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**An Adaptive Nonlinear Basal-Bolus Calculator for Patients With Type 1 Diabetes**
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Publication: Research - peer-review › Report – Annual report year: 1998

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A Stochastic model for two-station hydraulics exhibiting transient impact
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Publication: Research - peer-review › Report – Annual report year: 1997

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Publication: Research - peer-review › Report – Annual report year: 1997

Nielsen, H. A. O. . & Madsen, H. 1997 Department of Mathematical Modelling, Technical University of Denmark, DK-2800 Lyngby, Denmark in collaboration with NESA A/S.,
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Publication: Research - peer-review › Article in proceedings – Annual report year: 1997

Identification of Physical Parameters for A Hydraulic Robot
Publication: Research › Article in proceedings – Annual report year: 1997

Implementation of mini CHP
Publication: Research - peer-review › Article in proceedings – Annual report year: 1997

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Publication: Research - peer-review › Article in proceedings – Annual report year: 1997
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Publication: Research - peer-review › Article in proceedings – Annual report year: 1997

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On Optical Flow Estimation in Radar Images for Precipitation Forecasting
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Publication: Research › Article in proceedings – Annual report year: 1996

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Publication: Research - peer-review › Article in proceedings – Annual report year: 1996

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Publication: Research - peer-review › Journal article – Annual report year: 1995

Experiment Design for Grey Box Identification
Publication: Research - peer-review › Journal article – Annual report year: 1995
Identification of Transfer Functions for Control of Greenhouse Air Temperature
Publication: Research - peer-review › Journal article – Annual report year: 1995

Methodologies for the Analysis of Data from Sewers and Wastewater Treatment Plants
Publication: Research - peer-review › Article in proceedings – Annual report year: 1995

Methodologies for the Analysis of Data From Sewersm and Wastewater Treatment Plants
Publication: Research › Article in proceedings – Annual report year: 1995

Model for brændselsforbrug og elproduktion på Korsør kraftvarmeværk
Publication: Research - peer-review › Report – Annual report year: 1995

Publication: Research - peer-review › Book – Annual report year: 1995

Optimal input design for fault detection and diagnosis
Publication: Research - peer-review › Article in proceedings – Annual report year: 1995

Statistical Identification of Monod-Kinetic Parameters from On-line Measurements
Publication: Research - peer-review › Journal article – Annual report year: 1995

Identification of wastewater processes
Publication: Research › Ph.D. thesis – Annual report year: 1994

Emission of Dioxins from Danish Wood-Stoves
Publication: Research - peer-review › Journal article – Annual report year: 1994

Generalized Predictive Control for Non-Stationary Systems
Publication: Research - peer-review › Journal article – Annual report year: 1994

Identification and Control of Nutrient Removing Processes in Wastewater Treatment Plants
Publication: Research - peer-review › Conference article – Annual report year: 1994

Identification of wastewater treatment processes for nutrient removal on a full-scale WWTP by statistical methods
Publication: Research - peer-review › Journal article – Annual report year: 1994
Methods for Robust Estimation of AR-parameters
Publication: Research - peer-review › Journal article – Annual report year: 1994

On Flow and Supply Temperature Control in District Heating Systems
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Publication: Research - peer-review › Journal article – Annual report year: 1994

Optimal experiment design for identification of grey-box models
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

Application of Predictive Control in District Heating Systems
Publication: Research - peer-review › Journal article – Annual report year: 1993

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Publication: Research - peer-review › Journal article – Annual report year: 1993

Identification of wastewater processes using nonlinear grey box models
Publication: Research - peer-review › Report – Annual report year: 1992

Methods for quantification of the estimator uncertainty in recursive estimation of restricted
Publication: Research - peer-review › Report – Annual report year: 1992

Models and Methods for Optimization of District Heating Systems.: Part II: Models and Control Methods
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Publication: Research - peer-review › Journal article – Annual report year: 1992

