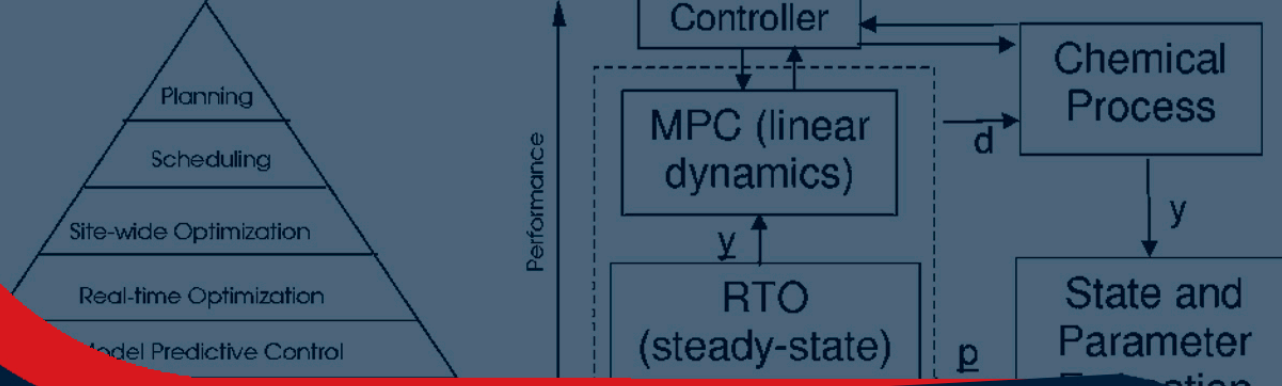

MINICURSO

02/08/2024

Local: USP (Cidade Universitária)

Dynamic Optimization: Off-line and On-line

Dias 8:30 às 12:00h

The course is divided into two parts:

Part I – DAE Optimization Strategies:

- Differential Algebraic Equations (DAEs) and Optimization
- Sequential Methods Based on ODE Solvers
- Optimal Control – Necessary Conditions and Strategies
- Collocation-based Methods
- Convergence of NLP formulations to Optimal Control Solutions
- Optimization of Polymer Reactor Grade Transition

Part II – Nonlinear MPC and D-RTO:

- Introduction to MPC and NMPC
- Nominal and Robust Stability Properties of NMPC
- Terminal and NLP properties for Stability
- Advanced Step NMPC (asNMPC)
- Moving Horizon Estimation, MHE and asMHE
- Economic NMPC
- Multistage Robust NMPC
- NMPC/D-RTO Case Studies

Palestrante: Lorenz T. Biegler

Participe!

PSE BR 2024

Acesse: sites.usp.br/psebr24