



Swedish
Electricity Storage
and Balancing Centre

3rd Summer School

19–21 August 2026 @ Chalmers University of Technology

**Focus on AI, modelling, machine learning,
safety and security, and big data analysis**

19 August Basic concepts and general applications

12:00–13:30	Lunch & Registration
13:30–15:45	Lecture & Exercise with Srinivasan Keshav (Cambridge University) Introduction to Machine Learning
15:15–15:45	Coffee break
15:45–17:30	Lecture & Exercise with Marina Papatriantafilou (Chalmers) Algorithmic aspects of data analysis in grid monitoring
19:00	Dinner at Ölstugan Tullen Johanneberg



SESBC Summer School (Day 1)

Version 26.08.17

20 August - PARALLEL TRACKS

MATERIALS AND DEVICES	SYSTEM AND INTELLIGENT ENERGY MANAGEMENT
Lecture 09:00–09:50 Amber Mace (Uppsala University) Multiscale modeling of batteries – from materials to devices	Lecture 09:00–09:50 Andreas Theocharis (Karlstad University) From Power Systems to Cyber-Physical Energy Systems – AI, Sectors coupling and the energy transition
Short break 09:50–10:00	
Lecture 10:00–10:50 Isak Bengtsson (Chalmers) An introduction to machine learning for materials	Exercise 10:00–10:50 Andreas Theocharis
Coffee 10:50–11:10	
Lecture 11:10–12:00 Anders Hellman (Chalmers) AI-Guided Discovery of Materials for Sustainable Energy Technologies	Lecture 11:10–12:00 Romaric Duvignau (Chalmers) Efficient and Scalable Peer-to-Peer Energy Systems
Lunch 12:00–13:20 Group photo 13:20–13:30	
Exercise 13:30–14:20 Amber Mace, Isak Bengtsson, and Anders Hellman	Exercise 13:30–14:20 Romaric Duvignau
Short break 14:20–14:30	
Exercise continues 14:30–15:20 Amber Mace, Isak Bengtsson, and Anders Hellman	Lecture 11:10–12:00 Engla Rencelj Ling & Filip Natvig (Uppsala University) Substation Cybersecurity and Machine Learning based Anomaly Detection
Coffee 15:20–15:50	
Exercise continues 15:50–16:40 Amber Mace, Isak Bengtsson, and Anders Hellman	Exercise 15:50–16:40 Engla Rencelj Ling & Filip Natvig
Popular science presentation 17:00 by PhD student Benedick Allan Strugnell-Lees	
17:30 Dinner at Ristorante Bellora	



21 August - INDUSTRIAL PERSPECTIVES

08:30–09:20	ABB – Shiva Sander-Tavallaey Green energy and AI – An ABB perspective
09:20–10:05	Göteborg energi – Joris van Rooij Smart meters in the distribution network
10:15–10:40	Coffee break
10:40–11:30	Volvo – Jacob Norgren Industrial energy flexibility – Machine learning and optimization in practice
11:35–12:25	Svenska kraftnät – Josefine Mattsson Forecasting in the national control centre
12:30–13:30	Lunch
13:30–15:30	Study visit to Digital Twin Cities Centre

