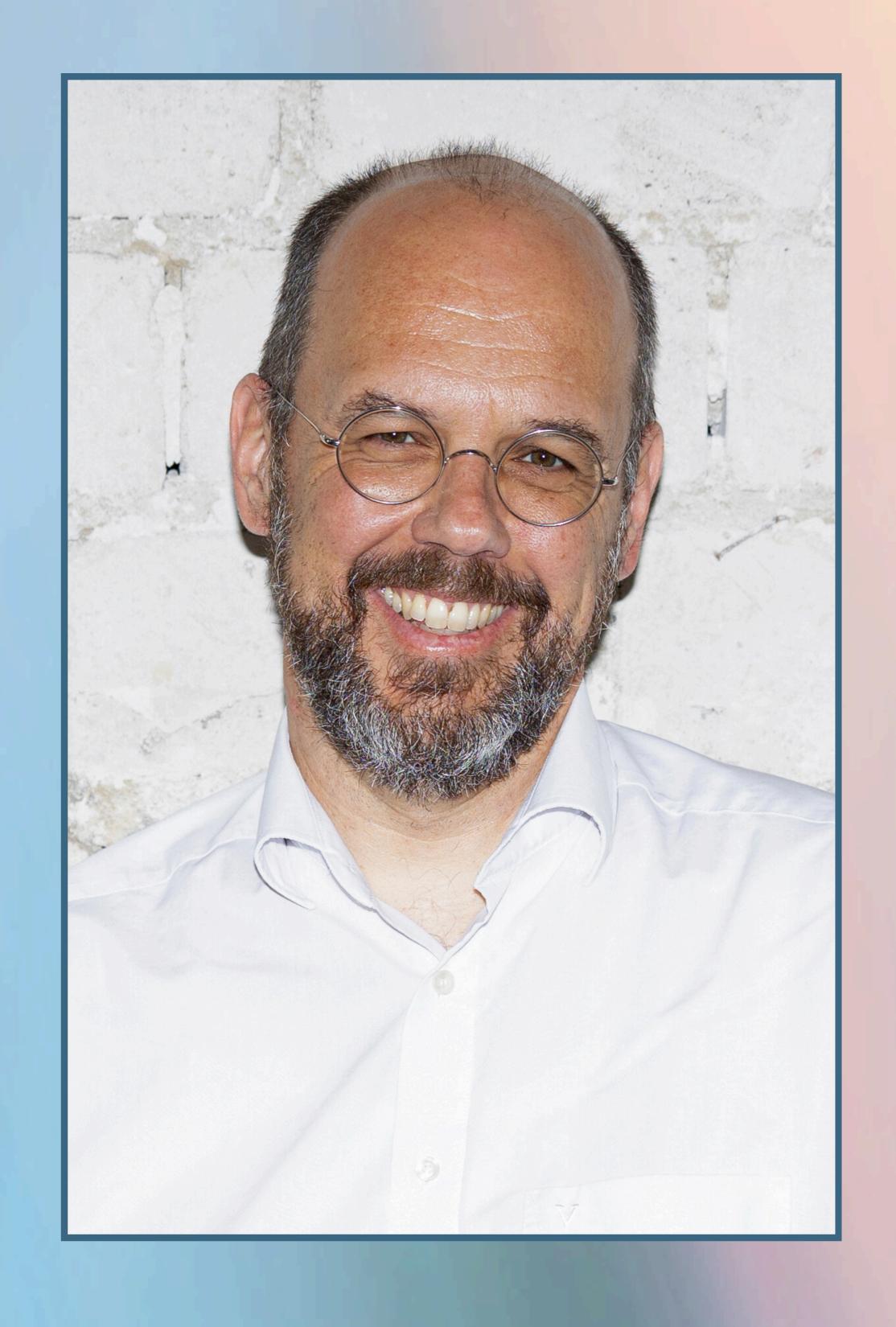


### FAU MoD Lecture Series



#### WHEN

Monday November 17, 2025 11:00H (Berlin time)

#### WHERE

On-site / Online

Friedrich-Alexander-Universität
Erlangen-Nürnberg (FAU). Room
H13 Johann-Radon-Hörsaal
Felix-Klein building
Cauerstraße 11, 91058
Erlangen. Bavaria, Germany

Live-streaming: https://www.fau.tv/clip/id/59621

# Quantum firmware: Optimal control for quantum processors

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#FAUMoDLecture

Representation of quantum optimal control is well known to improve the performance of quantum technology devices up to their limits in terms e.g. of system size and speed of operation. I will introduce our recent results with a variety of quantum technology platforms, focusing in particular on ultracold atoms, and introduce the software we developed for automatic calibration of quantum operations.

I will present optimization results for each of the building blocks of a quantum simulator: from evaporative cooling to lattice loading, from qubit transport to entanglement generation and to higher stack functionality such as neural-network assisted gate synthesis for quantum compilation.