SOS - Exam Plan

Jens Nielsen

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Course list

1. Introduction to Systems of Systems and Game Theory
2. Game Theory and Smart grid
3. The Maximum Principle (discrete-time)
4. Differentiable Games and Distributed Systems
5. Introduction to Consensus in Dynamic Networks
6. Communication and architectures in Smart Grids
7. Grid Control via Unreliable Communication Network
8. Smart grid: external generation site - voltage control over imperfect networks
9. Distributed Optimization
10. Communication & Control: applied to wind-farm use-case
11. Demand Management in Smart Energy Grids

Topic 1: Introduction to Systems of Systems and Game Theory

Reading Material: "Systems of Systems (SoS)/Complex Systems an Introduction" (attached under course material)

- Z. Han, D. Niyato, W. Saad, T. Basar, A. Hjørungnes. Game Theory in Wireless and Communication Networks: Theory, Models, and Applications. Cambridge University Press 2012. Chapters 3.1, 3.2
- A. MacKenzie, L. DaSilva. Game Theoryfor Wireless Engineers. Morgan & Claypool Publishers. 2006. Chapter 3.