Research outputs:

**Identifying fit-for-purpose lumped surrogate models for large urban drainage systems using GLUE**
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

**Lad vand og data strømme**
Research output: Book/Report › Report – Annual report year: 2019 › Commissioned › peer-review

**Valve status identification by temperature modelling in water distribution networks**
Frederiksberg C: University of Copenhagen, p. 31-31
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2019 › Research › peer-review

**Evaluating catchment response to artificial rainfall from four weather generators for present and future climate**
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

**Importance of Subdivision Resolution of Surrogate models for Emulating Catchment Response and Surcharge**
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2018 › Research › peer-review

**Importance of Subdivision Resolution of Surrogate Models for Emulating Catchment Response and Surcharge**
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

**Investigation of the usefulness of weather generator data as input to long-term simulations in urban hydrology**
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2018 › Research › peer-review

**Is your data correct? Validating and improving data collected in smart water networks**
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2018 › Research › peer-review

**Model predictive control of urban drainage systems: A review and perspective towards smart real-time water management**
Robust model for estimating pump characteristics and sewer flows from pumping station data

Technical Note on the Dynamic Changes in Kalman Gain when Updating Hydrodynamic Urban Drainage Models

Urban tunnel systems for conveyance and storage of storm- and wastewater: features, classification, and modelling

Using the Ensemble Kalman Filter to update a fast surrogate model for flow forecasting

Advancing from underground to above-ground model predictive control in urban drainage

A fast surrogate model tailor-made for real time control

Model predictive control for urban drainage: testing with a nonlinear hydrodynamic model

Testing high resolution synthetic rainfall time series representing current and future climates on CSO and other indicators

Developing Fast and Reliable Flood Models
Dynamic gauge adjustment of high-resolution X-band radar data for convective rain storms: Model-based evaluation against measured combined sewer overflow
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Evaluation of Maximum a Posteriorsi Estimation as Data Assimilation Method for Forecasting Infiltration-Inflow Affected Urban Runoff with Radar Rainfall Input
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Identification and Application of Surrogate Models for Urban Drainage Modelling
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2016 › Research › peer-review

Målerdata kan gemme på gratis informationer for forsyningerne: Et case studie fra Halsnæs Forsyning baseret på højopløste måledata
Kirstein, J. K., Borup, M., Rygaard, M. & Høgh, K., 2016, In : DanskVand. 84, 6, p. 50-51
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

A partial ensemble Kalman filtering approach to enable use of range limited observations
Research output: Contribution to journal › Journal article – Annual report year: 2015 › Research › peer-review

Auto-Calibration for Data Assimilation in Linear Reservoir Models Used in Flow Forecasting of Urban Runoff
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Flow Forecasting using Deterministic Updating of Water Levels in Distributed Hydrodynamic Urban Drainage Models
Research output: Contribution to journal › Journal article – Annual report year: 2014 › Research › peer-review

Real Time Updating in Distributed Urban Rainfall Runoff Modelling

Updating distributed hydrodynamic urban drainage models
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Biotransformation kinetics and sorption of cocaine and its metabolites and the factors influencing their estimation in wastewater
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Comparing the impact of time displaced and biased precipitation estimates for online updated urban runoff models
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review
Comparison of short-term rainfall forecasts for model-based flow prediction in urban drainage systems
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Comparison of short-term rainfall forecasts for model-based flow prediction in urban drainage systems
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2012 › Research › peer-review

Impact of time displaced precipitation estimates for on-line updated models
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2012 › Research › peer-review

Flow Forecasting in Urban Drainage Systems using Deterministic Updating of Water Levels in Distributed Hydraulic Models
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2011 › Research › peer-review

Real time adjustment of slow changing flow components in distributed urban runoff models
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2011 › Research › peer-review

Performance of MOUSE UPDATE for level and flow forecasting in urban drainage systems
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2010 › Research

Application of high resolution x-band radar data for urban runoff modelling: constant vs. dynamic calibration
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2009 › Research › peer-review

Vejrradarbaseret styring af spildevandsanlæg
Research output: Book/Report › Report – Annual report year: 2009 › Research

Projects:

The digital twin of urban drainage systems - dynamic models and measurements for error diagnosis
01/02/2019 → 31/01/2022
Project: PhD
Intelligent integration of deep urban tunnel systems in energy systems
Bjerregård, M. B., Christiansen, L. E., Borup, M. & Niyato, D.
Technical University of Denmark
01/12/2017 → 30/11/2020
Project: PhD

Hydraulic Modelling and data assimilation for deep urban tunnel systems
Palmitessa, R., Mikkelsen, P. S., Borup, M. & Law, A. W. K.
Technical University of Denmark
01/12/2017 → 30/11/2020
Project: PhD

FUPARU: Fuldaautomatisk decentral rensning af partikler i regnbetingede udledninger
Nielsen, K., Mikkelsen, P. S., Andersen, H. R., Vezzaro, L., Borup, M. & Chhetri, R. K.
01/11/2016 → 31/10/2018
Project: Research

Optimized water distribution using high-resolution data sources and novel data analysis methods
Kirstein, J. K., Rygaard, M., Borup, M. & Høgh, K.
Samfinansieret - Andet
01/09/2016 → 14/11/2019
Project: PhD

Optimized real-time management of interacting water systems for a smarter city
Samfinansierede - Virksomhed
01/07/2016 → 28/08/2019
Project: PhD

Surrogate modeling of inundation for both real time control and planning applications
Thrysøe, C., Arnbjerg-Nielsen, K. & Borup, M.
Technical University of Denmark
01/09/2015 → 19/02/2020
Project: PhD

Uncertainty and adaptive estimation in storm- and wastewater system modelling
Borup, M., Mikkelsen, P. S., Grum, M., Madsen, H., Arnbjerg-Nielsen, K., Savic, D. A. & Weerts, A.
Technical University of Denmark
01/01/2009 → 02/07/2014
Project: PhD

Addressing China's water challenges with hydroeconomic optimization
Martinsen, G., Bauer-Gottwein, P., Borup, M., Madsen, H. & Harou, J. J.
Samfinansieret - Andet
01/11/2015 → 03/03/2019
Project: PhD

Activities:

Valve status identification by temperature modelling in water distribution networks
Jonas Kjeld Kirstein (Guest lecturer), Martin Rygaard (Other), Morten Borup (Other), Klavs Høgh (Other)
31 Jan 2019
Activity: Talks and presentations › Conference presentations

Integration af energi- og vandsektoren - potentialer og udfordringer
Morten Borup (Invited speaker)
19 Sep 2018
Activity: Talks and presentations › Conference presentations

MIKE POWERED BY DHI SEMINAR 2016
Morten Borup (Invited speaker)
10 Mar 2016
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

Theoretical aspects of ensemble data assimilation for the Earth system
Morten Borup (Invited speaker)
5 Apr 2015 → 10 Apr 2015
Activity: Talks and presentations › Conference presentations

International Workshop On Urban Pluvial Flood Modelling
Morten Borup (Participant)
6 Oct 2014
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

Press clippings:

Interview for "P4 Morgen Bornholm"
Morten Borup
15/03/2019
1 media contribution
Press/Media: Press / Media

Article about NOAH
Morten Borup
14/03/2019
1 item of media coverage
Press/Media: Press / Media