

**Rodrigues, Vítor; Pedroso, João Pedro; Florido, Mário; de Sousa, Simão Melo**

**Certifying execution time.** (English) [[Zbl 1367.68074](#)]

Peña, Ricardo (ed.) et al., Foundational and practical aspects of resource analysis. Second international workshop, FOPARA 2011, Madrid, Spain, May 19, 2011. Revised selected papers. Berlin: Springer (ISBN 978-3-642-32494-9/pbk). Lecture Notes in Computer Science 7177, 108-125 (2012).

Summary: In this paper we present the framework Abstraction-Carrying Code Platform for Timing validation (ACCEPT), designed for timing analysis of embedded real-time systems using the worst-case execution time (WCET) as the safety parameter. In the context of real-time embedded code safety, we describe in detail the component responsible for generating and checking the WCET certificates. In particular, the checking mechanism is efficiently designed so that code consumers can autonomously verify that the received code meet their internal real-time requirements. The certificate generation/checking mechanism is inspired in the Abstraction-Carrying Code framework and implemented using Abstract Interpretation and Linear Programming.

For the entire collection see [[Zbl 1250.68046](#)].

**MSC:**

**68N30** Mathematical aspects of software engineering (specification, verification, metrics, requirements, etc.)

**Full Text:** [DOI](#)