Overnight glucose control in people with type 1 diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2018

Evaluation of pharmacokinetic model designs for subcutaneous infusion of insulin aspart
Publication: Research - peer-review › Journal article – Annual report year: 2017

Adaptive control in an artificial pancreas for people with type 1 diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2016

Adaptive Unscented Kalman Filter using Maximum Likelihood Estimation
Publication: Research - peer-review › Conference article – Annual report year: 2017

Adiabatic continuous stirred tank reactor
Publication: Research - peer-review › Report – Annual report year: 2017

A high-performance Riccati based solver for tree-structured quadratic programs
Publication: Research - peer-review › Conference article – Annual report year: 2017

A least squares approach for efficient and reliable short-term versus long-term optimization
Christiansen, L. H., Capolei, A. & Jørgensen, J. B. 2017 In : Computational Geosciences. 21, 3, p. 411-26
Publication: Research - peer-review › Journal article – Annual report year: 2017

An Adaptive Nonlinear Basal-Bolus Calculator for Patients With Type 1 Diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2016

An algorithm for gradient-based dynamic optimization of UV flash processes
Publication: Research - peer-review › Journal article – Annual report year: 2017
An efficient and rigorous thermodynamic library and optimal-control of a cryogenic air separation unit
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

An experimentally validated simulation model for a four-stage spray dryer
Publication: Research - peer-review › Journal article – Annual report year: 2017

A Novel Approach for Risk Minimization in Life-Cycle Oil Production Optimization
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

A Riccati-Based Interior Point Method for Efficient Model Predictive Control of SISO Systems
Publication: Research - peer-review › Conference article – Annual report year: 2017

A Thermodynamic Library for Simulation and Optimization of Dynamic Processes
Publication: Research - peer-review › Conference article – Annual report year: 2017

C code generation applied to nonlinear model predictive control for an artificial pancreas
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Comparison of three control strategies for optimization of spray dryer operation
Publication: Research - peer-review › Journal article – Annual report year: 2017

Computation of Phase Equilibrium and Phase Envelopes
Publication: Research - peer-review › Report – Annual report year: 2017

Cross-Validation of a Glucose-Insulin-Glucagon Pharmacodynamics Model for Simulation using Data from Patients with Type 1 Diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2017

Design, economics and parameter uncertainty in dynamic operation of post-combustion CO2 capture using piperazine (PZ) and MEA
Publication: Research - peer-review › Conference article – Annual report year: 2016

Dynamic Optimization of UV Flash Processes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017
Simulating clinical studies of the glucoregulatory system: *in vivo meets in silico*
Publication: Research › Report – Annual report year: 2017

The Adjoint Method for Gradient-based Dynamic Optimization of UV Flash Processes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Validation of a Simulation Model Describing the Glucose-Insulin-Glucagon Pharmacodynamics in Patients with Type 1 Diabetes
Publication: Research › Poster – Annual report year: 2017

A Hierarchical Algorithm for Integrated Scheduling and Control With Applications to Power Systems
Publication: Research - peer-review › Journal article – Annual report year: 2017

Algorithms and Methods for High-Performance Model Predictive Control
Publication: Research › Ph.D. thesis – Annual report year: 2016

An Efficient Implementation of Partial Condensing for Nonlinear Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

An Efficient UD-Based Algorithm for the Computation of Maximum Likelihood Sensitivity of Continuous-Discrete Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

An Ensemble Nonlinear Model Predictive Control Algorithm In an Artificial Pancreas for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

An open-source thermodynamic software library
Publication: Research › Report – Annual report year: 2016

Application of Economic MPC to Frequency Control in a Single-Area
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Application of the Continuous-Discrete Extended Kalman Filter for Fault Detection in Continuous Glucose Monitors for Type 1 Diabetes
Control of a post-combustion CO\textsubscript{2} capture plant during process start-up and load variations
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Control of a post-combustion CO\textsubscript{2} capture plant during process start-up and load variations
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Control of Electricity Load in Future Smart Cities
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Control of Electricity Loads in Future Electric Energy Systems
Publication: Research - peer-review › Book chapter – Annual report year: 2015

Economic Model Predictive Control for Large-Scale and Distributed Energy Systems
Publication: Research › Ph.D. thesis – Annual report year: 2015