Validation of Grey Box Models
Publication: Research - peer-review › Article in proceedings – Annual report year: 1992

The Use of Phase Type Distributions for Modelling Packet-Switched Traffic
Publication: Research - peer-review › Article in proceedings – Annual report year: 1991

Continuous Identification of a Four-Stroke SI Engine
Publication: Research - peer-review › Article in proceedings – Annual report year: 1990
**Models and Methods for Optimization of District Heating Systems.: Part I: Models and Identification Methods**


Publication: Research - peer-review › Book – Annual report year: 1990

**The Danish Incinerator Dioxin Study .1.**


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**Estimation of traffic models for a packet-switched network**


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Publication: Education › Book – Annual report year: 1989

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Madsen, H. & Thyregod, P. 1988 In : Energy and Buildings. 11, p. 201-211

Publication: Research - peer-review › Journal article – Annual report year: 1988

**Markov models in discrete and continous time for hourly observations of cloud cover**


Publication: Research - peer-review › Journal article – Annual report year: 1985

**Projects:**

**Smart Cities Accellerator**

Heller, A., Madsen, H. & Nielsen, P. S.

20/04/2018 → 20/07/2018

Project

**Stochastic Predictive Control of Wastewater Treatment Processes**

Stentoft, P. A., Møller, J. K., Madsen, H., Mikkelsen, P. S., Munk-Nielsen, T. & Vezzaro, L.

15/09/2017 → 14/09/2020

Project: PhD

**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

**Tools for Reliable Energy Performance Characterisation of Buildings**

Rasmussen, C., Madsen, H. & Rode, C.

01/01/2017 → 31/12/2019

Project: PhD

**Models for real time warning and control strategies in urban drainage and wastewater systems**

Pedersen, J. W., Mikkelsen, P. S., Madsen, H. & Vezzaro, L.

01/10/2016 → 30/09/2019

Project: PhD
Statistics and Data Analytics on Smart Zero
Wolf, S. & Madsen, H.
15/09/2016 → 14/09/2019
Project: PhD

Statistics and Data Analytics on Smart Zero
Wolf, S., Madsen, H. & Krogsbolie, J.
15/09/2016 → 14/09/2019
Project: PhD

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

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

Datadriven models for energy advising leading to behavioural changes in SMEs and residences
Liisberg, J. A. R., Møller, J. K., Bacher, P. & Madsen, H.
15/05/2016 → 14/05/2019
Project: PhD

Classification and aggregation of energy components
Richert, T. P., Bindner, H. W., Gehrke, O. & Madsen, H.
01/04/2016 → 31/03/2019
Project: PhD

Market Mechanisms for the integration of Distributed Energy Resources
De Zotti, G., Morales González, J. M. & Madsen, H.
01/04/2016 → 31/03/2019
Project: PhD

Sensor Based Process Monitoring of Large Scale Vacuum Casting Process
Nauheimer, M., Madsen, H., Kirkeby, K. & Olesen, B.
01/01/2016 → 31/12/2018
Project: PhD

Decision-making for the Management and Planning of Integrated Energy Systems
Blanco, I., Madsen, H., Morales González, J. M. & Kitzing, L.
01/11/2015 → 31/10/2018
Project: PhD

Analysis of high frequency (*smart meter*) energy consumption data
Tureczek, A. M., Nielsen, P. S. & Madsen, H.
01/08/2015 → 31/07/2018
Project: PhD

Dynamic Asset Allocation: Identifying Regime Shifts in Financial Time Series to Build Robust portfolios
Nystrup, P., Madsen, H., Hansen, B. W., Larsen, H. O. & Lindstrøm, K. J. E. L.
15/11/2014 → 14/11/2017
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 → 01/12/2017
Project: PhD

Innovationsnetwork Smart Energy (CLEAN)
Heller, A. & Madsen, H.
15/08/2014 → 31/12/2017
Project

