

Complex Technical Systems

Series of Public Lectures

We all realise that our society depends on increasingly complex technical systems such as power supply systems or information and communication systems. Therefore, their vulnerability and the reliability of the services they provide are of special interest. They are subject to a whole set of threats and risks, in part arising from their growing complexity, interconnectedness and interdependencies. The understanding and assessment of such complex systems requires adequate modelling techniques and analytical methods as well as tools for managing uncertainties – all prerequisites for systems' optimisation and decision making.

In this series of lectures we address the current situation, the potential areas of conflict, the analytical capabilities and the advanced approaches to handle complex technical systems from the perspective of private companies, public administration and science.

Starting on 09 May 2007, on Wednesdays, 18:15 h

ETH Zürich, Main Building, Rämistrasse 101, Room HG D1.2

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| 09 May 2007 | Stromdrehzscheibe Schweiz – Netzbetrieb im Zentrum Europas
Dr. Walter Sattinger, Swissgrid AG, Laufenburg |
| 23 May 2007 | Entwurf von fehlertoleranten Systemen durch genetische Algorithmen
Dr. Irene Eusgeld, Laboratorium für Sicherheitsanalytik, ETH Zürich |
| 06 June 2007 | Gibt es Gesetzmässigkeiten für komplexe Systeme? – Ein Blick auf sozio-ökonomische Beispiele
Prof. Dr. Frank Schweitzer, Chair of Systems Design, ETH Zürich |
| 13 June 2007 | Kritische Infrastrukturen und ihre Verwundbarkeiten
Dr. Stefan Brem, Bundesamt für Bevölkerungsschutz, Bern |
| 20 June 2007 | Cascading Disaster Spreading and Optimal, Network-Dependent Response Strategies
Prof. Dr. Dirk Helbing, TU Dresden, ETH Zürich |

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