September 2019
Tirana, Albania

Knowledge FOr Resilient soCiEty

Research and Education at Lund University

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Education programmes at Lund University
Fire Safety Engineering

- Swedish Programme for FSE (responsible for education)
  - About 50 students every year

- International Erasmus Mundus Master of FSE together with Ghent University and Edinburgh University
  - About 20 students per year /international background

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Education programmes at Lund University

- Swedish Master in Risk Management and Safety Engineering (course participation)
  - About 35-40 students every year
- International Master in Disaster Risk Management and Climate Change Adaptation (course participation)
  - About 20-25 students every year

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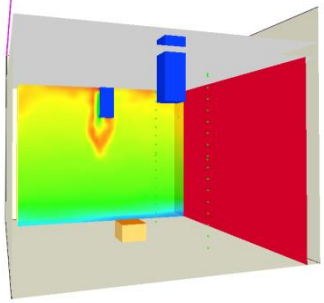
Research at Lund University
Fire Safety Engineering



- Several major research areas at the moment:
  - Fire performance based design of buildings
  - Fire risk Assessment
  - Evacuation
  - CFD models
  - Fire development
  - Wildfires/WUI fires

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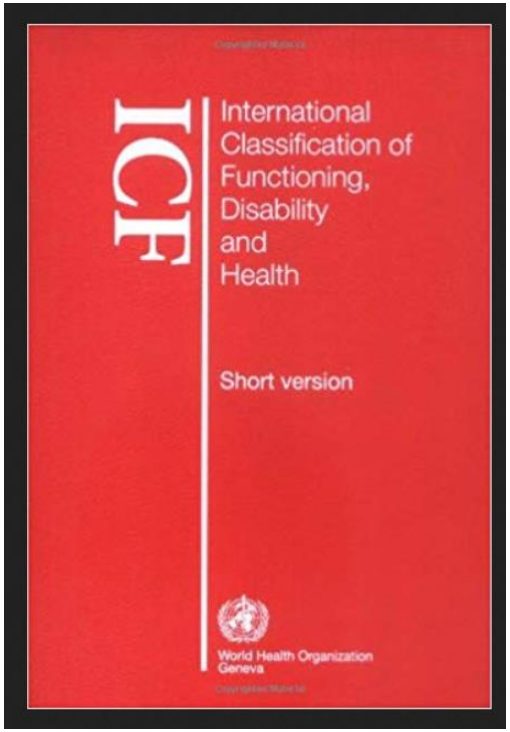
Examples of research projects
Fire Safety Engineering

Building egressibility in an ageing society

- Funding: by FORMAS (Swedish Research Council for sustainable development)
- Objective: Develop an egressibility scale for elderly people
- Method:
  - Literature review based on International Classification of Functioning, Disability and Health (ICF)
  - VR experiments



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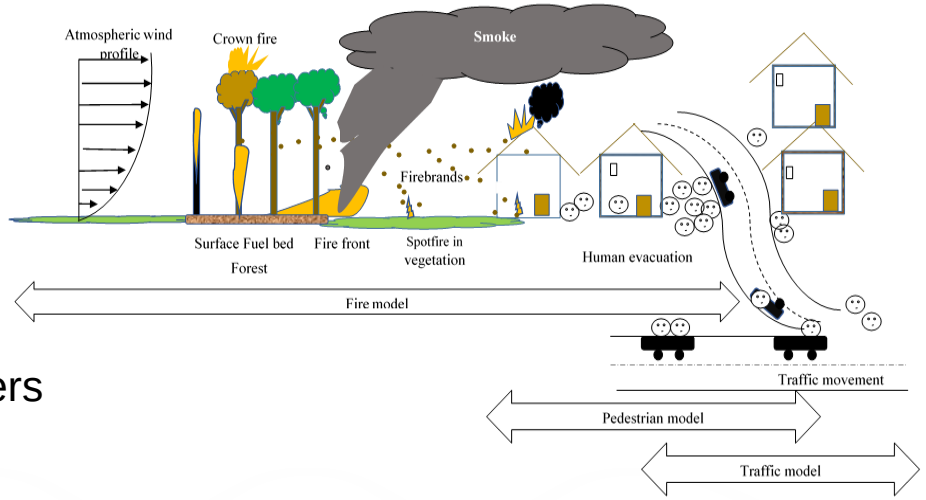
Examples of research projects
Fire Safety Engineering