IEA EBC Annex 67 - Energy Flexible Buildings
Heller, A., Madsen, H., Gianniou, P. & Foteinaki, K.
01/06/2014 → 01/06/2019
Project

Waste-2-Energy Smart Grid Upgrade
Halvgaard, R. F. & Madsen, H.
02/04/2014 → 02/04/2016
Project

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

Stochastic Dynamics of Demand Response and the Impact on Power Systems Service Provision
O’Connell, N., Madsen, H., O’Malley, M. J., Pinson, P., Bindner, H. W., Botterud, A. & Meibom, P.
01/01/2013 → 20/04/2016
Project: PhD

Stochastic energy systems
15/12/2012 → 12/12/2016
Project: PhD

Adaptive Load Forecasting
Parvizi, J., Madsen, H., Sørensen, M. P., Petersen, S. & Sartori, I.
15/09/2012 → 31/07/2016
Project: PhD

Stochastic Model Predictive Control with Applications in Smart Energy Systems
01/07/2012 → 31/03/2016
Project: PhD

Methodologies for the economic and societal valuation of wind, energy storage and demand-side management in the electricity supply
Simonsen Nielsen, M. P., Pinson, P. & Madsen, H.
01/05/2012 → 30/04/2015
Project: PhD
Stochastic Differential Equations in PK/PD Modelling
Juhl, R., Madsen, H. & Jørgensen, J. B.
15/01/2012 → 16/07/2015
Project: PhD

Integrated Wind Power Planning Tool
Rosgaard, M. H., Hahmann, A. N., Madsen, H., Pinson, P., Nissen, J. N. & Wilson, C.
01/10/2011 → 24/08/2015
Project: PhD

Multivariate Probabilistic Forecasting for Energy Systems
01/10/2011 → 21/09/2015
Project: PhD

Adaptive Load Forecasting
de Saint-Aubain, P. A. & Madsen, H.
15/09/2011 → 30/06/2012
Project: PhD

Scenario modeling for optimized integrated real-time control of sewer - wastewater treatment plant systems
Löwe, R., Madsen, H., Mikkelsen, P. S., Bauer-Gottwein, P., Heemink, A. W. & Muschalla, D.
01/01/2011 → 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

Models for the energy performance of low-energy houses
Andersen, P. H. D., Madsen, H., Rode, C., Hattel, J. H., Heiselberg, P. & Roels, S.
01/05/2010 → 24/01/2014
Project: PhD

Impact of Stochastic Generation on Electricity Market Dynamics
01/01/2010 → 30/08/2013
Project: PhD

Statistisk modellering af marine økosystemer
Berg, C. W., Madsen, H., Nielsen, A., Thygesen, U. H., Andersen, K. H., Cadigan, N. G. & Nielsen, S. F.
01/11/2009 → 30/08/2013
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

Stokastisk dynamisk modellering til kort-tidsregulering af glukose/insulin-metabolismen
Duun-Henriksen, A. K., Madsen, H., Jensen, P. R., Christiansen, L. E., Andreassen, S. & Gabrielsson, J.
01/06/2009 → 12/12/2013
Project: PhD
NonLinear modelling for energy systems
Trombe, P., Madsen, H., Pinson, P., Larsen, R. W., Greiner, M. O. W. & Thorarinsdottir, T. L.
01/01/2009 → 22/03/2013
Project: PhD

Model based analysis of ethnic differences in Type 2 diabetes
01/10/2008 → 24/08/2012
Project: PhD

Models for efficent integration of solar energy
Bacher, P., Madsen, H., Nielsen, H. A., Christiansen, L. E., Palsson, O. P. & Taboada, M. J. J.
01/10/2008 → 24/08/2012
Project: PhD

Grey box Modelling of Hydraulic Systmes
Thordarson, F. Ø., Madsen, H., Madsen, H., Poulsen, N. K., Rasmussen, M. R. & Willems, P.
01/10/2007 → 23/02/2012
Project: PhD

