Peder Bacher - DTU Orbit (14/12/2017)

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Dynamical Systems

Publications:

**Online short-term forecast of greenhouse heat load using a weather forecast service**


Publication: Research - peer-review » Journal article – Annual report year: 2017

**Determination of thermal characteristics of standard and improved hollow concrete blocks using different measurement techniques**


Publication: Research - peer-review » Journal article – Annual report year: 2017

**Multi-site solar power forecasting using gradient boosted regression trees**


Publication: Research - peer-review » Journal article – Annual report year: 2017

**On site characterisation of the overall heat loss coefficient: comparison of different assessment methods by a blind validation exercise on a round robin test box**


Publication: Research - peer-review » Journal article – Annual report year: 2017

**Stochastic model of wind-fuel cell for a semi-dispatchable power generation**


Publication: Research - peer-review » Journal article – Annual report year: 2017

**Load forecasting of supermarket refrigeration**


Publication: Research - peer-review » Journal article – Annual report year: 2015

**Non-parametric method for separating domestic hot water heating spikes and space heating**


Publication: Research - peer-review » Journal article – Annual report year: 2016

**Smart-Energy Operating-System - A Framework for Implementing Flexible Electric Energy Systems in Smart Cities**

Madsen, H., Parvizi, J. & Bacher, P. 2016

Publication: Research - peer-review » Conference abstract for conference – Annual report year: 2016

**Characterising the Actual Thermal Performance of Buildings: Current Results of Common Exercises Performed in the Framework of the IEA EBC Annex 58-Project**


Publication: Research - peer-review » Conference article – Annual report year: 2015

**Integrated energy systems modelling**

Introduction to Statistics - eNotes

Methodology and forecast products for the optimal offering of ancillary services from wind in a market environment

Thermal Performance Characterization using Time Series Data - IEA EBC Annex 58 Guidelines

IEA Common Exercise 4: ARX, ARMAX and grey-box models for thermal performance characterization of the test box

Setting up and validating a complex model for a simple homogeneous wall

A non-parametric method for correction of global radiation observations

Grey-box Modeling for System Identification of Household Refrigerators: a Step Toward Smart Appliances

Load forecasting for supermarket refrigeration

Online load forecasting for supermarket refrigeration

Online short-term heat load forecasting for single family houses

Short-term heat load forecasting for single family houses

Solar/electric heating systems for the future energy system
Publication: Research - peer-review › Report – Annual report year: 2013

An improved dynamic test method for solar collectors
Publication: Research - peer-review › Journal article – Annual report year: 2012

Center for Bygningssimulering: Idegrundlag for etablering af center
Publication: Research › Report – Annual report year: 2012

Load Forecasting for Households
Publication: Research - peer-review › Report – Annual report year: 2012

Modelling the heat dynamics of a monitored Test Reference Environment for Building Integrated Photovoltaic systems using stochastic differential equations
Publication: Research - peer-review › Journal article – Annual report year: 2012

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

Models for efficient integration of solar energy
Publication: Research › Ph.D. thesis – Annual report year: 2012

Identifying suitable models for the heat dynamics of buildings
Publication: Research - peer-review › Journal article – Annual report year: 2011

Improved experimental setup for observation of non-linear heat dynamics
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Models of the heat dynamics of solar collectors for performance testing
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Online Short-term Solar Power Forecasting
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Opensource Software for MLR-Modelling of Solar Collectors
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011
Short-Term Solar Collector Power Forecasting
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Analysis of energy consumption in single family houses
Publication: Research › Article in proceedings – Annual report year: 2010

Data for Energy Performance Analysis: Financed by The Danish Electricity Saving Trust
Publication: Research › Report – Annual report year: 2010

Experiments and Data for Building Energy Performance Analysis: Financed by The Danish Electricity Saving Trust
Publication: Research › Report – Annual report year: 2010

Mathematical and Statistical Models and Methods for Describing the Thermal Characteristics of Buildings
Publication: Research › Article in proceedings – Annual report year: 2010

Models for Energy Performance Analysis: Financed by The Danish Electricity Saving Trust
Publication: Research › Report – Annual report year: 2010

Non-linear phenomena in greybox-modeling of heat dynamics in buildings
Publication: Research › Article in proceedings – Annual report year: 2010

Procedure for identifying models for the heat dynamics of buildings: Financed by The Danish Electricity Saving Trust and Vind i Øresund - Interreg 4A
Publication: Research - peer-review › Report – Annual report year: 2010

Statistical models describing the energy signature of buildings
Publication: Research › Article in proceedings – Annual report year: 2010

Projects:

Datadriven models for energy advising leading to behavioural changes in SMEs and residences
Liisberg, J. A. R., Møller, J. K., Bacher, P. & Madsen, H.
CITS - Copenhagen ITS
Hæg, P., Overton Chabre Holm, D., Starke, J., Bacher, P. & Nielsen, T. A. S.
01/10/2013 → 31/05/2014
Project

Models for efficient 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

Solar/electric heating systems in the future energy system
Furbo, S., Perers, B., Andersen, E., Fan, J. & Bacher, P.
01/04/2008 → 31/12/2011
Project