PHYSICS-INFORMED MACHINE LEARNING MODELING FOR MODEL PREDICTIVE CONTROL OF NONLINEAR PROCESSES: AN OVERVIEW OF RECENT RESULTS
Yingzhe Zheng and Zhe Wu
(Paper ID #6)

STATISTICAL MACHINE LEARNING IN MODEL PREDICTIVE CONTROL OF NONLINEAR PROCESSES: AN OVERVIEW OF RECENT RESULTS
Mohammed Alhajeri, Aisha Alnajdi, Zhe Wu and Panagiotis Christofides
(Paper ID #8)

A NOVEL STOCHASTIC OPTIMIZATION SOFTWARE FOR THE OPTIMAL DESIGN OF CHEMICAL PROCESSES MODELED IN COMMERCIAL SIMULATION SOFTWARE
Fanyi Duanmu, Dian Ning Chia and Eva Sorensen
(Paper ID #13)

MODEL PREDICTIVE CONTROL TUNING BY MONTE CARLO SIMULATION AND CONTROLLER MATCHING
Morten Ryberg Wahlgreen, John Bagterp Jørgensen and Mario Zanon
(Paper ID #15)

ASYMPTOTICALLY STABLE ECONOMIC NONLINEAR MODEL PREDICTIVE CONTROL WITHOUT PRE-CALCULATED STEADY-STATE OPTIMUM
Kuan-Han Lin and Lorenz Biegler
(Paper ID #20)

BAYESIAN OPTIMIZATION FOR AUTOMATIC TUNING OF MODEL PREDICTIVE CONTROLLERS
Leonardo Gonzalez and Victor Zavala
(Paper ID #27)

ONLINE MACHINE LEARNING MODELING AND PREDICTIVE CONTROL OF SWITCHED NONLINEAR SYSTEMS: AN OVERVIEW OF RECENT RESULTS
Cheng Hu and Zhe Wu
(Paper ID #30)
A REAL-TIME BASED APPROACH TO DISTILLATION CONTROL EDUCATION
Isuru A. Udagama, Michael A. Taube and Brent R. Young
(Paper ID #36)

DATA-ENABLED EXPERIMENTAL DEVELOPMENT OF POLYMER-BASED ORGANIC ELECTRONICS
Aaron Liu, Rahul Venkatesh, Carson Meredith, Elsa Reichmanis and Martha Grover
(Paper ID #39)

DIGITALIZATION AND CONTROL OF AN EXPERIMENTAL ELECTROCHEMICAL REACTOR
Junwei Luo, Berkay Çıtmacı, Joon Baek Jang, Carlos Morales-Guiio and Panagiotis Christofides
(Paper ID #40)

CHARACTERIZING THE PARETO OPTIMAL TRADE-OFF BETWEEN MODEL-BASED INFORMATION CONTENT AND MEASUREMENTS COST
Jialu Wang and Alexander Dowling
(Paper ID #46)

OPTIMIZING MEMBRANE CHARACTERIZATION USING THE DATA (DIAFILTRATION APPARATUS FOR HIGH-THROUGHPUT ANALYSIS) FRAMEWORK
Xinhong Liu, Jonathan Ouimet, Laurianne Lair, William Phillip and Alexander Dowling
(Paper ID #47)

DECISION MAKING WITH HYBRID MODELS UNDER PARAMETER AND EPISTEMIC UNCERTAINTY: REACTOR OPTIMIZATION CASE STUDY
Kyla Jones, Elvis Eugene and Alexander Dowling
(Paper ID #51)

PLANT WIDE STEADY STATE OPTIMIZATION USING REINFORCEMENT LEARNING
Kalpesh Patel and Gabriel Winter
(Paper ID #53)

EXTENSION OF SIGN-PERTURBED SUMS METHOD TO MULTIVARIATE SYSTEMS
Masanori Oshima, Sanghong Kim, Yuri Shardt and Ken-Ichiro Sotowa
(Paper ID #58)

