Abstract:
In 2004, at Faculty of Mathematics and Physics, Charles University, a project called BEEN (Benchmarking Environment) was introduced. The original aim of this project was to create a highly configurable and modular environment for middleware applications benchmarking. This project was successfully defended in 2007. In 2011, another group of students introduced a successor of this project called WillBEEN. Finally, in 2013 a project entitled EverBEEN, which was a complete reimplementation of the WillBEEN project, was successfully defended. The goal of the EverBEEN project was to bring newer technologies, asynchronous communication and stability improvements into the BEEN project family and resulted in a reimplementation from scratch. Despite all the effort, project EverBEEN remained tightly coupled with underlying libraries and technologies, contained a lot of generated code hard to maintain nor extend and last but not least the project failed to exploit the inversion of control principle, so there were strong dependencies among modules.

The goal of this thesis was to learn from the past and introduce a new and simplified modular framework for regression benchmarking of applications without the shortcomings and drawbacks of previous versions. The result is framework BootBEEN.

Keywords: performance evaluation, extensibility framework, benchmarking environment