Student Conference 2016

Scientific Presentations

Fabian Benduhn, Veit Köppen, Gunter Saake

(based on slides by Christian Kästner)
Presentations at Student Conference

• 12 min Presentation
• 3 min Question & Answers
• Finish late: cut off
• Finish early: more questions

• 3 Presentations per session
  – Agree on one notebook or prepare/practice to switch
Preparation

• Prepare for a talk!
• Preparation takes time (20x time of actual presentation)
• Do not prepare slides the evening before!
Presenting Scientific Results

• Before writing a paper
  – Present ideas to colleagues for discussion
  – Put your ideas into order
  – Think about visualizations

• After writing a paper
  – Presenting an accepted paper at a workshop or conference
  – Give a rough overview: Problem, Solution, Evaluation
  – Convince audience to read the paper
  – Initiate a discussion (workshop)

• Paper and presentation often do not perfectly align
• (Lecture != Presentation)
Prepare for a very large room
Workshop Room
What makes a successful presentation?

• Facts
  – Content
  – Structure
  – Cohesion / line of thoughts

• Visuals
  – Design of slides
  – Visualizations

• Appearance
  – Body language
  – Language
  – Subjective impression
Goals

• Every presentation has a goal
• Every presentation has several tasks

• Answer these questions first:
  – What is my goal?
  – What is my main point?
  – Why should the audience listen?
  – Why is the topic interesting?
  – Who will benefit from this presentation?
Structure

• Beginning: Connect to audience
  – Introduce yourself
  – Motivate your topic (why should they listen?)
  – Executive summary (main points, main results)
  – (Calm down)

• Middle: Convey information
  – Facts, Arguments, Results, Discussion

• End: Take home message
  – Summarize main points
  – Emphasize consequences
  – Future work
Beginning

• What is the general problem?
• Why is this problem interesting?
• What is the specific problem?
• Why is this problem interesting?
• Which question(s) to answer?
• (State of the art)
• How to proceed and why?
• Goals and tasks?
• What background knowledge is necessary?
• Which problems need to be solved?
• Which decisions to make?
• Which assumptions/simplifications and why?
• Experiments
• Results
• Interpretation
• Does this answer my hypothesis?
End

• What was the main result?
• How general are these results? (threats to validity)
• What are the consequences?
• What remains open? Which new questions arose? Future work?
• Thank for attention
Typical problems

• Too quick introduction
• Problem remains unclear
• Consequences / results unclear
• Too much “what I did”
• Too little “why did I do this (each step)”
• Too little “what’s the point”
• No connection between thoughts / slides
• Missing cohesion
Technical Hints

• 20 min, about 7 to 15 slides
• Fontsize $\geq 18$, sans-serif fonts
• Name, title and affiliation on every slide
• Slide numbers on every slide
• At most one topic per slide
• Visualization, colors where necessary
• Avoid overfull slides (> 7 objects or > 36 words)
• Avoid full sentences, instead summarize content using headwords.
Structure slide?

• Only if you have something to say
• Maybe only after motivation slides

Agenda

• Problems and Advantages of Preprocessors
• 4 Improvements
  • Views
  • Visual Representation
  • Disciplined Annotations
  • Product-Line-Aware Type System
• Summary and Perspective
Visualizations

- Assists memory
- Assists comprehension
- Emphasizes the content
- More accessible style

If
- Meaning is clear
- Visualized content is correct
- Text is readable
Different kinds of visualizations

Diagrams
Photos
Clip-arts

Private Ausgaben

- Miete
- KFZ
- Versicherungen
- Sparen
- Strom, Energie
- Haushalt
- Urlaub
- Hobby, Freizeit

Preprocessor in Femto OS
Simplify visualizations

• A microprocessor consists of X, Y and Z...

Figure 1. Pentium block diagram.
Animation

• Use animation with care

• Use
  – to focus attention (~ laser pointer)
  – to visualize a process / several steps

• Do not use without specific purpose
Checklist for visualizations

• Can text be replaced by visualizations?
• Is the meaning clear?
• Are the facts correct?
• All texts and details readable?
• No unnecessary or misleading elements?
• Does it help comprehension?
You cannot communicate
Where to stand

• Facing the audience
• Not too far away
• Don’t hide the projected image
• Don’t hide behind furniture
Posture

- Upright
- Open
- Relaxed
- Stable
Movement

• Don’t fidget
• Emphasize thoughts with gestures and facial expressions
• Calm, but not fixed
Eyes

• Look at the audience
• Try to look at everybody naturally
• Do not stare at screen/window/corner/floor
Voice / Language

• Slow enough
• Loud enough
• Clear pronunciation
• Enough pauses
• Avoid monotony

• Keep sentences simple
• Don’t read
Timing

• Practice timing
• If faster when nervous plan ahead
• Have a timer during presentation
• Check speed during presentation

• Practice fast and slow version of last 3 slides
Some Last Tips

• Always be prepared
  – Have a PDF version of your slides
  – On at least 2 USB sticks & internet
  – Prepare presentation before the session, usually only one laptop

• Laser pointer hard to see in large rooms -> animations instead

• No dress code in computer science conferences

• Practice timing and phrasing!
Feedback & Grading

• 5 Criteria
  – Motivation an goals clear?
  – Content (structure, cohesion, clarity, conclusion?)
  – Slides (amount, style, visualizations)
  – Presentation & body language
  – Clarity (understandable, slang, missing background inform.)

• Feedback sheet for everybody
Take-away slide

• Prepare for a presentation

• Make goals and motivation crystal clear

• Careful slide layout with visualizations where suitable

• Calm and focused presentation