Wildfire evacuation modelling

- Funding: National Institute of Standards and Technology (USA governmental agency)
- Objective: Implement coupled traffic, pedestrian and fire spread simulations, data collection on human response
- Method:
  - Collect human response data
  - New concept of vulnerability to wildfires
  - Implementation of different modelling layers
  - Unity3D to develop new software



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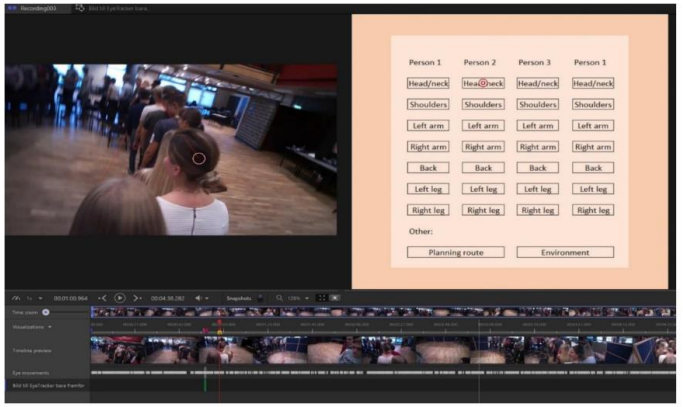
Examples of research projects
Fire Safety Engineering

In-depth analysis of crowd movement

- Funding: Swedish Fire Research Council
- Objective: In depth analysis of crowd movement with eye-tracking
- Method:
  - Analysis of previously collected data on crowd movement
  - Identification of biomechanics parametres useful for crowd modelling



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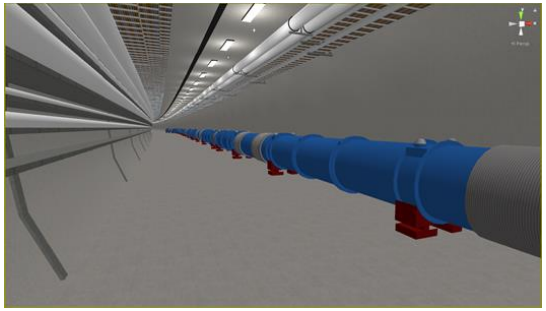
Examples of research projects
Fire Safety Engineering

Fire risk assessment in physics research facilities



- Funding: CERN
- Objective: Develop and assess a fire risk assessment method for physics research facilities
- Method:
  - VR evacuation experiments
  - Fire and evacuation modelling
  - Fire risk assessment tool development

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Examples of research projects
Division of Risk Management and societal Safety

CenCIP: Centre for Critical Infrastructure Protection Research

- Funding: MSB (20 MSEK, 2015-2020)
- Objective:Setting up a Centre of Excellence in Sweden with respect to Critical Infrastructure Research
- Method:Interviews, Document Studies, Modelling and Simulation, Statistical methods, etc.

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Examples of research projects
Division of Risk Management and societal Safety

Swedish National Critical Infrastructures

- Funding: Internal Security Fund (3.2 MSEK, 2017-2020)
- Objective:Modelling, analysis and risk governance of cross-sectorial infrastructure
- Method:Interviews, Document Studies, Modelling and Simulation, Statistical methods, etc.

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Examples of research projects
Division of Risk Management and societal Safety

Climate change impact on the safety and functionality of current and future infrastructure

- Funding: Swedish Transport Administration (3.8 MSEK, 2017-2020)
- Objective:Risks, analysis and adaptation regarding climate change impact on transport infrastructures (bridges)
- Method:Document Studies, Analytical methods, Statistical methods, etc.

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Examples of research projects
Division of Risk Management and societal Safety

Societal Security collaboration in research and education

- Funding: UArctic (0.5 MSEK, 2019-2020)
- Objective:To contribute to a more institutionalized and vivid collaboration between educational and research institutes from the Nordic countries and Russia in the field of Societal Security, dealing with all-hazard crisis management in such issue areas as natural, man-made and technological hazards, and their combinations.
- Method:Research Network project.

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Examples of research projects
Division of Risk Management and societal Safety

Critical flows and supply chains under threat in transformation

- Funding:MSB (20 MSEK, 2019-2023)
- Objective:. Increased understanding of critical flows, systems and dependencies in a societal perspective. Multi-disciplinary development of methods and strategies for strengthening community resilience under both normal and more extreme threats.
- Method:Interviews, Document Studies, Modelling and Simulation, Statistical methods, etc.

