

**T-110.5190**

**Scientific Papers**

# Purpose of scientific writing

- Present research results for research community
- Point out writer's own justified conclusions clearly and distinctly
  - The content itself is complex, complex language will hide the message

# Topic and content

- Based on facts, earlier research results
  - published in peer referred publications
- Opinions in background
  - can be seen from topic selection, not in results
  - own opinions, argumentation and conclusions must clearly be separated

# Language

- Exact and correct, but understandable
  - Reader can understand the message only one way, and just one way
- Clear, and based on facts
  - Not too complex or with many side tracks
- Justifications for every claim
- For the audience
  - avoid jargon
  - help reader through the paper

# Structure

- Introduction
  - Background
  - Presenting the new solutions
  - Analysis and results
  - Conclusions
  - References
- 
- (abstract will have all these in the beginning)

# Introduction

- Motivation
- Scope
- Environment of the work
- Problems and research question(s)
- Results
- Content of this research
  - main findings of the work

# Background

- Related research
  - done by others -> referring to current scientific knowledge
- Open questions and challenges

# My/our solution/work

- Clearly state what you have done and how
  - Method of research
  - Criteria for comparisons
  - What was really done

# Analysis and results

- What were the findings of the work
- What were surprising findings
- What was expected but not true
- Choose main results
  - something may be left out

# Conclusions

- Revision of the work
  - e.g. for new or hurried reader
- Evaluation of the main results
- Not just repetition, but something new
  - e.g. emphasis on a viewpoint
- Future work, what was left out,...

# Repetition

- Avoid complex sentences
- Justify
- Structure
  - Introduction
  - Background
  - Presenting the new solutions
  - Analysis and results
  - Conclusions
  - References