Economic Optimization of Spray Dryer Operation using Nonlinear Model Predictive Control with State Estimation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Efficient solvers for soft-constrained MPC
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

High-Performance Small-Scale Solvers for Moving Horizon Estimation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Modeling and Simulation of a Modified Quadruple Tank System
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Model predictive control for wind power gradients
Publication: Research - peer-review › Journal article – Annual report year: 2014

MPC Related Computational Capabilities of ARMv7A Processors
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015
A Reduced Dantzig-Wolfe Decomposition for a Suboptimal Linear MPC
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Assessment of Model Predictive and Adaptive Glucose Control Strategies for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

A tuning approach for offset-free MPC with conditional reference adaptation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

A Tuning Approach for Oset-free MPC with Conditional Reference Adaptation.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Bihormonal model predictive control of blood glucose in people with type 1 diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Conditional Reference Adaptation for Offset-free MPC
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Economic Optimization of Spray Dryer Operation using Nonlinear Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Efficient Implementation of Solvers for Linear Model Predictive Control on Embedded Devices
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

High-performance small-scale solvers for linear Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Input-constrained model predictive control via the alternating direction method of multipliers
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Interior Point Methods on GPU with application to Model Predictive Control
(DTU Compute PHD-2014; No. 338).
Publication: Research › Ph.D. thesis – Annual report year: 2014
Model Predictive Control for Smart Energy Systems
Publication: Research › Ph.D. thesis – Annual report year: 2014

Predicting Plasma Glucose From Interstitial Glucose Observations Using Bayesian Methods
Publication: Research - peer-review › Journal article – Annual report year: 2014

Real-time economic optimization for a fermentation process using Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Dantzig-Wolfe Decomposition Algorithm for Economic MPC of Distributed Energy Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Decomposition Algorithm for Optimal Control of Distributed Energy System
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Fast Condensing Method for Solution of Linear-Quadratic Control Problems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Grey-Box Model for Spray Drying Plants
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Riccati Based Homogeneous and Self-Dual Interior-Point Method for Linear Economic Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Tuning Procedure for ARX-based MPC
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Tuning Procedure for ARX-based MPC of Multivariate Processes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

A Warm-Started Homogeneous and Self-Dual Interior-Point Method for Linear Economic Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013
Power Management for Energy Systems
Publication: Research › Ph.D. thesis – Annual report year: 2013

Practical Implementations of Advanced Process Control for Linear Systems
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

The Homogeneous Interior-Point Algorithm: Nonsymmetric Cones, Warmstarting, and Applications
Publication: Research › Ph.D. thesis – Annual report year: 2014

The Potential of Economic Model Predictive Control for Spray Drying Plants
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Thermal Storage Power Balancing with Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Waterflooding optimization in uncertain geological scenarios
Publication: Research - peer-review › Journal article – Annual report year: 2013

A Dantzig-Wolfe Decomposition Algorithm for Linear Economic MPC of a Power Plant Portfolio
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Computational Methods for Model Predictive Control: New Opportunities for Computational Scientists
Publication: Research › Sound/Visual production (digital) – Annual report year: 2012
Control of Blood Glucose for People with Type 1 Diabetes: an In Vivo Study
Publication: Research › peer-review › Article in proceedings – Annual report year: 2012

Control of Blood Glucose for People with Type 1 Diabetes: an In Vivo Study
Publication: Research › Sound/Visual production (digital) – Annual report year: 2012

Economic Model Predictive Control for Building Climate Control in a Smart Grid
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Effects of Everyday Life Events on Glucose, Insulin, and Glucagon Dynamics in Continuous Subcutaneous Insulin Infusion–Treated Type 1 Diabetes: Collection of Clinical Data for Glucose Modeling
Publication: Research - peer-review › Journal article – Annual report year: 2012

Electric vehicle charge planning using Economic Model Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Fast Nonconvex Model Predictive Control for Commercial Refrigeration
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

High Order Adjoint Derivatives using ESDIRK Methods for Oil Reservoir Production Optimization
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Iterative Methods for MPC on Graphical Processing Units
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Modeling Smart Energy Systems for Model Predictive Control
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Model Predictive Control Algorithms for Pen and Pump Insulin Administration
Publication: Research › Ph.D. thesis – Annual report year: 2013

