High Performance Motion Control of Mechatronic Systems

Table drive system is widely used in mechatronic systems
→ Improvement of positioning performance of the table drive system is needed for high quality manufacturing

Ball screw-driven table system

Problems to be solved:
- ○ Mechanical resonances
- ○ Nonlinear friction
- ○ Mechanical parameter changing

Study themes:
- ○ Fast and precision positioning based on sensor fusion
- ○ Autonomous controller design using Genetic Algorithms