

# WCET Annotation Languages Reconsidered: The Annotation Language Challenge

Jens Knoop

Technische Universität Wien, Austria

The precision and performance of tools and methods for determining the *worst-case execution time* (*WCET*) of a program or system depends crucially on the expressiveness and useability of the annotation language that is used for providing the tool with hints on the timing behaviour of the system that cannot automatically be deduced. Based on the findings of a survey on the strengths and limitations of currently used languages and mechanisms for WCET annotations, we recently proposed to complement the WCET tool challenge, which had been launched earlier at the *2nd International IEEE 2006 Symposium on Leveraging Applications of Formal Methods, Verification and Validation*, with a second closely related challenge: the *WCET Annotation Language Challenge*. We believe that contributions towards mastering this new challenge will be essential for the next major step of advancing the field of WCET analysis.

The annotation language challenge has been presented at the *7th International Workshop on Worst-Case Execution Time Analysis (WCET 2007)* held in Pisa, Italy, in July 2007. In this talk we will present this challenge and the essential findings of our survey on WCET annotation languages, which have motivated this challenge, in detail.

This is joint work with Raimund Kirner, Adrian Prantl, Markus Schordan, and Ingomar Wenzel. This work has been partially supported by the Austrian Science Fund (Fond zur Förderung der wissenschaftlichen Forschung) within the research project “Compiler-Support for Timing Analysis (CoSTA)” under contract P18925-N13 and by the ARTIST2 Network of Excellence on Embedded Systems Design under contract IST-004527.