

# PhD Seminar 2011



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<http://www.trust.cased.de/teaching/seminars/phd-seminar/>



## Recap: Our Goals for the PhD Seminar

### Your successful PhD in IT Security:

- Background Information
- Required Skills
- Goals
- Best Practices
- Learning-by-Doing

## Recap: The Organizers



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## Recap: Methods

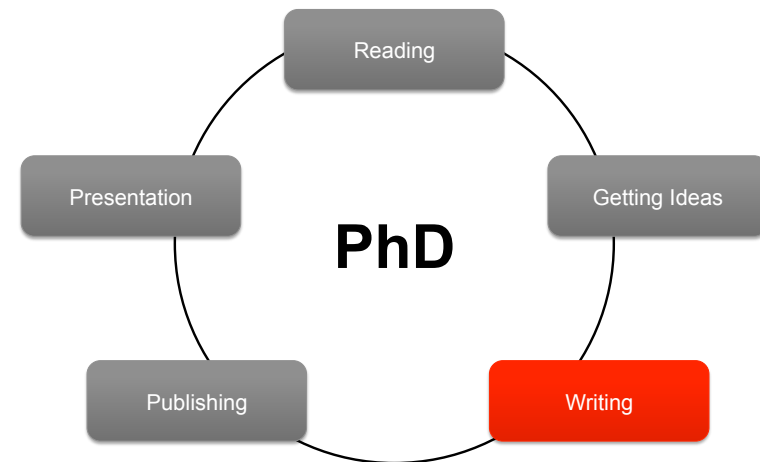
- Interactive !
- Some Slides
- Exchange of Experiences + Best Practices
- Learning-by-doing
- Feedback
- Invited Talks (speakers to be announced)

## Contents of the Seminar



- **What is Research?**
  - Roles, Areas, Funding
- **Obtaining a PhD**
  - Motivation, Goals, Tips & Tricks
- **Research Skills**
  - Getting Ideas
  - **Scientific Writing** / Publishing / Presentation

## Research Skills



## Homework of last PhD seminar



- **Use the feedback you got on your extended abstract**
- **Split/extend your extended abstract into the following parts of your paper:**
  - Abstract
  - Introduction
  - Related Work
  - References (use Bibtex & compact+consistent references: “In Computer and Communications Security (CCS’09)” but not “In Proceedings of 12<sup>th</sup> International Conference on ...”)
- **Print your paper 12 times & bring it to next seminar**

## Possible Structure of a Paper



Abstract (4 sentences)  
Introduction (1 page)  
The problem (1 page)  
My idea (2 pages)  
The details (5 pages)  
Related work (1-2 pages)  
Conclusions and further work (0.5 pages)

(from Simon Peyton Jones: “How to write a great research paper”)

## ABSTRACT

### Example:

- Problem 1. Many papers are *badly written and hard to understand*
- Relevance 2. This is a pity, because their *good ideas may go unappreciated*
- Solution 3. Following simple guidelines can dramatically improve the quality of your papers
- Impact 4. Your work will be used more, and the feedback you get from others will in turn improve your research

(from Simon Peyton Jones: "How to write a great research paper")

## The Abstract

- **High-level description of your paper**
- **Might be all that some readers can access**
  - Self-contained: no links to rest of paper (e.g., references)
  - Informative and not too cumbersome or too long
- **Used by PC members to decide which papers to read**
  - Make (the right) people interested in reading your paper
- **Four sentences (or at least parts) [Kent Beck]**
  1. State the problem
  2. Say why it's an interesting problem
  3. Say what your solution achieves
  4. Say what follows from your solution

## INTRODUCTION

## RELATED WORK

## OUR CONTRIBUTION

## REFERENCES

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### Some questions towards extracting your contribution:

- Why is the considered problem relevant?
- What is the state of the art for solutions to this problem?
- Which problems do related works solve and how?
- Which problems do related works NOT solve / are still open?
- What is your intended direction towards a solution?