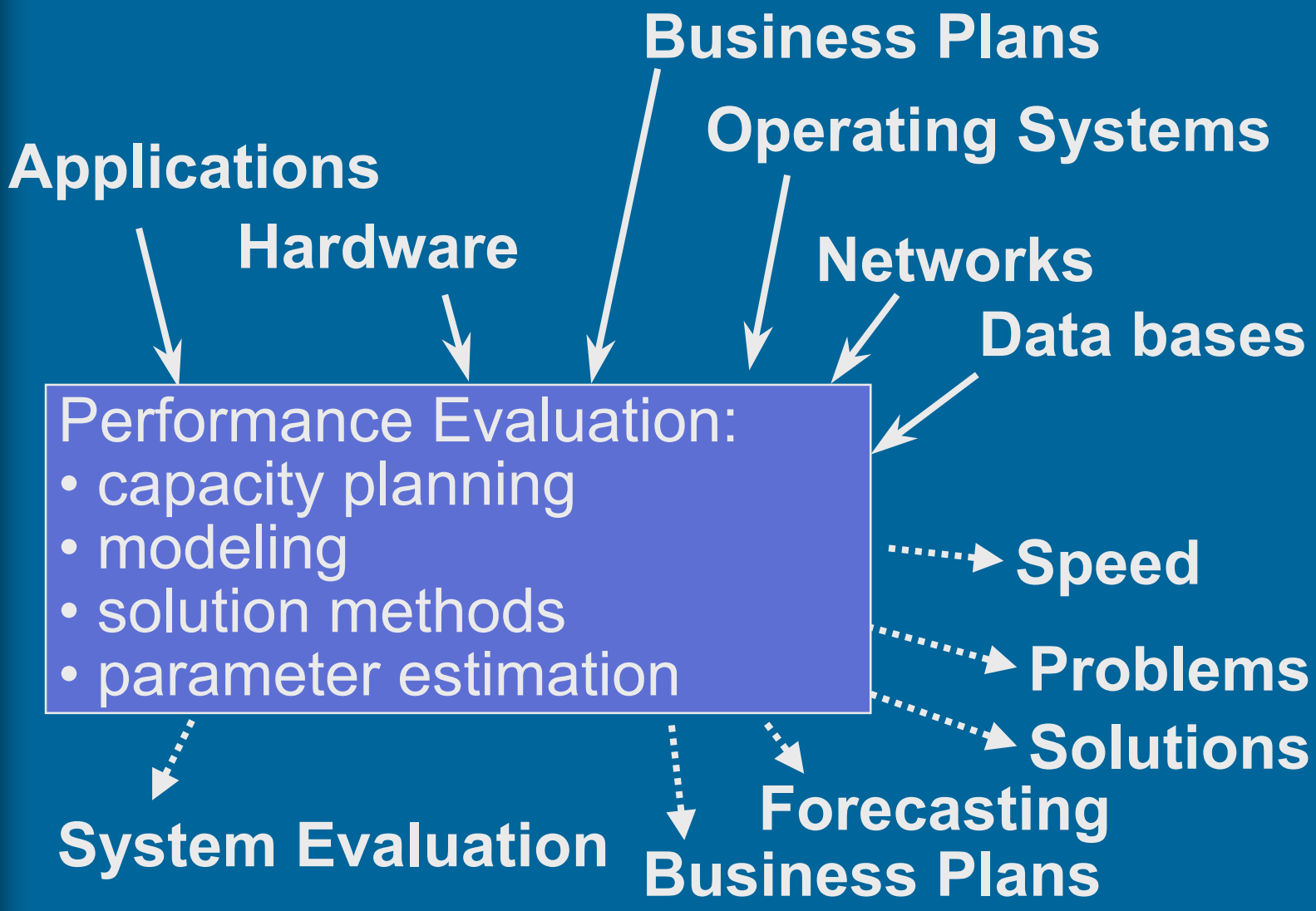
581372-6
Performance Evaluation

Teemu Kerola
University of Helsinki
Department of Computer Science

Spring 2002

Topics



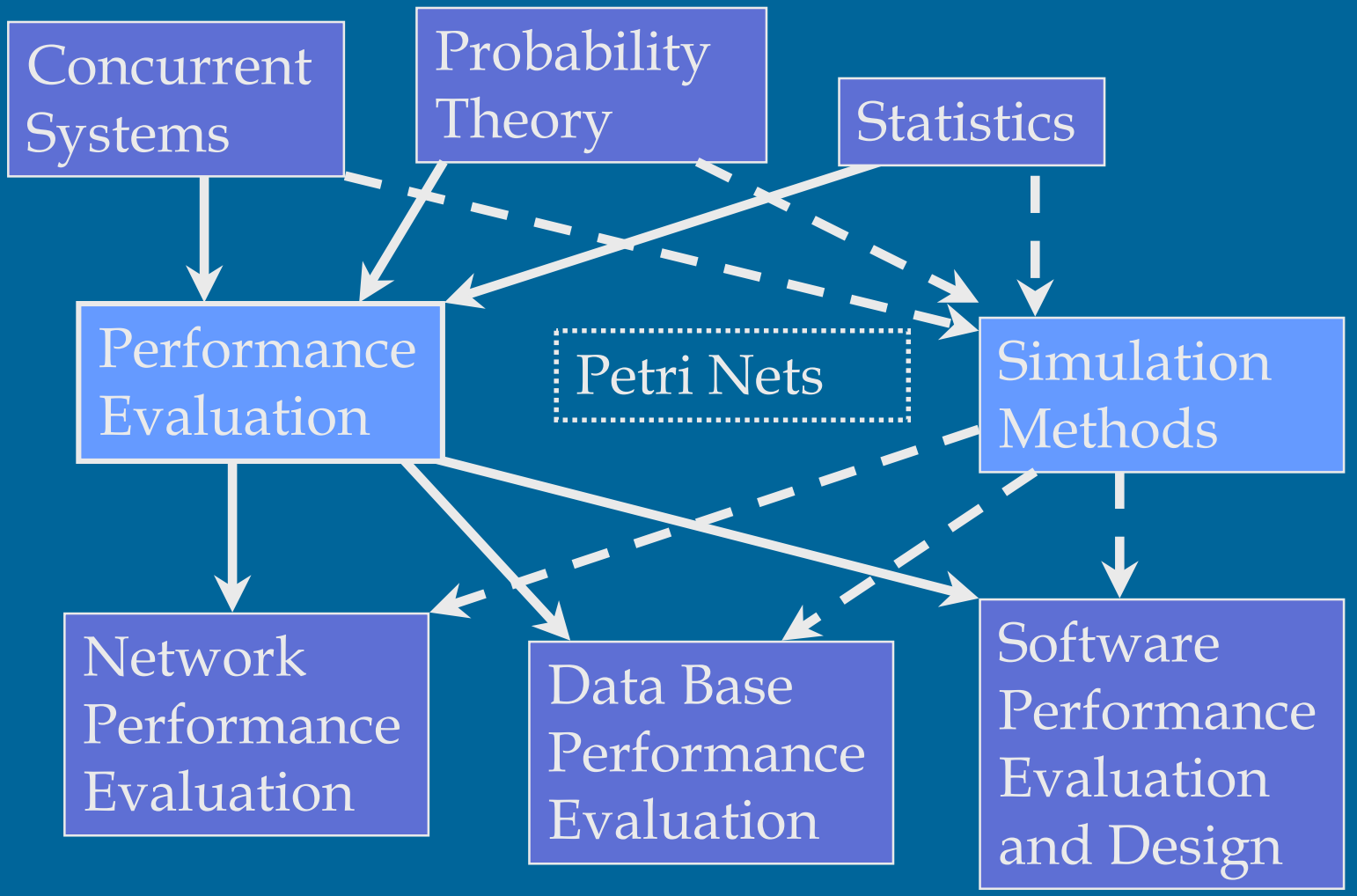
Goals

- What is the overall process of systems performance evaluation?
- How are performance evaluation models developed, solved, and used?
- How are parameter values determined?
- What specific analytical solution methods are there and how do they work?
- What are the limits of analytical solution methods, I.e., when is simulation needed?

How is performance evaluation used?

- How good is current system?
- Why is my system so slow?
- What would happen if some component would be changed to a twice as fast component?
- How long will current system be ”fast enough”?
- How many transactions (per second) can current system handle?
- Do we need complete system upgrade, or just larger message buffers?

Course Map



Notice

- These slides are made to support lectures and to be used with the text book
- They are NOT covering everything that is covered in the lectures
- They are NOT a replacement for a text book
- If you need a self-contained presentation, please use a text book

Motto:

It is not good exercise, if you do not sweat

WWW Information

- Course home page
  http://www.cs.helsinki.fi/~kerola/ska/
- This semester schedule
  .../ska/K02/aikataulu.html
- Lectures *.../ska/K02/luennot/*
- Homeworks *.../ska/K02/laskuharj/*
- Old exams *.../ska/kokeet/*
- Newsgroup *hy.opiskelu.tktl.ska*

Contents

Course Material

- E.D. Lazowska, J. Zahorjan, G.S. Graham, and K.C. Sevcik, Quantitative System Performance, Prentice-Hall, 1984.
  - general text book
- A.M. Law, W.D. Kelton, Simulation, Modeling and Analysis, McGraw-Hill, 1991
  - statistics, prob. theory
- J. Brumfield, PMVA Purdue Mean Value Analysis Program User's Guide, Dept of CS, Purdue University
  - software to solve closed queuing network models
- Lecture notes
- Homework problems