Model Predictive Control for an Industrial SAG Mill
Model predictive control for a smart solar tank based on weather and consumption forecasts
Publication: Research - peer-review › Conference article – Annual report year: 2012

Model predictive control technologies for efficient and flexible power consumption in refrigeration systems
Publication: Research - peer-review › Journal article – Annual report year: 2012

MPC Toolbox with GPU Accelerated Optimization Algorithms
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Numerical Methods for Solution of the Extended Linear Quadratic Control Problem
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Oil Reservoir Production Optimization using Single Shooting and ESDIRK Methods
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Optimal Energy Consumption in Refrigeration Systems - Modelling and Non-Convex Optimisation
Publication: Research - peer-review › Journal article – Annual report year: 2012

Optimisation of Oil Production in Two – Phase Flow Reservoir Using Simultaneous Method and Interior Point Optimiser
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Optimization based tuning approach for offset free MPC
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Overnight Control of Blood Glucose in People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Proceedings of the 17th Nordic Process Control Workshop
Publication: Research - peer-review › Book – Annual report year: 2012

Production Optimization for Two-Phase Flow in an Oil Reservoir
Real-Time Optimization for Economic Model Predictive Control

Sequential Convex Programming for Power Set-point Optimization in a Wind Farm using Black-box Models, Simple Turbine Interactions, and Integer Variables

Simulation, Control and Optimization of Single Cell Protein Production in a U-Loop Reactor

Simulation, Control and Optimization of Single Cell Protein Production in a U-Loop Reactor

State Estimation for the Automotive SCR Process

State Estimation in the Automotive SCR DeNOx Process

State Estimation in the Automotive SCR DeNOx Process

Stochastic Model Predictive Control with Applications in Smart Energy Systems

Tuning of Controller for Type 1 Diabetes Treatment with Stochastic Differential Equations
Tuning SISO offset-free Model Predictive Control based on ARX models

Adaptive Disturbance Estimation for Offset-Free SISO Model Predictive Control

Closed-Loop and Semi Closed-Loop Strategies for Control of Blood Glucose in People with Type 1 Diabetes

Economic MPC for Power Management in the Smart Grid

Energy Efficient Refrigeration and Flexible Power Consumption in a Smart Grid

Exploiting Microorganisms for Animal Feed Production
Jørgensen, J. B. 2011

Finite Horizon MPC for Systems in Innovation Form

Flexible and Cost Efficient Power Consumption using Economic MPC: A Supermarket Refrigeration Benchmark

Hierarchical model-based predictive control of a power plant portfolio
Edlund, K., Bendtsen, J. D. & Jørgensen, J. B. 2011 In : Control Engineering Practice. 19, 10, p. 1126-1136

Insulin Administration for People with Type 1 diabetes

Model predictive control for plant-wide control of a reactor-separation-recycle system
Bialas, D. J., Huusom, J. K., Jørgensen, J. B. & Sin, G. 2011
NMPC for Oil Reservoir Production Optimization
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Noise Modelling and MPC Tuning for Systems with Infrequent Step Disturbances
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Noise Modelling and MPC Tuning for Systems with Infrequent Step Disturbances
Huusom, J. K., Poulsen, N. K., Jørgensen, S. B. & Jørgensen, J. B. 2011
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2011

Oil Reservoir Production Optimization using Optimal Control
Publication: Research - peer-review › Conference article – Annual report year: 2011

On Implementing a Homogeneous Interior-Point Algorithm for Nonsymmetric Conic Optimization
Publication: Research › Report – Annual report year: 2011

Power Consumption in Refrigeration Systems - Modeling for Optimization
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Production Optimization of Oil Reservoirs
Publication: Research › Ph.D. thesis – Annual report year: 2012

Robust Economic MPC for a Power Management Scenario with Uncertainties
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Strategies for glucose control in people with type 1 diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Systematic identification and robust control design for uncertain time delay processes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Systematic Identification and robust control design for uncertain time delay processes
Huusom, J. K., Poulsen, N. K., Jørgensen, S. B. & Jørgensen, J. B. 2011
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2011

Towards benchmarking of multivariable controllers in chemical/biochemical industries: Plantwide control for ethylene glycol production
A Dantzig-Wolfe MPC Algorithm for Power Plant Portfolio Control
Publication: Research - peer-review › Journal article – Annual report year: 2011

