Safety and Reliability of Embedded Systems

(Sicherheit und Zuverlässigkeit eingebetteter Systeme)

Welcome!

Administrative Issues

- Lecture held by AG Software Engineering: Dependability
  - http://seda.informatik.uni-kl.de/teaching/suze/ws2013

- Lecturer
  - Prof. Dr. Peter Liggesmeyer
    - Email: liggesmeyer@informatik.uni-kl.de
    - Office hours on appointment
    - Room: 32-425

- Tutor
  - M.Sc. Michael Roth
    - Email: michael.roth@cs.uni-kl.de
    - Office hours on appointment
    - Room: 32-427

Administrative Issues
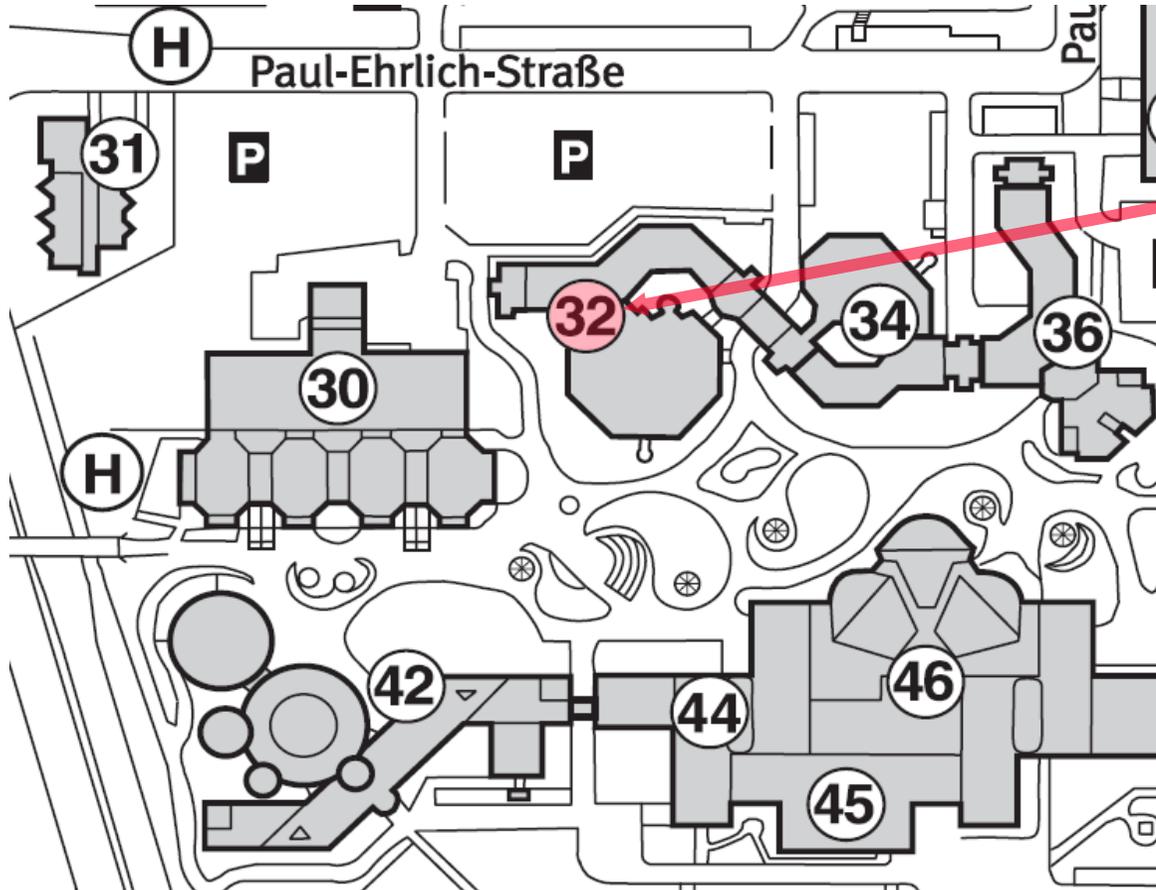
AG Software Engineering: Dependability

Technical University of Kaiserslautern
Building 32, 4th Floor
P.O. Box 3049
67653 Kaiserslautern
Germany

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software engineering dependability

Administrative Issues

- Schedule
  - Lecture (2 SWS)
    - Held weekly
    - Wednesday, 13:45 - 15:15, Room 42-110
  - Tutorial (1 SWS)
    - Held every two weeks (usually)
    - Thursday, 13:45 - 15:15, Room 42-110
    - Start of tutorials: Thursday, November 20th

- Grading by written exam
  - 11.03.15 – 3pm
  - 14.04.15 – 10am (resit exam)

