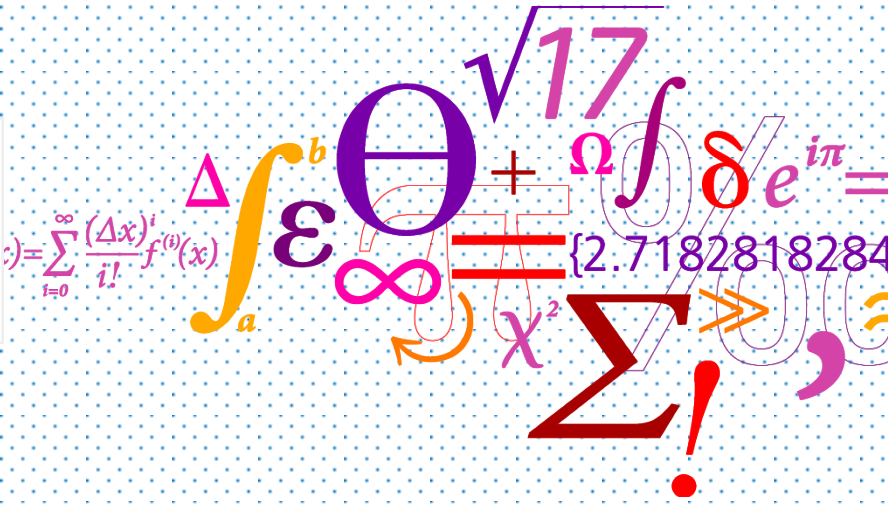
PhD project:
Geographical representations of renewable energy systems

PhD Student: Stefan Petrovic,
DTU Management Engineering
System Analysis Division
Energy System Analysis group

Supervisor: Kenneth Karlsson,
Senior Scientist, DTU
Management Engineering, head
of Energy System Analysis
group

Co-Supervisor: Bernd Möller,
Associate professor, Department
of Development and Planning,
Aalborg University

4th Generation District Heating Technologies and Systems



DTU Management Engineering
Department of Management Engineering

PhD research plan

- Two years gone, one more to go
- Model for heat savings in building stock
  - match current heat demand from different sources (Energy Statistics, SBi, measured consumption,…)
  - calculate potentials and costs of heat saving measures
  - include societal data (property values, migration, etc.); make bidirectional link it to GIS
- Ringkøbing-Skjern Energy Atlas
  - Write a report
  - Submit report and the database
- Load flow analysis
  - Locations where the grid should be expanded
  - Investment and operation costs
- Finalize two papers
  - Heat savings and district heating in the future Danish energy system
  - Residential heat pumps in the future Danish energy system

Results / potential results

- Results
  - Model for determining geographical distribution of heat saving potentials in Danish building stock
  - Danish heat atlas as a support tool for energy system models

- Potential results
  - Ringkøbing-Skjern Energy Atlas and associated documentation
  - Model for heat savings in building stock
  - Investments in electricity transmission grid
  - Role of heat savings, district heating and residential heat pumps in the future Danish energy system

Collaboration and abstract for the conference in 2015

- Collaborated with Ringkøbing-Skjern municipality on creating Energy Atlas

- Role of district heating and heat savings in the future Danish energy system
- Ringkøbing-Skjern Energy Atlas
  - Definition paper
  - Heat savings in Ringkøbing-Skjern
  - Future heat supply in Ringkøbing-Skjern

Thank you for your attention

- Questions and/or comments

Contact:
Stefan Petrovic, e-mail: stpet@dtu.dk
mobile: 2465 5732