

Porting Linux Benchmarks to macOS

General information	Advisor Dr. Redha Gouicem Email gouicem@in.tum.de Date 17.03.2022
Type	Master / Bachelor / Guided Research
Description	In the context of a project related to x86 binary emulation on ARM hosts, we wish to compare our system with the state-of-the-art Rosetta 2 binary translator from Apple. Since it is only usable on Apple machines with Apple M1 processors running macOS, we need to port benchmarks to this platform. In this thesis, your work will be to port popular benchmark suites developed for Linux, e.g., PARSEC [1], to macOS. Additionally, you may need to add support for ARM platforms.
Keywords	Binary translation, emulation, macOS, x86, ARM
Goals	Concrete outcomes <ol style="list-style-type: none">1. Port the PARSEC benchmark suite to macOS2. Port other benchmarks to macOS
Prerequisites	Compulsory <ul style="list-style-type: none">• C/C++ Preferred <ul style="list-style-type: none">• None

References

1. <https://parsec.cs.princeton.edu/>

Application process

Please send an email to the advisor including the following:

- Email subject: “Thesis application (DSE)”
- CV
- A copy of your transcript(s)