# WS14: Metaprogramming Seminar

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(also based on material from Dr. Sebastian Erdweg)

# Metaprogramming

- A metaprogram is a program that manipulates other programs.
- Useful when creating or extending a programming language (PL)
  - PLs are tools to express our designs in code.

# Goals

- Non-goal: learn in detail a specific metaprogramming technology
- Goal: reflect, understand and contrast different approaches to metaprogramming (both foundations and current research)
  - Understanding a specific technology should become an exercise.

# Format

Scientific work consists of:

- Read & understand
- Think & create
- Write & reflect
- Discuss & convey

# Discussion seminar…

- Read & understand: ✓
- Think & create: ✗
- Write & reflect: ✓
- Discuss & convey: ✓

# …vs thesis work

- Read & understand: ✓
- Think & create: ✓
- Write & reflect: ✓
- Discuss & convey: mostly ✗

- Yet, a seminar can be useful preparation for thesis work.

# Course load, weekly

Each week:

- Read & understand scientific paper
- Write a short summary & questions for discussions
- Meet to discuss it with peers
- One participant will be the *discussion leader*.

# Course load, at the end

- Write term paper on the topic
- Survey (critically) paper and related literature

# Course load distribution

- 4 ECTS = 120 hours
- Planned division (very approximate):
- 12 papers * 8 h/paper = 80%
- 12 * 2 = 24 h on term paper

# Read & understand a paper

- Read accurately
  - plan for sufficient time
- Understand essential content
  - not all technical details
- Take notes/questions
  - for discussion & summary

# Short summary

- Goal: ensure everybody reads the article before discussion
- Summarize essential content & questions
- At most 150-300 words
- Relevant for grade
- Emailed to me & discussion leader

# Discussion leader

- Deeper reading of paper

- At the end, will write summary of topic

# General goals

- Autonomous understanding of scientific literature
- Active and critical discussion of scientific matters