Adaptive Step Size Control in Implicit Runge-Kutta Methods for Reservoir Simulation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Application of Soft Constrained MPC to a Cement Mill Circuit
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

ARX-based Model Predictive Control of Systems with Time Delays
Huusom, J. K., Poulsen, N. K., Jørgensen, S. B. & Jørgensen, J. B. 2010
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

ARX-Model based Model Predictive Control with Offset-Free Tracking
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

ARX-Model based Model Predictive Control with Offset-Free Tracking
Huusom, J. K., Poulsen, N. K., Jørgensen, S. B. & Jørgensen, J. B. 2010
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

ARX MPC for people with type 1 diabetes
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2010

DISTRIBUTED ELECTRICAL POWER PRODUCTION SYSTEM AND METHOD OF CONTROL THEREOF
Børresen, S., Edlund, K., Hilger, K. B., Jørgensen, J. B., Mølbak, T. & Mortensen, J. H. 2010
Publication: Research › Patent – Annual report year: 2010

Explicit Singly Diagonally Implicit Runge-Kutta Methods and Adaptive Stepsize Control for Reservoir Simulation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Implications and Limitations of Ideal Insulin Administration for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Meal Estimation in Nonlinear Model Predictive Control for Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Modeling and Simulation of Single Cell Protein Production
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010
Convex Optimization for System Identification and Control
Jørgensen, J. B. 2009 14th Belgian-French-German Conference on Optimization.
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2009

DiaCon: an interdisciplinary approach to diabetes control
Publication: Research - peer-review › Poster – Annual report year: 2009

Efficient Computational Methods for Model Predictive Control
Jørgensen, J. B. 2009
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Glucose modeling and prediction using physical activity variables
Publication: Research - peer-review › Poster – Annual report year: 2009

Improvements to least-squares model identification: an application to diabetes modeling
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Modelling, Simulation and Optimization of Single-Cell Protein Production in a U-Loop Reactor
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Moving Horizon Estimation based on Finite Impulse Response Models
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Simulation of Subsurface Two-Phase Flow in an Oil Reservoir
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Simulation of Two-Phase Flow in an Oil Reservoir using Adaptive High-Order Runge-Kutta based Time-Integration
Völcker, C., Jørgensen, J. B., Thomsen, P. G. & Stenby, E. H. 2009
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2009

Soft Constraints for Robust MPC of Uncertain Systems
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2009

A Dynamic Model for a Cupola Furnace
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2008

A Generalized Autocovariance Least-Squares Method for Kalman Filter Tuning
Publication: Research - peer-review › Journal article – Annual report year: 2008

A Runge-Kutta Based Software Package for Nonlinear Model Predictive Control
Jørgensen, J. B. 2008 International Workshop on Assessment and Future Directions of NMPC.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008
DIACON. Control Algorithms for Semi- and Fully-Automated Pen and Pump Insulin Administration
Jørgensen, J. B. 2008
Publication: Research › Sound/Visual production (digital) – Annual report year: 2008

Model Predictive Control based on Finite Impulse Response Models
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Model Predictive Control for Uncertain Systems
Muralidharan, G. & Jørgensen, J. B. 2008
Publication: Research › Sound/Visual production (digital) – Annual report year: 2008

Model Predictive Control for Uncertain Systems
Muralidharan, G. & Jørgensen, J. B. 2008
Publication: Research › Sound/Visual production (digital) – Annual report year: 2008

Moving Horizon Control and Estimation of Livestock Ventilation Systems and Indoor Climate
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Prevent Refrigerated Foodstuff in the Supermarket from Discard
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Software for Large-Scale Nonlinear Model Predictive Control
Jørgensen, J. B. 2008
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2008

Unreachable Setpoints in Model Predictive Control
Publication: Research - peer-review › Journal article – Annual report year: 2008

A Computational Efficient and Robust Implementation of the Continuous-Discrete Extended Kalman Filter
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

A Computationally Efficient and Robust Implementation of the Continuous-Discrete Extended Kalman Filter
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

A Critical Discussion of the Continuous-Discrete Extended Kalman Filter
Jørgensen, J. B. 2007
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Adjoint Sensitivity Results for Predictive Control, State- and Parameter-Estimation with Nonlinear Models
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

