Specification and Verification with Higher-Order Logic

Organisation and Overview

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Software Technology Group
Fachbereich Informatik
Technische Universität Kaiserslautern

Sommersemester 2010
Organisation

Contact

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Dates, Time, and Location

- 3C + 3R (8 ECTS-LP)
- Monday, 11:45-13:15, room 48-462
- Wednesday, 11:45-13:15, room 48-462 or room 32-411
- Friday, 11:45-13:15, room 32-411
Organisation

Course Webpage
- softech.informatik.uni-kl.de/Homepage/SVHOL10

Literature

Acknowledgements
- to Dr. Jens Brandt who designed most of the slides
- to the Isabelle/HOL community
Overview

Course Outline

- Introduction
- Concepts of functional programming
- Higher-order logic
- Verification in Isabelle/HOL (and other theorem provers)
- Verification of algorithms: A case study
- Modeling and verification of finite software systems: A case study
- Specification of programming languages
- Verification of a Hoare logics
- Beyond interactive theorem proving