Master thesis: Simulation software development

Thesis Description:
Simpow (SIMulation of POWer systems) is a power system simulation software owned by Solvina. It includes modules for: load flow calculation, fault analysis, dynamic simulations (RMS- and EMT-models), linear analysis, and much more. As the complexity of the power system increases, the demand on the simulation softwares used for power system studies also increases. Solvina is therefore offering a thesis within simulation software development. The aim of the thesis is to develop Simpow to make it ready for future power system studies. The thesis can include tasks such as:

- Structuring of source code
- Developing new tools and functions
- Benchmarking towards other softwares (PSS/E, PowerFactory, or similar)
- User interface development and design

For this thesis we are looking for one student with the following background:

- MSc student within electric power, computer engineering, programming, industrial design, or similar
- Special interest in the following areas is meriting:
  - Electric power systems
  - Programming (Fortran)
  - Numerical methods
  - Control theory
  - User interface design

Solvina’s offering:
An exciting thesis work performed in a highly competent environment with expert areas such as electric power engineering, process and control engineering, and engineering management. The thesis will be performed at our headquarters in Gothenburg. The exact scope will be decided together with the student to match with the student’s interest areas.

If you have any questions about the thesis, please contact Bengt Johansson at bengt.johansson@solvina.com or 031-709 63 66. Send your application to work@solvina.com and write "ex2023-004 – Simulation software development” as subject. Selection takes place continuously.