A Dynamic Model for in vivo Glucose-Insulin Metabolism
Hrafnkelsson, V. & Jørgensen, J. B. 2007
A Generalized Autocovariance Least-Squares Method for Covariance Estimation

An ESDIRK Software Package for DAE Systems
Jørgensen, J. B., Kristensen, M. R. & Thomsen, P. G. 2007

A Numerically Robust ESDIRK-Based Implementation of the Continuous-Discrete Extended Kalman Filter

A Tool for Kalman Filter Tuning

A Tool for Kalman Filter Tuning

Comparison of Prediction-Error Modeling Criteria

Comparison of Prediction-Error-Modelling Criteria

Continuous-Discrete Time Prediction-Error Identification Relevant for Linear Model Predictive Control

Continuous-Discrete Time Prediction-Error Modelling Relevant for Linear Model Predictive Control

Estimation of noise covariances and indentification of disturbance structure using the autocovariance least-squares method

Estimation of noise covariances and indentification of disturbance structure using the autocovariance least-squares method

Experimental Design for Input/Output Constrained Closed-Loop Systems
Improving Model Predictive Control Performance Using Disturbance Estimation
Publication: Research › Sound/Visual production (digital) – Annual report year: 2007

Improving Model Predictive Control Performance using Disturbance Estimation and Systematic Kalman Filter Tuning
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Improving Model Predictive Control Performance Using Systematic Kalman Filter Tuning
Publication: Research › Sound/Visual production (digital) – Annual report year: 2007

Keeping Experiments in Control with Interval Methods
Publication: Research - peer-review › Journal article – Annual report year: 2007

MPC-Relevant Prediction-Error Identification
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

New Extended Kalman Filter Algorithms for Stochastic Differential Algebraic Equations
Publication: Research - peer-review › Book chapter – Annual report year: 2007

Nonlinear Model Predictive Control Start-Up of a Plate Reactor
Haugwitz, S., Jørgensen, J. B. & Hagander, P. 2007
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Numerical Methods for Model Predictive Control
Jørgensen, J. B. 2007
Publication: Research › Sound/Visual production (digital) – Annual report year: 2007

Sensitivity Computation for Dynamic Optimization
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2007

A Continuous-Discrete Extended Kalman Filter Algorithm for Prediction-Error-Modelling
Jørgensen, J. B., Kristensen, M. R., Thomsen, P. G. & Madsen, H. 2006
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2006

A Family of ESDIRK Solvers for DAE Systems
Kristensen, M. R., Jørgensen, J. B. & Thomsen, P. G. 2006
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2006

A Generalized Autocovariance Least-Squares Method for Kalman Filter Tuning
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

Continuous-Time Prediction-Error Identification for MPC
Jørgensen, J. B. 2006
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2006
Development of Systematic Tuning Procedures for Extended Kalman Filtering
Publication: Research › Conference abstract for conference – Annual report year: 2006

Dynamic Optimization and Predictive Control
Jørgensen, J. B. 2006
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

Dynamic Optimization Based on Adjoint Sensitivity Computation
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2006

Implementation Issues for High-Level Control
Jørgensen, J. B. & Recke, B. 2006
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

Model Predictive Control - Why, Where, and How?
Jørgensen, J. B. 2006
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

Numerical Methods for Model Predictive Control
Jørgensen, J. B. 2006
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

Planned Work in CMBC on Extended Kalman Filtering
Publication: Research › Article in proceedings – Annual report year: 2006

Planned Work in CMBC on Extended Kalman Filtering
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

Start-Up Predictive Control and Estimation. A Numerical Approach
Jørgensen, J. B. 2006
Publication: Research › Sound/Visual production (digital) – Annual report year: 2006

A procedure for guaranteed in Control experimental design
Bonné, D., Jørgensen, J. B. & Jørgensen, S. B. 2005
Publication: Research - peer-review › Report – Annual report year: 2005

Efficient Filtering and Prediction in Stochastic Differential Equations
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Modeling for Predictive Control of Cement Grinding Circuits
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Modelling of Cement Grinding Circuits for Predictive Control
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005
Towards Automatic Decentralized Control Structure Selection
Publication: Research › Article in proceedings – Annual report year: 2001

Towards Automatic Decentralized Control Structure Selection
Publication: Research › Sound/Visual production (digital) – Annual report year: 2001

