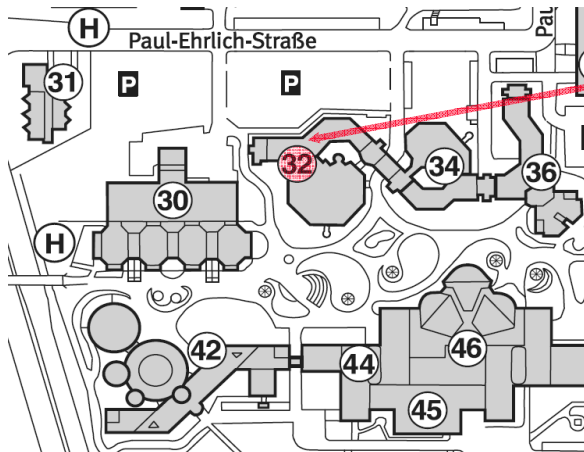

Safety and Reliability of Embedded Systems (Sicherheit und Zuverlässigkeit eingebetteter Systeme)

Welcome!

Administrative Issues

- ☐ Lecture held by AG Software Engineering: Dependability
 - <http://agde.informatik.uni-kl.de/teaching/suze/ws2006>
 - LV-Nr. 89-3331 / 89-3331U
- ☐ Lecturer
 - Prof. Dr. Peter Liggesmeyer
 - Email: liggesmeyer@informatik.uni-kl.de
 - Office hours on appointment
 - Room: 32-425
- ☐ Tutor
 - Dipl.-Ing. Nikolas Mayer
 - Email: mayern@informatik.uni-kl.de
 - Phone: (0631) 205-3957
 - Office hours: Monday, 10:00 - 11:30, or 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

Safety and Reliability of Embedded Systems

ENGINEERING
SOFTWARE
DEPENDABILITY

Prof. Dr. Liggesmeyer, 3

Administrative Issues

☐ Schedule

- Lecture (2 SWS)
 - Held weekly
 - Monday, 13:45 - 15:15, Room 13-305
- Tutorial (1 SWS)
 - Held every two weeks (usually)
 - Thursday, 13:45 - 15:15, Room 13-305
 - Start of tutorials: Thursday, November 2

- ☐ Grading by written or oral exam (mode and date will be announced within lecture and tutorial)

Safety and Reliability of Embedded Systems

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Administrative Issues



Safety and Reliability of Embedded Systems

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DEPENDABILITY**

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Administrative Issues

- ☐ Lecture notes
 - Available online at:
<http://agde.informatik.uni-kl.de/teaching/suze/ws2006/material/vorlesung/>
 - Format: PDF or Postscript
- ☐ Problem sheets
 - Available online at:
<http://agde.informatik.uni-kl.de/teaching/suze/ws2006/material/uebung/>
 - Format: PDF or Postscript
 - 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 marking of solved problem sheets

Safety and Reliability of Embedded Systems

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Administrative Issues

- 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

Administrative Issues

- ☐ 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