

A portrait of Professor Christopher Onder, a middle-aged man with short grey hair and blue eyes, wearing a grey button-down shirt. He is standing in a server room with racks of equipment and colorful cables in the background. A dark teal horizontal bar is overlaid at the bottom of the image, containing his name and a quote.

Professor Christopher Onder

«We want our research to help companies better understand their control-oriented problems and to find optimized solutions based on the physical properties of the process.»

Engine Systems Laboratory

Institute for Dynamic Systems and Control

Based on first principles in physics, we bring a model-based approach to a wide range of environmental, commercial, social, and biomedical design challenges. Our primary objective is to combine scientific depth with relevant engineering applications. In close collaboration with our industrial partners, we aim to bridge the gap between theory and real-world problems.

Focus

- Control-oriented modeling
- Dynamic optimization
- Feedback control systems
- Engine systems
- Vehicle propulsion systems
- Test-benches

Tools and methods

Systems modeling, robust control, feed-forward, optimization, dynamic programming, energy management, model-based calibration, automatization

Further details online:

www.idsc.ethz.ch/research-guzzella-onder