Administrative Issues
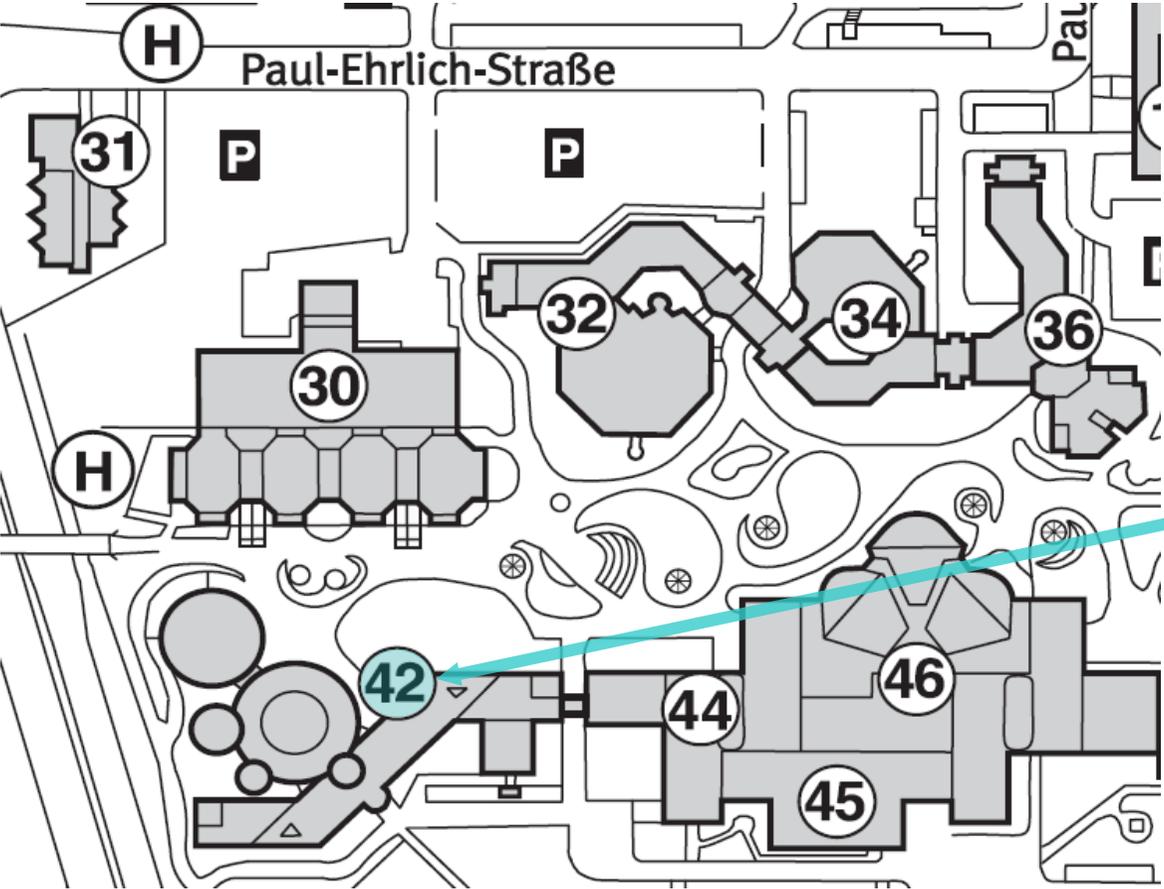
Lecture and Tutorial:
Room 42-110

Administrative Issues

- Lecture notes
    - Available online at:
      http://seda.cs.uni-kl.de/teaching/suze/ws2013/material/folien/
    - Format: PDF

- Problem sheets
    - Available online at:
      http://seda.cs.uni-kl.de/teaching/suze/ws2013/material/excercise/
    - Format: PDF
    - There will be no solutions published, so it is highly recommended to attend the tutorial sessions!
    - Please note that there is no handing-in and no grading of solved problem sheets

- Goals of lecture
    - Get to know selected formal and stochastic techniques for safety and reliability analysis of software and systems
    - Be able to use particular analysis methods in practice

Administrative Issues

- Topics
    - Introduction
    - Terminology
    - Risk Acceptance Methods
    - Safety and Reliability Analysis Models
    - FMECA (Failure Modes, Effects and Criticality Analysis)
    - Fault Tree Analysis
    - Symbolic Model Checking
    - Stochastic Reliability Analysis
    - Quality Assurance and Quality Management

- Goals of tutorial
    - Work-out solutions to problem sets
    - Clarification of issues concerning the lecture
    - But: The intention is not to provide a substitute for the lecture!
- Topics
    - Same as lecture