

## **Mathematics with Industry Day - MiMM®**

### Aims

- Train mathematicians to tackle scientifically modern technological and societal problems
- Solve relevant challenging real-world problems posed by industrial companies and societal actors
- Enhance the employability of mathematicians

### Beneficiaries

- Industrial companies, governmental institutions, societally-relevant stakeholders
- Researchers in applied mathematics and other natural sciences, curious high school pupils, undergraduate and graduate university students

### Call for industrial/societal problems

**"Mathematics with Industry Day"** (MiMM®) takes place for the 5th time in a row at Karlstad University (Sweden) on **Dec. 15, 2021**.

We are asking potentially interested companies / institutions to send in their problem suggestions; contact Prof. Adrian Muntean, [adrian.muntean@kau.se](mailto:adrian.muntean@kau.se) for details.

Teams of applied mathematicians ("young and old" cca. 8-10 persons/team) will be attacking with mathematical tools selected industrial questions during 1 day. The results are reported at the end of the day. For more details on the MiMM® concept, see <https://lnkd.in/eHXXd8V>.

The fee for the participating company/problem owner is 5000 SEK.

### Plan of action

The company/problem owner identifies a possible challenging issue of interest for the company, which must be solved or at least explored further using mathematics tools like: modeling, simulation, statistics, optimization, control.

A ½ page formulation will be published online to attract good "problem solvers" from Sweden and abroad to join us.

MiMM® looks preferably for unsolved industry-relevant questions – which means that the problem owner must think what (anonymized) data/pictures or further information can possibly be provided to assist us.

At the beginning of the day, the industrial/societal problems are presented in a plenary session (i.e. to all teams). The pre-formed teams work on the proposed challenges. The problem owners join the team assigned to own problem. At the end of the day, the presentation and evaluation of the results obtained by the teams takes place also plenary.

N.B. Typically 1 out of 3 problems is completely solved during the day, while the other 2 have follow-up discussions/internships/graduation theses etc. between us and the involved companies.