Automatic Selection of Decentralized Control Structures
Publication: Research › Article in proceedings – Annual report year: 2000

Towards Automatic Decentralized Control Structure Selection
Publication: Research - peer-review › Journal article – Annual report year: 2000

Model Predictive Control Design for an Alternating Nutrient Removal Process
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 1998

Model Predictive Control of a Flow Swing Reactor
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 1998

Operational Implications of Optimality
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 1998

Operational Implications of Optimality
Publication: Research - peer-review › Article in proceedings – Annual report year: 1998

An Output Multiplicity in Binary Distillation: Experimental Verification
Publication: Research - peer-review › Journal article – Annual report year: 1996

Projects:

Stochastic Dynamic Optimization and Control Theory
Brok, N. L., Madsen, H., Jørgensen, J. B. & Poulsen, N. K.
01/09/2017 → 31/08/2020
Project: PhD

Learning-based Model Predictive Control of Spray Dryers
Miklos, R., Niemann, H. H., Jørgensen, J. B., Petersen, L. N., Poulsen, N. K. & Utzen, C.
01/01/2017 → 31/12/2019
Project: PhD

SDE-modelling in CITIES
15/07/2016 → 13/11/2019
SDE-modelling in CITIES
15/07/2016 → 13/11/2019
Project: PhD

Simulation and Optimization of Oil Reservoirs in the Danish North Sea
Hørsholt, S., Jørgensen, J. B., Capolei, A. & Nick, H.
01/12/2015 → 30/11/2018
Project: PhD

Optimal Control of PDE-Constrained Systems
Christiansen, L. H., Jørgensen, J. B., Engsig-Karup, A. P. & Pedersen, M.
15/09/2015 → 25/01/2019
Project: PhD

Nonlinear Model Predictive Control for Oil Reservoirs
Ritschel, T. K. S., Jørgensen, J. B., Capolei, A. & Poulsen, N. K.
15/08/2015 → 14/08/2018
Project: PhD

Model Predictive Control based on Stochastic Differential Equations - An Artificial Pancreas with Fast Insulin, Glucagon and Multiple Sensors
Hagdrup, M., Jørgensen, J. B., Madsen, H., Poulsen, B. & Poulsen, N. K.
01/09/2014 → 28/02/2018
Project: PhD

Modeling of Pharmacokinetics and Pharmacodynamics of Novel Glucagon Analogues for Closed-Loop Dual Hormone Blood Glucose Control
15/03/2014 → 16/08/2017
Project: PhD

Center for IT-Intelligent Energy Systems for Cities
01/01/2014 → 31/12/2019
Project

Model Predictive Control for Commercial Refrigeration in the Smart Grid
Mohd. Azam, S. N., Jørgensen, J. B. & Izadi-Zamanabadi, R.
15/11/2013 → 14/08/2017
Project: PhD

Generic interface development and benchmarking of carbon dioxide reduction processes
01/12/2012 → 20/09/2016
Project: PhD

Economic Model Predictive Control for Spray Drying Plants
01/10/2012 → 22/06/2016
Project: PhD

Optimization Algorithms for Experimental Design, Parameter Estimation, and Control of Dynamic Systems
Frison, G., Jørgensen, J. B., Poulsen, N. K., Engsig-Karup, A. P., Axehill, D. & Ferreau, H. J.
Stochastic Model Predictive Control with Applications in Smart Energy Systems  
01/07/2012 → 31/03/2016  
Project: PhD

Stochastic Differential Equations in PK/PD Modelling  
Juhl, R., Madsen, H. & Jørgensen, J. B.  
15/01/2012 → 16/07/2015  
Project: PhD

Economic MPC for Large and Distributed Energy Systems  
01/11/2011 → 04/03/2015  
Project: PhD

Protein structure refinement by optimization  
Carlsen, M., Røgen, P., Stolpe, M., Jørgensen, J. B., Hamelryck, T. & Keasar, C.  
01/08/2011 → 30/09/2015  
Project: PhD

Scientific GPU Computing for Dynamical Optimization  
15/11/2010 → 25/09/2014  
Project: PhD

Model Predictive Control for Smart Energy Systems  
Halvgaard, R. F., Jørgensen, J. B., Madsen, H., Poulsen, N. K., Bindner, H. W., Chmielewski, D. J. & Jones, C. N.  
01/11/2010 → 25/04/2014  
Project: PhD

