Universiteit Leiden
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Model-assisted optimal control framework for industrial system coupling problems

Wei, X.

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Acronyms

MAO	Model-assisted optimization
ODE	Ordinary differential equations
PDE	Partial differential equations
DAE	Differential-algebraic equations
TBM	Tunnel boring machine
MDP	Markov decision process
POMDP	Partially observable Markov decision process
CNN	Convolutional neural networks
GRU	Gated recurrent unit
LSTM	Long short-term memory
RNN	Recurrent neural network
PCB	Printed circuit board
SMADT	Surrogate model-assisted digital twin
FEA	Finite element analysis
CFD	Computational fluid dynamics
GA	Genetic algorithms
PSO	Particle swarm optimization
BO	Bayesian optimization

CMA-ES	Covariance matrix adaptation evolution strategy
MPC	Model predictive control
Z-N	Ziegler-Nichols
PID	Proportional-integral-derivative