic language features, such as 'eval'. This talk presents an overview of the challenges and the techniques used in the TAJIS research project that aims to develop sound and effective program analysis techniques for JavaScript web applications.