Advanced process control designs to solve engineering problems:

- Enhancing process profitability
  - Control designs which compute economically-optimal control actions
  - Methods for developing physics-based process models for model-based control on-line

- Chemical process safety
  - Cybersecurity of chemical process control systems
  - Equipment material fidelity and control

Core research group expertise:
- Control design
- Nonlinear systems theory
- Optimization
- Chemical engineering
- Numerical simulation

Example computational fluid dynamics simulation from ANSYS Fluent