Incremental refinement of process design  
Quaglia, A., Sin, G., Gani, R., Sarup, B., Jørgensen, J. B., Bode, A. & Pistikopoulos, E. N.  
01/06/2010 → 30/09/2013  
Project: PhD

Numerical Methods for Reservoir Simulation and Optimization  
Capolei, A., Jørgensen, J. B., Poulsen, N. K., Jansen, J. D. & Knudsen, J. K. H.  
01/05/2010 → 25/04/2014  
Project: PhD

Power Management for Refrigeration Systems  
01/04/2010 → 24/09/2013  
Project: PhD

Large-Scale Algorithms for Non-Smooth Convexs Optimization  
01/02/2010 → 22/11/2013  
Project: PhD

Model Predictive Control algorithms for pen and pump insulin administration  
Boiroux, D., Jørgensen, J. B., Madsen, H., Poulsen, N. K., Sørensen, M. P., Knudsen, J. K. H. & del Re, L.  
01/09/2009 → 22/11/2012  
Project: PhD
Concurrent Aero-Servo-Elastic analysis and Design of wind turbines
Mirzaei, M., Poulsen, N. K., Niemann, H. H., Jørgensen, J. B., Bottasso, C. L. & Stoustrup, J.
15/08/2009 → 07/03/2013
Project: PhD

Control of Process Operations and Monitoring of Product Qualitites through Hybrid Multi-Scale Model-Based Analysis
01/01/2009 → 21/11/2012
Project: PhD

Numerical Methods for Simulation and Optimization of Enhanced Oil Recovery Methods
Völcker, C., Jørgensen, J. B., Thomsen, P. G., Engsig-Karup, A. P., Foss, B. A. & Kristensen, M. R.
01/01/2008 → 24/08/2012
Project: PhD

In Silico Models of Blood Coagulation
Andersen, N. M., Sørensen, M. P., Ingwersen, S. H., Olsen, O. H., Jørgensen, J. B., Monroe, D. M. & Sosnovtseva, O.
01/08/2007 → 20/04/2011
Project: PhD

Model-based predictive control of wind turbines
Henriksen, L. C., Poulsen, N. K., Hansen, M. H., Jørgensen, J. B., Engelen, T. G. V. & Per, B.
15/05/2007 → 02/03/2011
Project: PhD

Ulineær optimal robust styring og vindmølle regulering
Thomsen, S. C., Poulsen, N. K., Niemann, H. H., Jørgensen, J. B. & Stoustrup, J.
15/10/2006 → 29/09/2010
Project: PhD

Predictive Tools for Designing new Insulins and Treatment Regimes
Klim, S., Madsen, H., Ingwersen, S. H., Kristensen, N. R., Jørgensen, J. B., Gabrielsson, J. & Lavielle, M.
01/07/2006 → 16/12/2009
Project: PhD

Topology Optimization Problems with Design-Dependent Sets of Constraints
Schou, M. H., Stolpe, M., Evgrafov, A., Sigmund, O., Jørgensen, J. B., Kocvara, M. & Svanberg, K.
01/01/2006 → 30/06/2010
Project: PhD

Model Identification for Predictive Control and Optimization
Huusom, J. K., Jørgensen, S. B., Poulsen, N. K., Jørgensen, J. B., Andersen, H. W. & Bombois, X.
01/02/2005 → 24/11/2008
Project: PhD

Optimizing control of integrated processes
Jørgensen, J. B., Jørgensen, S. B., Poulsen, N. K., Marquardt, W. & Strand, S.
01/08/1997 → 03/06/2005
Project: PhD

D.2 Real-time optimising control
Jørgensen, S. B., Pedersen, K. & Jørgensen, J. B.
01/05/1997 → ...
Project
D.3 Operational implications of optimality
Jørgensen, S. B. & Jørgensen, J. B.
01/05/1997 → ...
Project

D.6 Implementation of control into ICAS
Jørgensen, S. B. & Jørgensen, J. B.
01/05/1997 → ...
Project

D.7 Development of toolbox for linear and non-linear MPC
Jørgensen, S. B. & Jørgensen, J. B.
01/05/1997 → ...
Project

E.2 System (Tools) Integration
01/05/1997 → ...
Project