

# Software-Engineering Seminar, Summer 2019

Peter Zeller

AG Softech & AG Programmierprachen  
FB Informatik  
TU Kaiserslautern

## Supervisors/Participants

Topic	Student	Supervisor
Futures and Promises		Sebastian Schweizer
Actors in Scala		Peter Zeller
Mozart		Sebastian Schweizer
Publish/Subscribe		Sebastian Schweizer
Distributed Reactive Progr.		Annette Bieniusa
Emerald		Ralf Hinze
Argus		Annette Bieniusa
Orleans		Peter Zeller
Cloud Haskell		Ralf Hinze
DISTALGO		Annette Bieniusa
P		Ralf Hinze
IronFleet		Peter Zeller
Dedalus und Datalog		Ralf Hinze
Delta CRDTs		Peter Zeller
PaRiS		Annette Bieniusa

# Goals

- Learn about a specific topic in SE
- Read and understand scientific papers/books explaining the topic
- Learn how to present the topic

## Your tasks

- Read and understand the material we provided
- Search for additional material on the topic
- Write a paper
  - Language: English (Bachelor: may be in German)
  - Use our Latex template
  - 10-15 pages (Bachelor: 7-15 pages)
  - Easy to read for other students
  - Present the problem and motivation of the work
  - Present the solution
  - You may add critique
- Presentation
  - 20 minutes presentation
  - about 20 minutes discussion and questions (know your topic!)
  - participate in discussion

# Seminar topic: Distributed and Concurrent Programming

## Difficulties:

- Concurrency, order, time, determinism
- Partial failures
- Limited resources, performance, scalability
- Security & correctness
- Changes in topology, code, etc.

## Your topics:

- Programming techniques and models
- Runtime techniques and protocols
- Ensuring correctness

# Schedule

- Introduction: May 13
- First draft of paper: June 17
- Presentations: Wednesdays, 11:45-13:15
  - June 5: Emerald; Argus
  - June 12: Futures and Promises; Mozart
  - June 19: Actors in Scala; Orleans
  - June 25: Publish/Subscribe; Cloud Haskell
  - July 3: Dedalus and Datalog; Distributed Reactive Programming
  - July 10: DISTALGO; P; IronFleet
  - July 17: Delta CRDTs; PaRiS
- Final paper: July 15

All deadlines: End of the day 23:59.

Submissions: As pdfs by email to your supervisor and coordinator

## First submission: Introduction

- 1 A motivation/problem statement, which explains what the topic and scope of the paper is and what problem it tries to solve.
- 2 A brief statement about what approach/methods were used.
- 3 A summary of the results/contributions
- 4 No technical details necessary yet.

## First draft and final paper

- Your paper should target other students in the seminar
- Be understandable
- Add context
- Explain in your own words

First draft:

- Full paper including everything you want to have in the final paper

Final paper:

- Incorporate feedback from first draft
- Polish paper



## How to fail a seminar?

- Plagiarism
- Late submissions
- Not attending final presentations
- Poorly written paper
  - Fail to convey the concepts
  - Incomprehensible English
- Bad presentation
  - Fail to convey the concepts
  - Unable to answer any questions
- Never talk to your supervisor
- Do not use a spell checker

## Next steps

- Talk to your supervisor
- Write introduction