Framework for Real Time Control of Integrated Urban Wastewater Systems
Breinholt, A., Mikkelsen, P. S., Grum, M., Madsen, H., Bauer-Gottwein, P., Madsen, H. & Vanrolleghem, P.
01/09/2007 → 27/06/2012
Project: PhD

Estimation of Conditional densities for predictions in nonlinear stochastic processes - with applications to wind power systems
Tastu, J., Madsen, H., Pinson, P., Poulsen, N. K., Kariniotakis, G. & Lindström, E.
01/08/2007 → 12/12/2013
Project: PhD

Statistical modelling of tagging data from marine animals
Pedersen, M. W., Madsen, H., Thygesen, U. H., Poulsen, N. K., Huse, G. & Zucchini, W.
01/07/2007 → 02/02/2011
Project: PhD

Nonlinear Stochastic Modelling of Antimicrobial resistance in Bacterial Populations
Philipsen, K. R., Madsen, H., Christiansen, L. E., Molin, S., Diekmann, O. & Ersbøll, A. K.
01/10/2006 → 30/06/2010
Project: PhD

Identification of Ecological Thresholds of Sustaniability in Marine Ecosystems
Møller, J. K., Madsen, H., Carstensen, N. J., Nielsen, B. F., Ditlevsen, S. & Guttorp, P.
01/08/2006 → 25/05/2011
Project: PhD

Improved Statistical Analysis of Sleep EEG Data in Relation to Pharmacokinetics
01/07/2006 → 10/02/2010
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
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<th>Subject</th>
<th>Authors</th>
<th>Dates</th>
<th>Project Type</th>
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<td>Methods for Investigation of QT Prolongations</td>
<td>Jónsdóttir, A. H. &amp; Madsen, H.</td>
<td>01/04/2006 → 31/05/2010</td>
<td>PhD</td>
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<td>Data Assimilation in Marine Modelling</td>
<td>Frydendall, J., Madsen, H., Sørensen, J. V. T., Poulsen, N. K., Carstensen, N. J. &amp; Heemink, A. W.</td>
<td>01/03/2006 → 25/11/2009</td>
<td>PhD</td>
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<td>Automatisk kalibrering og attenuation korrektion i netværk af små vejrradar</td>
<td>Pedersen, L., Madsen, H., Jensen, N. E., Mikkelsen, P. S., Overgaard, S. &amp; Sempere-Torres, D.</td>
<td>01/02/2006 → 26/08/2009</td>
<td>PhD</td>
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<td>Power Fluctuations from Large Offshore Wind Farms</td>
<td>Sørensen, P. E., Cutululis, N. A., Madsen, H. &amp; Pinson, P.</td>
<td>01/10/2004 → 30/09/2008</td>
<td>PhD</td>
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<td>Estimationsteori for stokastiske differentielligninger</td>
<td>Nilsøe, K., Madsen, H., Kessler, M., Nielsen, B. F., Jørgensen, B. &amp; Rydén, T.</td>
<td>01/10/2002 → 15/01/2007</td>
<td>PhD</td>
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Minimizing antibiotic resistance development MINIRESIST
11/01/2001 → 14/12/2013
Project

Data assimilation in atmospheric dispersion of radioactive material
Drews, M., Madsen, H., Lauritzen, B., Poulsen, N. K., Finck, R. R. & Holst, J.
01/10/2000 → 18/03/2005
Project: PhD

Data assimilering og autokalibrering i 2D/3D hydrodynamisk numerisk modellering af det marine miljø
Sørensen, J. V. T., Madsen, H., Madsen, H., Poulsen, N. K., Cañizares, R. & Heemink, A. W.
01/04/2000 → ...
Project: PhD

Nonlinear identification and optimal control of fed-batch processes
01/08/1999 → 24/03/2003
Project: PhD

Vindmøllepark-produktionsprediktor
Joensen, A. K., Madsen, H. & Nielsen, T. S.
01/04/1999 → 31/03/2002
Project

