The aim of the international research group – established by the support of the EU and the National Development Agency (NFÜ), – is to perform basic research in the field of numerical mathematics; aimed at innovation that tends to develop fast simulations of complex physical and production systems. The application of these considerably reduces calculation time and is able to solve simulation tasks that cannot be solved with the programmes available at present. For that, suitable mathematical processes have been developed on the one hand, and the possibility of their running on modern, fast hardware (multiprocessing computers, graphic cards) has been established on the other hand. This is because the research group objective is to develop tools for industrial applications. All these tasks are performed by an international research team.

Research areas:

- theoretical and applied mathematics
- partial differential equations
- numerical methods
- global and discrete optimization
- scientific computing, HPC
- IT systems