



# Field-specific Seminar: Complex Systems

## Organizational Matters

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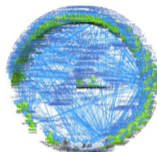
Computer Science Division, University of Rostock

## Definition: Complex Software Systems

Complex software systems are composed of many components that might interact with each other.

Each component aims at solving a specific problem.

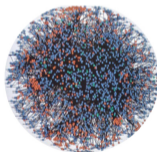
The interaction between the components might result in a „social network of software components“.



Netflix



Twitter



Amazon



Social Network

**Abbildung:** Complex Software Systems approximate social networks ([Source](#))

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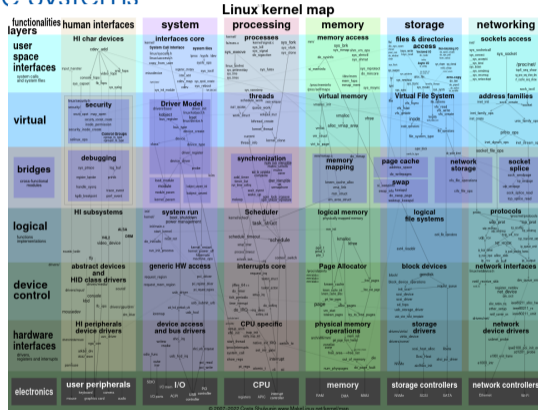


Abbildung: Overview of the interactions between components in the Linux kernel (Source)

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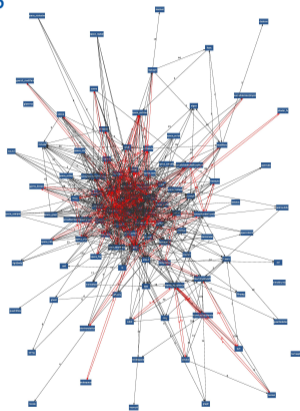


Abbildung: Dependency of software components in Blender  
(Source)



## Seminar topics

All seminar topics are centered around the following questions:

1. How can complex software systems be built and understood?
2. What are the implications of evermore complex software systems?
3. What are the problems that are addressed by the components?
4. Which approaches and methods are used to solve the problems?

## Seminar Workflow

1. Choice/assignment of seminar topics
  - After the first seminar!
2. Guidelines for scientific presentations and papers
  - Second and third seminar
3. Literature review, familiarization with topic
  - Appointment for consultation and advices on demand
  - Topics: Creation of slides, paper outline, etc.
4. Presentation of your work + First version of paper
  - Specific deadlines **TBA** (but before end of lecture period)
  - Topics: Creation of slides, paper outline, etc.
5. Final camera-ready paper
  - Specific deadlines **TBA** (but before September)

## Remarks on the Workflow

- Turn in slides and paper as PDF document via email
  - Time stamp of ITMZ mail server applies to all deadlines
- Extension of deadlines **only possible**
  - in case of important reasons
  - before the original deadline has expired
  - with a valid medical certificate in case of sickness
- Own initiative is part of the seminar
  - See it as a dry run for your master's thesis
  - to familiarize with the topic and related work
  - to elaborate on concepts, terms, and ideas
  - Nevertheless, ask for help if (really) necessary
- If you **plagiarize** (parts of) slides, code and/or paper, you will **fail** the course **without further warning!**

## Registration and Contact

- Enrollment in corresponding Stud.IP course
  - Title: 23870 (Seminar) Gebietsseminar Komplexe Systeme / Field-specific Seminar Complex Systems
  - Link: [https://studip.uni-rostock.de/dispatch.php/course/details?sem\\_id=68d38650126db8a68f87c1d455cec7e6](https://studip.uni-rostock.de/dispatch.php/course/details?sem_id=68d38650126db8a68f87c1d455cec7e6)
- Questions via E-Mail to Andreas Ruscheinski
  - [andreas.ruscheinski@uni-rostock.de](mailto:andreas.ruscheinski@uni-rostock.de)