Non- and semiparametric methods with applications in engineering
01/01/1999 → ...
Project

PRESS installation hos Sonderborg Fjernvarme
Madsen, H. & Nielsen, T. S.
01/01/1999 → 31/12/2000
Project

IT based optimization of District Heating Networks
Nielsen, H. A., Madsen, H. & Laursen, P.
01/02/1998 → 31/12/2002
Project

IT-baseret driftoptimering af fjernvarmedistribution
Madsen, H., Nielsen, H. A. & Nielsen, T. S.
01/02/1998 → 30/10/2000
Project

Dynamic modelling of Energy Systems
Andersen, K. K., Madsen, H., Spliid, H., Bidstrup, N. & Lebrun, J.
01/01/1998 → 03/12/2001
Project: PhD

Multivariat kalibrering af kemiske sensorer
Øjelund, H., Madsen, H., Steen-Pedersen, J., Thyregod, P., Hansen, L. K., Olsen, E. V. & Sundberg, R.
01/01/1998 → ...
Project: PhD
Elforbrugsmodeller for ELKRAFT-området
Madsen, H. & Nielsen, H. A.
01/12/1997 → 01/03/1998
Project

Grey-box identification
Madsen, H. & Sadegh, P.
01/10/1997 → 01/11/1998
Project

Center for IT-tools in the Energy Sector
Madsen, H. & Andersen, K. K.
01/09/1997 → 31/08/2001
Project

Modellering og styring af sprøjtestøbeproces
Madsen, H., Spliid, H. & Thyregod, P.
01/08/1997 → 31/07/2000
Project

Modellering og styring af sprøjtestøbeproces
Thyregod, P., Madsen, H., Melgaard, H., Spliid, H., Rootzén, H., Bisgaard, S. & Olsen, K. J.
01/08/1997 → …
Project: PhD

Combined physical and statistical on-line prediction of wind power from wind farms.
Madsen, H., Joensen, A. K. & Nielsen, T. S.
01/04/1997 → 31/03/2000
Project

Multivariate Calibration in Optical Sensors
Madsen, H., Thyregod, P. & Øjelund, H.
01/04/1997 → 31/05/2001
Project

Stochastic Dynamic modelling of Oxigen
Jonsdottir, H., Madsen, H., Eliasson, J., Palsson, O. P., Poulsen, N. K., Madsen, H. & Olsson, G.
01/04/1997 → 08/02/2007
Project: PhD

Estimation in Stochastic Differential Equations
Madsen, H. & Baadsgaard, M.
01/09/1996 → 31/08/1999
Project

Estimation Techniques in Stochastic
Baadsgaard, M. & Madsen, H.
01/09/1996 → 01/09/1999
Project: PhD
Identifikation og regulering af rensningsanlæg
Madsen, H., Poulsen, N. K., Bechmann, H. & Nielsen, M.
01/05/1996 → 30/04/1999
Project

Modellering og Prædiktiv Styring af Spildevandssystemer
Bechmann, H., Madsen, H. & Poulsen, N. K.
01/05/1996 → 28/04/2000
Project: PhD

Stochastic modelling of nonlinear systems
Nielsen, J. N., Madsen, H., Poulsen, N. K. & Ljung, L.
01/03/1996 → 29/03/2001
Project: PhD

Prædiktorer i komplekse stokastiske systemer
Nielsen, H. A., Madsen, H. & Holst, J. J.
01/02/1996 → 25/09/2000
Project: PhD

Stokastisk Prædiktiv Kontrol i Komplekse Systemer
Nielsen, T. S., Madsen, H., Holst, J., Poulsen, N. K., Bidstrup, N. & Egardt, B.
01/02/1996 → 14/11/2002
Project: PhD

Dynamisk kvalitetskontrol
Madsen, H., Thyregod, P. & Iwersen, J.
01/01/1996 → ...
Project

