

**SOAF**

SVENSKA OPERATIONSANALYSFÖRENINGEN

# SOAK 2017 Programme

## Schedule

		Room A35	Room A36
19/10	10.00-11.00	Coffee and registration	
	11.00-11.15	Welcome (Room A35)	
	11.15-12.00	Plenary (Room A35): Anders Arweström Jansson "Vad är det människor gör som automationen inte klarar? Analys och design av beslutsstödsystem för expertanvändare."	
	12.00-12.10	Photo (outside Universitetsklubben)	
	12.10-13.30	Lunch (Universitetsklubben)	
	13.30-15.00	Software and Operational Research	Simulation
	15.00-15.30	Coffee	
	15.30-17.00	Spatial coordination and Dose planning	Economy and Transportation
	17.00-17.30	Subben's checklist revisited (Room A35)	
	17.30-18.00	Mingle (Universitetsklubben)	
	17.30-	Conference dinner (Universitetsklubben)	
20/10	9.00-10.30	Large real-world problems (and reasonable solution times)	Operational research in the public sector
	10.30-11.00	Coffee	
	11.00-11.45	Plenary (Room A35): Jan Frelin "Vart kommer all osäkerhet ifrån?"	
	11.45-13.00	Lunch (UK)	
	13.00-14.30	Taming uncertainty	Optimization tools
	14.30-15.00	Coffee	

# List of talks

## Software and operational research

19 October, 13.30-15.00, Room A35

**Design of a Driver Advisory System for Electric Multiple Units based on a Dynamic Programming Approach**

*Nima Ghaviha, School of Business, Society and Engineering, Mälardalen University*

**Optimization Models for System Quality and Decisions**

*Pasqualina Potena, RISE SICS Västerås*

**Scheduling in Software testing**

*Patrik Eveborn, Optimal Solutions AB*

**Explicit modelling of multiple intervals in a constraint generation procedure for multiprocessor scheduling**

*Emil Karlsson, Department of Mathematics, Linköping University*

## Simulation

19 October, 13.30-15.00, Room A36

**Medelfältsanalys av kjedjeköer**

*Alexander Aurell, Department of Mathematics, Royal Institute of Technology, and Göran Svensson, Department of Mathematics, Royal Institute of Technology and Teleopti*

**A splitting algorithm for simulation-based optimization problems with categorical variables**

*Zuzana Nedělková, Department of Mathematical Sciences, Chalmers University of Technology*

**Predicting the near-future location and status of ambulances using simulation modelling**

*Tobias Andersson Granberg, Department of Science and Technology, Linköping University*

## Spatial coordination and Dose planning

19 October, 15.30-17.00, Room A35

**New network optimization techniques for positioning unmanned aerial vehicles as communication relays for surveillance tasks**

*Oleg Burdakov, Department of Mathematics, Linköping University*

**Intersection-free cycle time optimization of Multi-robot Stations - Comparing with simulated and industrial estimates of synchronised cycle times**

*Edvin Åblad, Department of Mathematical Sciences, Chalmers University of Technology and Fraunhofer-Chalmers Centre*

**Preventing Hot Spots in High Dose-Rate Brachytherapy**

*Björn Morén, Department of Science and Technology, Linköping University*

**Automatiserad stråldosplanering för cancerbehandling genom explicit optimering av plankvalitet**  
*Lovisa Engberg, Department of Mathematics, Royal Institute of Technology and RaySearch Laboratories AB*

## Economy and Transportation

19 October, 15.30-17.00, Room A36

### **Kostnads-nyttö analys på tågtidtabeller**

*Victoria Svedberg, RISE SICS and Department of Science and Technology, Linköping University*

### **Samhällsekonomisk utvärdering av förändringar i pendeltågstidtabeller**

*Abderrahman Ait Ali och Jennifer Warg, School of architecture and the build environment, Royal Institute of Technology*

### **Big data för mer "vetenskaplig" scenariometodik**

*Anders Eriksson, Kogma*

### **Energiminimala godstransporter från ett nationellt systemperspektiv**

*Jenny Karlsson, VTI*

## Subben's checklist revisited

19 October, 17.00-17.30, Room A35

### **"Subben's checklist" revisited - A partial description of the development of quantitative OR papers over a period of 25 years**

*Michael Patriksson, Department of Mathematical Sciences, Chalmers University of Technology*

## Large real-world problems (and reasonable solution times)

20 October, 09.00-10.30, Room A35

### **A self-adaptive placement heuristic for a highly constrained real-world container loading problem**

*Jonas Olsson, Department of Mathematics, Linköping University*

### **Integrating Railway Timetabling with Locomotive Assignment and Routing:**

*Jawad Elomari, RISE SICS Västerås*

### **Optimization of routes for a fleet of plug-in hybrid vehicles**

*Ann-Brith Strömberg, Department of Mathematical Sciences, Chalmers University of Technology*

### **Large-scale integration of wind power into the European electricity system**

*Caroline Granfeldt, Department of Mathematical Sciences, Chalmers University of Technology*

# Operational research in the public sector

20 October, 09.00-10.30, Room A36

## **Optimization for snow removal**

*Kaj Holmberg, Department of Science and Technology, Linköping University*

## **Decision Support for Public Service Obligation in Air Transportation**

*Alan Kinene, Department of Science and Technology, Linköping University*

## **Hälsoekonomiska utfallsmått i modellering av prehospitalt ambulanstransportsystem**

*Nicklas Ennab Vogel, Department of Medical and Health Sciences, Linköping University*

## **Utvärdering av kostnadsdrivare inom bussbranschen i Sverige**

*Helene Lidestam, VTI*

# Taming uncertainty

20 October, 13.00-14.30, Room A35

## **Optimal maintenance of wind power plants**

*Quanjiang Yu, Department of Mathematical Sciences, Chalmers University of Technology*

## **Mot storskaliga utvärderingar av derivatprissättningsmetoder**

*Pontus Söderbäck, Department of Management and Engineering, Linköping University*

## **Emergency Event Forecasting**

*Niki Matinrad, Department of Science and Technology, Linköping University*

## **Säkerhetslagerbestämning med simulering – en jämförelse med analytisk metod**

*Fredrik Persson, Department of Management and Engineering, Linköping University*

# Optimization Tools

20 October, 13.00-14.30, Room A36

## **Latest Optimization Trends in Practice**

*Kostja Siefen, Gurobi Optimization*

## **Creating Optimization-based solutions easily: FICO Xpress Insight**

*Juan-Manuel García, FICO*

**Possibly also a presentation on CPLEX from IBM.**