

# Workshop Deep Learning

What is Deep Learning and where in the (Chemical) Process Industry can it be applied?

- Date: Monday 02.03.2020
- → Where: G2 ZE15 Emil-Figge-Str. 70 TU Dortmund
- What: Talks and discussions in a relaxed atmosphere.
  Ideas, early and in-progress work is encouraged



Workshop • Application of AI in the Process Industry • Mon. 2020-03-02





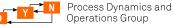
#### Process Dynamics and Operations Group

## Agenda 1/2 – Pre-Lunch

- 9:15 10:00• **Guest Fabian Bürger** • What is Deep Learning and its application to autonomous driving
- 10:00 10:30• **Matthias Rodeck** • Characterization of sprays by image recognition with neural networks
- 10:30 10:45
  - Coffee break
- 10:45 11:30• Janine Lins • Particle characterization during crystallization using CNNs
- 11:30 12:00• **Guest Corina Nentwich** • When data is expensive: Adaptive Sampling for the training of surrogate models
- 12:00 13:00 Lunch break







### Agenda 2/2 – After-Lunch

- 13:00 13:45
  Guest Fabian Bürger How to apply deep learning to other fields than image recognition
- 13:45 14:30
  Tim Janus Surrogate-assisted flowsheet optimization for steady state models
- 14:30 14:45 Coffee break
- 14:45 15:15
  Kai Kruber Optimize intensified distillation columns with machine learning methods
- 15:15 15:45
  Pourya Azadi Save energy in a furnace by the application of neural networks
- 15:45 16:00 Final discussion
- 18:30 open end Grab a beer in Dortmund City

Workshop • Application of AI in the Process Industry • Mon. 2020-03-02







Process Dynamics and Operations Group



#### www.tu-dortmund.de

Workshop • Application of AI in the Process Industry • Mon. 2020-03-02