

# Advanced Topics in Computer Networking (ATCN) – Social Networks and Cloud Computing –

Prof. Dr. Xiaoming Fu (fu@cs.uni-goettingen.de)

Teaching Assistant: Jiachen Chen (jiachen@cs.uni-goettingen.de)

Computer Networks Group  
Institute of Computer Science  
Georg-August-Universität Göttingen

October 28, 2011

# Outline

- 1 Course Overview
- 2 Course Plan
- 3 Seminar Preparation and Process
- 4 Final Presentation
- 5 Final Report

# Outline

- 1 Course Overview
- 2 Course Plan
- 3 Seminar Preparation and Process
- 4 Final Presentation
- 5 Final Report

# Objectives

- Basic concepts: Gain experience in **Reading**, **Writing** and **Presenting** research ideas in English
- Learn knowledge about new and emerging research topics and technologies in social networking and cloud computing
- Organize discussions and exchange research ideas/experiences between students and researchers

# What we plan to do?

- It's research-oriented. Therefore, the main focus will be paper reading and research discussions.
- It's *Seminar*, so we will.....*Discuss, Discuss* and *Discuss* with prepared reading materials
- Every session, we discuss between two to three papers
- Each participant completes a review form of a paper 2 days prior to the seminar day (i.e., by Wednesday!)
- Final presentations, Q&A)
- Final report due 31.03.2012

# How to evaluate?

- Part I: Session participation (30%)
  - paper review (15%)
  - session discussion (15%)
- Part II: Final presentation (30%)
- Part III: Final report (40%)

# Outline

- 1 Course Overview
- 2 **Course Plan**
- 3 Seminar Preparation and Process
- 4 Final Presentation
- 5 Final Report

# Schedule

- 28.10 Session 0: Overview and social networks basis
- 04.11 (no session)
- 11.11 Session 1: Social network structure
- 18.11 Session 2: Strong and weak ties
- 25.11 (no session)
- 02.12 Session 3: OSN sampling
- 09.12 Session 4: Recommendation systems; social nets privacy
- 16.12 (no session)
- 06.01 Session 5: Virtualization
- 13.01 Session 6: Data center network
- 20.01 Session 7: Energy issues in cloud computing
- 27.01 Session 8: Mobile cloud computing
- 03.02 Final presentation I
- 10.02 Final presentation II
- 31.03 Final report deadline



# Outline

- 1 Course Overview
- 2 Course Plan
- 3 Seminar Preparation and Process**
- 4 Final Presentation
- 5 Final Report

# Before the seminar (I): Read a Paper

- Rough round:
  - Read: abstract, introduction, conclusion and first graph of the main work
  - Check points: problem statement and rough main idea
- Read in depth:
  - Addressed Problem: a critical or trivial issue?
  - Solution: challenge/verify the credibility of the idea: do the assumption, method, statistics and conclusion sound?
  - Evaluation: theoretical, experiment or simulation? extensive and sufficient results?

# Before the seminar (II): Write a Review

- Summary of the paper
- Strength and weakness of the paper: **Please detail the reasons!!**
  - Convincing problem statement? A critical issue?
  - Limited novelty or new idea?
  - Solution/Method:
    - i assumption
    - ii deployment
    - iii scalability
    - iv protocol overhead, algorithm complexity
    - v robustness/resilience to failures
    - vi efficiency
    - vii ...
  - Evaluation
    - i benchmark
    - ii performance metric
    - iii simulation/experiment setup
    - iv Convincing results? Sufficiently demonstrated the pros/cons/variants of the solution?
  - Writing: well structured? easy to understand?

# During the Seminar

- Lecturer will publish a summary of all participants' reviews, including 5 parts:
  - problem statement
  - method
  - evaluation
  - writing
  - future work
- All the comments are discussed by all the participants.
- The review is provided anonymously
  - so just express your opinions in your review
  - don't worry if you will be criticized with your review

# Outline

- 1 Course Overview
- 2 Course Plan
- 3 Seminar Preparation and Process
- 4 Final Presentation**
- 5 Final Report

# Final Presentation

- Paper list will be provided before 9.12
- Select a paper in the list before 16.12
- Deadline of submitting slides: 31.01
- Duration: 25-30 minute presentation + 10 minute discussion
- Tips for preparing slides
  - 15-20 pages, BSc/MSc. thesis format
  - Correct citation of others' work (figure, sentence, argument, idea, ...)
  - Get your audiences to quickly understand the idea of the paper
  - Animations, figures and tables are better than wordy sentences
  - Use example to explain complicated algorithms
  - Short sentences
  - Avoid complicated equations
  - **Summary of the paper: thinking/justification of the paper in your own words (Bonus)**

# Outline

- 1 Course Overview
- 2 Course Plan
- 3 Seminar Preparation and Process
- 4 Final Presentation
- 5 Final Report**

# Final Report

- Deadline: 31 March
- Objective
  - review the paper and investigate this research field
- A scientific paper including
  - Summary of the selected paper: method and evaluation results
  - Discussion of the paper on how to improve the work or other related directions



# Format

- Title
- Abstract: a broad overview of the report, end with a short statement of the major results of your investigation
- Introduction: expands the abstract, get specific about your investigation
- Related work: unlikely invented something completely new
- Overview of the paper: what's important idea of the paper? Bring your reader to the method
- Main results of the paper
- Discussion of the paper: give your opinion on the paper
- Future thoughts along the direction