Software Product Lines Discussion Seminar

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Course Overview

- Provides an overview of various research topics related to of Software Product Lines and highly configurable systems

- Includes background and state of the art papers

What You Will Also Learn…

- How to read and discuss a research paper
- How to write a paper review
- How to brainstorm about research ideas
- How to write a research paper
- How to present a research paper

Course Structure

- Discussion-based
- 1 paper to read & discuss each week
- Final project paper & presentation about an open problem
- Paper schedule online
- Relies on GitHub for any submissions

Grading Scheme

- In-class discussion and participation (40%)
- Paper summaries (20%)
- Final Paper (25%)
- Final Presentation (15%)

Paper Summaries (20%)

- Summary includes:
  - What the paper is about
  - 2-3 things you liked about the paper
  - 2-3 things that can be improved in the paper or that were not clear (with the motivation, technique, evaluation, etc.)
  - 1 discussion question you have (goes towards discussion grade but here for documentation)
- Ideally around 1/2 page (remember quality not quantity!)
- Due: **in your GitHub repository BEFORE class**

Discussion in Class (40%)

- Start with summarizing the paper
- Discuss any clarification questions
- Move on to the discussion questions
  - Discussion points that relate the current paper to
    - previous papers we have read
    - related papers you have read on your own
    - other areas you are familiar with
  - Everyone is expected to participate!

Project

- Interesting question/problem related to SPLs or highly configurable software
  - **Motivation**: what is the problem & why is it interesting/relevant?
  - **Related work**: what are the existing (related) solutions to this problem and why are they not enough?
  - **Proposed solution**: what is your plan to solve this problem ? (don’t have to implement it but must make sense!)
  - **Limitations**: are there (expected) limitations to your solution?
  - **Evaluation**: how would you evaluate your solution ? (experiments, case studies, quantitative/qualitative analysis..)

Paper (25%)

- Graded on overall quality
  - Clear motivation
  - Thorough literature review
  - Valid solution
  - Suitable evaluation
  - Writing quality

Presentation (15%)

- 15 min presentation + 5 min for questions (time may vary according to number of registered students)
- Graded on overall quality
  - Clearly describes the problem
  - Clearly describes the solution & possible evaluation
  - Clearly describes how this is different from existing work
  - Presentation style
  - Quality of slides

Project Timeline

- **Project proposal** due on **Dec. 14th, 2015** — just a paragraph describing the idea, submitted in your GitHub repo (not graded)

- **Project paper** due on **Feb. 4th, 2016** (in your GitHub repo)

- Tentative: Presentations to take place Feb. 8th & Feb.15, 2016 (schedule to be announced beforehand)

Logistics

- Contact: nadi@st.informatik.tu-darmstadt.de
- Please make an appointment by email if you wish to discuss any issues
- Use Subject: “[spl-sem]: <subject>” for emails
- Will create a course mailing list for any announcements
- Please note that there will be no class on Oct. 25 **but summaries are still due** and part of the time of the following class will be used for discussion
- Always check the course website (and your email) for any schedule updates