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Examples of research projects
Division of Risk Management and societal Safety

Living with floods: Social learning for sustainable flood risk management

- Funding:Swedish Research Council (Vetenskapsrådet) jan 2018-dec 2020
- Objective: Investigate transition processes to more resilient and sustainable approaches and practices in flood risk management in spatial
- Method: qualitative research methods such as semi-structured interviews as well as systems and document analysis applying coding.

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Examples of research projects
Division of Risk Management and societal Safety

Power and norms in Swedish disaster management

- Funding: MSB
- Objective:To investigate what norms are present in the disaster management system
- To investigate how power relations influence collaboration and coordination in disaster management
- Method: Interviews, document studies and surveys

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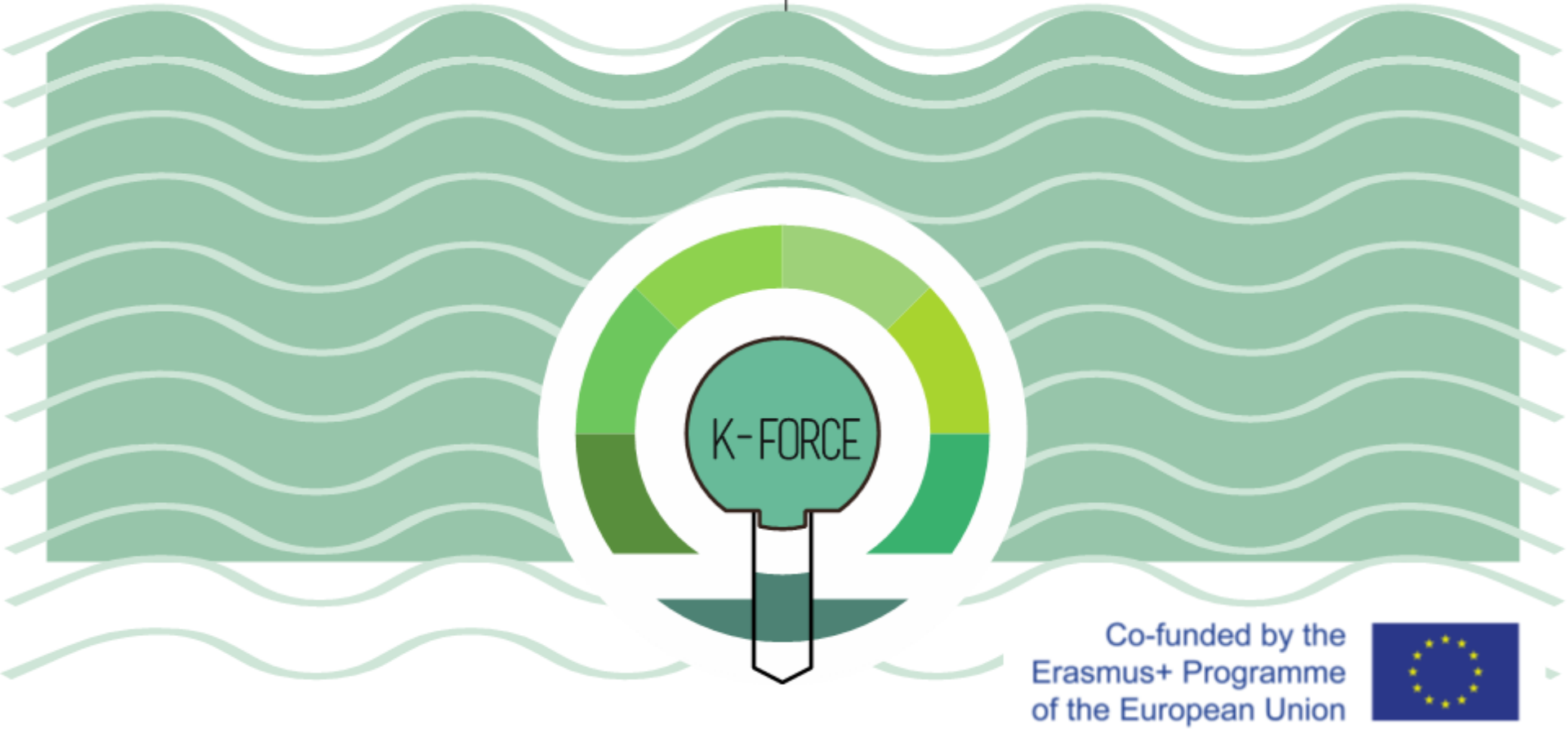

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Thank you
for your attention

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