Energy-Aware Computing Systems (EASY)

Organisation

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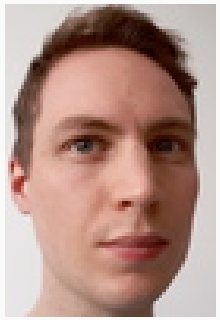
ERLANGEN-NÜRNBERG

TECHNISCHE FAKULTÄT

Exercise organisation

Organisation:

Timo Hönig



Stefan Reif

Benedict Herzog

Timeslot:

- Monday, 12:00–14:00

Contact:

- Email to organisers: i4easy-**owner**@lists.cs.fau.de
- Email including students: i4easy@lists.cs.fau.de
- `https://www4.cs.fau.de/Lehre/WS18/V_EASY/`

Exercise goals

- Research
  - Find, read, and understand relevant literature
- Implement
  - Apply theoretical results in practice
- Experiment
  - Evaluate approaches in practice
- Understand
  - Find context for your results
- Discuss
  - Explain your results

Exercise types

- Blackboard exercises
  - Present material for the assignments
  - Refresh lecture content
  - Participation is strongly encouraged
- Computer exercises
  - Discuss specific questions
  - Participation is optional
- Submission exercises
  - Present solutions of assignments
  - Discuss pitfalls
  - Participation is mandatory
- Literature discussion exercises
  - Discuss literature and recent research topics
  - Participation is strongly encouraged

Assignments

1. Energy measurement
   - How does energy measurement differ from time measurement?
   - How can we interpret energy measurement results?
2. Energy models
   - How do hardware states and software activities influence the energy demand?
   - How to predict energy demand without measuring it?
3. Energy-related optimisation
   - How to make computing systems more energy efficient?
   - What constraints should be considered?

Infrastructure

- `/proj/i4easy/pub/`
  - Material for each assignment
- `/proj/i4easy/$USER/`
  - Working directory
- `gitlab.cs.fau.de/i4easy-exercises/ws18/$GROUP`
  - Centralised git repository, per group

Before the deadline:

- Submit your solution to the `gitlab` repository
  - We will provide the repository on `gitlab.cs.fau.de`
  - This repository is exclusive for your group
- Create a `git` tag to mark the submitted revision

  → “`submission1`”, “`submission2`”, “`submission3`”
- Push the tag to the central gitlab repository

After the deadline:

- Attend the submission exercise
- Present your results