TRACKING CHEMICAL ADDITIVE RELEASES IN THE PLASTICS END-OF-LIFE MANAGEMENT STAGE TO CLOSE THE LOOP
John D. Chea, Matthew Conway, Austin L. Lehr, Gerardo J. Ruiz-Mercado and Kirti M. Yenkie
(Paper ID #64)
ADVANCED MPC FOR LARGE SCALE DYNAMIC SYSTEMS BASED ON MODEL REDUCTION TECHNIQUE AND FEEDFORWARD ARTIFICIAL NEURAL NETWORK
Weiguo Xie
(Paper ID #69)

APPROXIMATION OF NONLINEAR MODEL PREDICTIVE CONTROL USING MIXTURE DENSITY NETWORKS
Morimasa Okamoto, Jiayang Ren, Qiangqiang Mao and Yankai Cao
(Paper ID #73)

INTERPRETABLE QSAR MODEL FOR HEALTH RISK ASSESSMENT OF HAZARDOUS CHEMICAL BASED ON STRUCTURE-TO-TOXICITY TRANSFORMER
SangYoun Kim, Shahzeb Tariq, SungKu Heo, ChanHyeok Jeong, MinHyeok Shin, TaeYong Woo and ChangKyoo Yoo
(Paper ID #75)

BIDIRECTIONAL INVENTORY CONTROL WITH OPTIMAL USE OF INTERMEDIATE STORAGE AND MINIMUM FLOW CONSTRAINTS
Lucas Ferreira Bernardino and Sigurd Skogestad
(Paper ID #83)

EVALUATING SOLUTION PERFORMANCE UNDER UNCERTAINTY IN SUPERSTRUCTURE OPTIMIZATION
Julia Granacher, Rafael Castro-Amoedo, Ivan Daniel Kantor and François Maréchal
(Paper ID #96)

MIXED-INTEGER QUADRATIC OPTIMIZATION USING QUANTUM COMPUTING FOR PROCESS APPLICATIONS
Ashfaq Iftakher, Monzure-Khoda Kazi and M. M. Faruque Hasan
(Paper ID #98)

RECONFIGURATION IN THE MODEL PREDICTIVE CONTROL OF NUMBERED-UP MODULAR FACILITIES
Yi Dai and Andrew Allman
(Paper ID #99)

A PREDICTIVE MODEL FOR IN-SITU MONITORING OF MOLECULAR WEIGHT OF COPOLYMERS USING SPECTROSCOPIC METHODS
Tung Nguyen, Ahmad Shamsabadi and Mona Bavarian
(Paper ID #104)
MODEL-BASED CONTROL ALGORITHMS FOR THE QUADRUPLE TANK SYSTEM: AN EXPERIMENTAL COMPARISON
Anders H. D. Andersen, Tobias K. S. Ritschel, Steen Hørsholt, Jakob Kjøbsted Huusom and John Bagterp Jørgensen
(Paper ID #105)

STATE ESTIMATION FOR CONTINUOUS-DISCRETE-TIME NONLINEAR STOCHASTIC SYSTEMS
Marcus Krogh Nielsen, Tobias K.S. Ritschel, Ib Christensen, Jess Dragheim, Jakob Kjøbsted Huusom, Krist V. Gernaye and John Bagterp Jørgensen
(Paper ID #106)

PROGRESSIVE RELAXATIONS FOR EFFICIENT DETERMINATION OF CONSERVATIVE DESIGN SPACES
Daniel Laky, Michael Bynum, Shankar Vaidyaraman, Salvador García Muñoz and Carl Laird
(Paper ID #108)

A PARTIAL MULTIPARAMETRIC PROGRAMMING METHOD FOR MODEL PREDICTIVE CONTROL
Dustin Kenefake, Sahithi Akundi and Efstratios Pistikopoulos
(Paper ID #109)