Thesis Topics in Testonica Lab

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Testonica

Selling Globally – To The Leaders

Developed technologies are used by *leading companies* in the following market segments:

- telecom
- automotive
- aerospace
- military
- instrumentation and measurement
- industrial electronics
- consumer electronics
- fundamental science
- entertainment

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Testonica Lab in Numbers

- 10 people company selling to global leaders
- Established in 2005
- Spin-off from Tallinn Tech
- 99.7% sales revenues come from export
- 300k EUR R&D budget annually
- R&D team: 6 PhDs and 3 PhD students
- Outsourcing everything except R&D

The Best Place in Tallinn To Make Your PhD!

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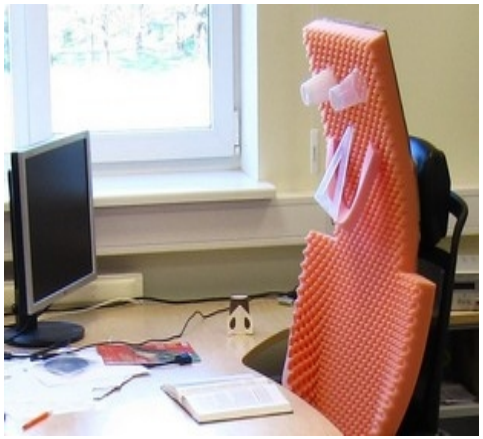
Student-Centric Collaboration

Testonica Lab

- Competitive salary
- Thesis topic
- Job at the bleeding edge of technology
- Job in the campus close to study
- Inspiring colleagues
- Motivation for PhD studies



Tallinn Tech

- Scholarship
- Thesis supervision
- Modern research environment
- Top-level mentors
- Top-level research
- Publications and conferences

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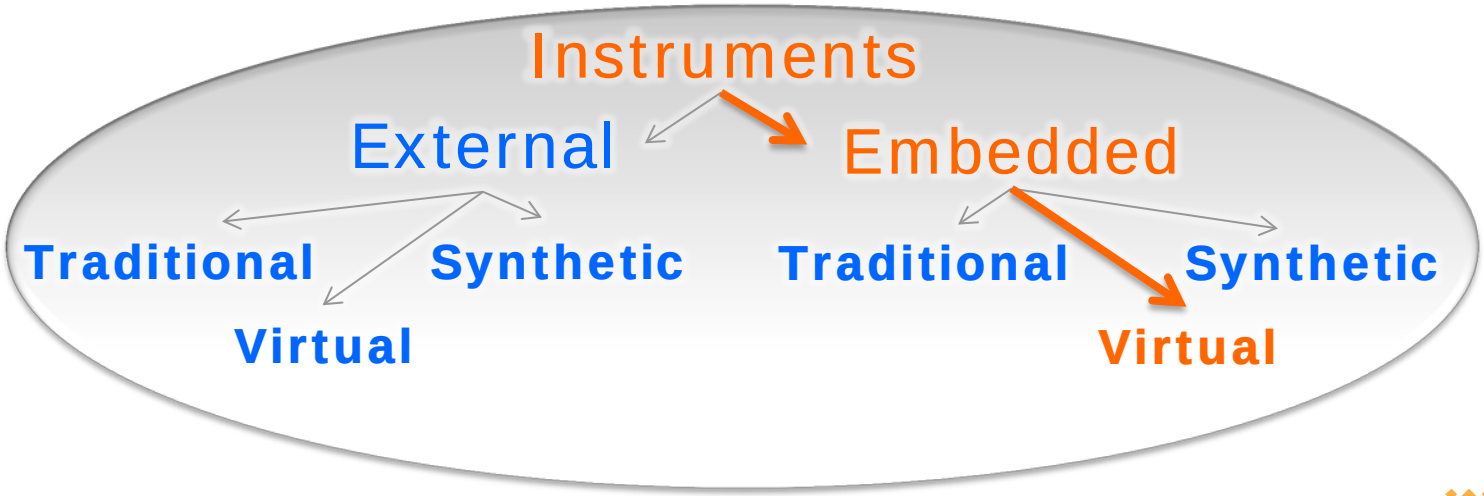
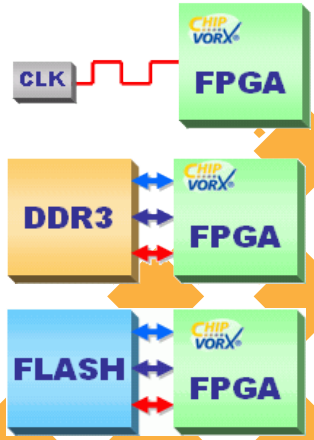
Testonica Lab – The Technologies

- Technology leader in high-speed embedded instruments
  - BERT, at-speed test, frequency measurement, etc.
  - Processor-centric test, FPGA-based test
  - IEEE 1687 IJTAG, fault management framework
  - High-speed in-system programming (flash ICs)
- Testonica's ***embedded virtual*** instrumentation:
  - Allows a fully automated "push-button" solution(EU+US pat.)





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Testonica Lab: Leadership in R&D

- Technology leader and pioneer in the field of embedded synthetic/virtual instrumentation
- World-class top expert in JTAG-controlled test solutions
- Testonica Lab's current projects:
  - STREP FP7 project BASTION: 2014 – 2016
  - ELIKO Competence Centre project (EAS): 2008 – 2015
  - National ICT project FUSETEST(Archimedes):2013–2015
  - H2020 project IMMORTAL: 2015 – 2018
- Total R&D budget: >300 kEUR per year

PhD Thesis Topic Examples

- Verification of **on-chip reliability** infrastructure
- Graceful Degradation and **Health Management** of Electronic Devices
- Intelligent High-Performance **Instrumentation** for Test and Debug

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Possible MSc Thesis Topics

- Communication over **PCIe** on bare HW
- Communication over **SATA** on bare HW
- **BER** measurement on common buses
- Various topics in **FPGA/CPLD** design
- **Control SW** on MicroTCA platform with IPMI support

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THANK YOU!

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