

Title: Instrumenting Embedded Software
Principal Investigator: Sebastian Fischmeister
Industry Partner: Mapusoft
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Innovation of modern products is often implemented in software. Consequently programs become larger and more complex. Extracting information from running programs helps developers writing and understanding such large and complex software. Instrumentation is often the means to extracting information, and it is applicable for profiling, testing, debugging, tracing, and monitoring programs.

Unfortunately, traditional approaches preserve only logical correctness during instrumentation. Other properties such as timing may get violated and thus current frameworks are unsuited for embedded real-time programs.

The proposed research will investigate theory and best practices of instrumenting programs while minimizing and bounding interference.