Prediction models for wind energy production
Madsen, H., Nielsen, T. S., Søgaard, H. & Sejling, K.
01/01/1996 → 31/12/1998
Project

Center for informationsteknologi i miljøsektoren
Madsen, H., Øjelund, H. & Sadegh, P.
01/06/1995 → 01/04/1999
Project

Development of methods for evaluation of electricity saving and load levelling measures
Madsen, H., Nielsen, H. A. & Bergstrøm, W.
01/03/1995 → 31/12/1997
Project

Implementing Short Term Predictions at Utilities
Madsen, H., Nielsen, T. S. & Nielsen, H. A.
01/01/1995 → 31/12/1998
Project

Prognosemodeller for gasforbrug
Madsen, H. & Nielsen, T. S.
17/06/1994 → 30/06/1996
Project
Identification af modeller for kedel og varmeanlæg
Madsen, H., Hansen, L. H., Holst, J., Bidstrup, N. & Vadstrup, P.
01/06/1994 → 31/05/1997
Project

Identification af modeller for kedel- og varmeanlæg
Hansen, L. H., Madsen, H., Hansen, P. E. & Poulsen, N. K.
01/06/1994 → …
Project: PhD

Tidsrækkeanalyse og Danamisk Modellering af Regnvands påvirkede Recipienter
Jacobsen, J. L. & Madsen, H.
01/04/1994 → …
Project: PhD

Time series analysis and dynamic modelling of processes in rivers affected by precipitation runoff
Madsen, H., Jacobsen, J. L., Harremoes, P. & Linde Jensen, J. J.
01/04/1994 → 31/05/1997
Project

Forsøgsplanlægning for identifikation af delvis kendte systemer (grey-box modeller)
Madsen, H., Sadegh, P. & Holst, J.
01/01/1994 → 31/12/1996
Project

Statistisk finansieringsteori
Madsen, H., Nielsen, J. N. & Baadsgaard, M.
01/01/1994 → …
Project

Identifikation af Grey-Modeller
Sadegh, P., Madsen, H. & Ljung, L.
01/08/1993 → 21/03/1997
Project: PhD

Optimering af fjernvarmestystemer
Madsen, H., Nielsen, T. S. & Nielsen, H. A.
01/07/1993 → 30/06/1996
Project

Udvikling, afprøvning og implementering af GPC-regulatorer i fjernvarmesystemer
Madsen, H. & Nielsen, T. S.
01/07/1993 → 30/06/1996
Project

Identifikation og styring af spildevandsprocesser
Carstensen, N. J., Madsen, H. & Harremoës, P.
01/01/1991 → …
Project: PhD

Undersøgelser af kontrolstrategier for regulering af fjernvarmesystemer
Palsson, O. P., Madsen, H. & Ravn, H. V.
01/07/1990 → 16/06/1994
Project: PhD
Idenfifikation af dynamiske systemer i kontinuert tid
Melgaard, H., Madsen, H., Hendricks, E. & Holst, J.
01/03/1990 → 17/03/1995
Project: PhD

Idenfikkation af varmedynamikken for bygningskomponenter
Madsen, H. & Melgaard, H.
01/01/1990 → …
Project

Idenfikkation og estimation af underliggende parametervariationer i stokastiske modeller
Søgaard, H. T., Madsen, H. & Holst, J.
15/02/1989 → 30/05/1994
Project: PhD

Modelling and prediction of load in district heating systems
Sejling, K. & Madsen, H.
01/02/1989 → 01/02/1994
Project: PhD

System til optimal regulering af fjernvarmeproducer
Madsen, H., Nielsen, T. S. & Nielsen, H. A.
01/01/1988 → …
Project

Activities:

Cities research for District Heating Innovation
Heller, A. (Speaker), Madsen, H. (Speaker)
6 Mar 2017
Activity: Talks and presentations › Conference presentations

5-års seminar om Lavenerghuset i Sisimiut
Madsen, H. (Speaker)
2 Jun 2010
Activity: Other