

An assessment framework for evaluating the digitalisation potential of stormwater management and monitoring in small- and medium-sized water utilities

Suits, Kristjan; Annus, Ivar; Kändler, Nils; Kaur, Katrin; Kõiv, Kerta; Arm, Liisi; Barndöck, Helen Urban Water Journal 2025
<https://doi.org/10.1080/1573062X.2025.2511810>

Automatic calibration module for an urban drainage system model

Annus, Ivar; Vassiljev, Anatoli; Kändler, Nils; Kaur, Katrin Water 2021 / art. 1419 <https://doi.org/10.3390/w13101419> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Automatic calibration toolbox for SWMM5

Vassiljev, Anatoli; Suits, Kristjan; Kaur, Katrin; Kändler, Nils; Truu, Murel; Annus, Ivar Advances in engineering software 2023 / art. 103528 <https://doi.org/10.1016/j.advengsoft.2023.103528> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Calibration of the water distribution network model

Koppel, Tiit; Kändler, Nils; Vassiljev, Anatoli Proc. of the Conference "Water Resources Management 2001" 2001 / p. 207-217

Construction of water network model

Kändler, Nils; Koppel, Tiit; Vassiljev, Anatoli 4th International Congress and Trade Fair "Water : Ecology and Technology" : ECWATECH-2000 : Moscow, 30 May - 2 June 2000 : abstracts 2000 / p. 246-247

Controlling peak runoff from plots by coupling street storage with distributed real time control

Kändler, Nils; Annus, Ivar; Vassiljev, Anatoli Urban water journal 2022 / p. 97-108 : ill <https://doi.org/10.1080/1573062X.2021.1958235> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Controlling stormwater runoff from impermeable areas by using smart inlets

Kändler, Nils; Annus, Ivar; Vassiljev, Anatoli; Puust, Raido; Kaur, Katrin New trends in urban drainage modelling : UDM 2018 : Conference proceedings 2019 / p. 263-268 https://doi.org/10.1007/978-3-319-99867-1_44 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Decentralized real-time control platform for urban drainage systems in climate proof smart cities = Sademeveesüsteemide detsentraliseeritud juhtimissüsteemi platvorm kliimakindlates tarkades linnades

Kändler, Nils 2021 https://www.ester.ee/record=b5434231*est <https://digikogu.taltech.ee/et/Item/f02a02b2-da6e-4341-a69c-eba8d029e433>
<https://doi.org/10.23658/taltech.32/2021>

Determination of the corresponding roughness height in a WDS model containing old rough pipes

Annus, Ivar; Vassiljev, Anatoli; Kändler, Nils; Kaur, Katrin Journal of water supply : research and technology - AQUA 2020 / p. 201-209 <https://doi.org/10.2166/aqua.2019.080>

Developing a framework for smart stormwater management in Tallinn, Estonia

Suits, Kristjan; Vassiljev, Anatoli; Kaur, Katrin; Kõiv, Kerta; Kändler, Nils; Annus, Ivar Engineering Proceedings 2024 / art. 23
<https://doi.org/10.3390/engproc2024069023> [Journal metrics at Scopus](#) [Article at Scopus](#)

Diurnal dynamic analysis of water distribution networks

Ainola, Leo; Koppel, Tiit; Kändler, Nils Advances in Water Supply Management : proceedings of the International Conference on Computing and Control for the Water Industry, 15-17 September 2003, London, UK 2003 / p. 165-171 : ill
<https://www.taylorfrancis.com/chapters/edit/10.1201/NOE9058096081-19/diurnal-dynamic-analysis-water-distribution-networks-ainola-koppel-k%C3%A4ndler>

Eesti keskkonnategevuskava [2001 - 2003]

Kiili, Jaanus; Kask, Ülo; Liik, Olev; Metsvahi, Tiit; Paadam, Katrin; Adamson, Alo; Hendre, Marju; Hääl, Maire-Liis; Kändler, Nils; Loigu, Enn; Randla, Tiina; Reinsalu, Enno; Seepõld, Marit; Udal, Andres; Vilu, Raivo 2001
https://www.ester.ee/record=b1550399*est

Empirical evaluation of NB-IoT and CAT-M coverage for underground water system

Roosipuu, Priit; Annus, Ivar; Kuusik, Alar; Kändler, Nils; Alam, Muhammad Mahtab; Mürsepp, Ivo IEEE Access 2024 / p. 187290-187301 <https://doi.org/10.1109/ACCESS.2024.3478733> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Energetic optimization by rehabilitation of oversized water distribution networks

Ainola, Leo; Koppel, Tiit; Kändler, Nils Pumps, electromechanical devices and systems applied to urban water management. Volume 1 2003 / p. 3-9

Evaluation of low power wide area network technologies for smart urban drainage systems

Malik, Hassan; Kändler, Nils; Alam, Muhammad Mahtab; Annus, Ivar; Le Moullec, Yannick; Kuusik, Alar 2018 IEEE : International Conference on Environmental Engineering, March 12-14, 2018 Milan Italy : conference proceedings 2018 / 5 p. : ill

<https://doi.org/10.1109/EE1.2018.8385262>

Excel-based tool for automatic calibration of urban drainage system models

Vassiljev, Anatoli; Annus, Ivar; Kändler, Nils; Truu, Murel; Kaur, Katrin; Suits, Kristjan Environmental Sciences Proceedings 2022 / art. 30 <https://doi.org/10.3390/environsciproc2022021030>

Experience of calibration of model of water supply system

Ainola, Leo; Koppel, Tiit; Kändler, Nils; Vassiljev, Anatoli 5th International Congress ECWATECH-2002, Moscow : abstracts 2002 / p. 214-215

Flow dynamics in a pipe containing uneven roughness elements

Kaur, Katrin; Vassiljev, Anatoli; Annus, Ivar; Truu, Murel; Kändler, Nils WDSA CCWI : proceedings book 2022 / 11 p. : ill <https://drive.google.com/file/d/1sTPCrwLPmq-2C0-NX8siSfWp9WLd54A/view>

Geoanalytical method for linking base wastewater flows with a sanitary sewer model

Kändler, Nils; Annus, Ivar; Kaur, Katrin; Koor, Margus Urban water journal 2025 / p. 109-120 <https://doi.org/10.1080/1573062X.2024.2445119>

GIS-integrated pluvial flood risk assessment methodology for urban areas

Truu, Murel; Annus, Ivar; Kändler, Nils WDSA CCWI : proceedings book 2022 / 14 p. : ill https://drive.google.com/file/d/19mrdk9_LLOy5mfYDT9IGgmlsW5FFwj4f/view

Hoone kanalisatsioon [Võrguteavik] = Draining system inside buildings / Eesti Standardimis- ja Akrediteerimiskeskus

2021 https://www.ester.ee/record=b5449156*est

Insights gained from stormwater e-monitoring in Viimsi, Estonia

Suits, Kristjan; Rajarao, Gunaratna K.; Kändler, Nils; Vassiljev, Anatoli; Annus, Ivar CEST Proceedings 2023 / 4 p <https://doi.org/10.30955/gnc2023.00303>

Integrated decision support system for pluvial flood-resilient spatial planning in urban areas

Truu, Murel; Annus, Ivar; Roosimägi, Janet; Kändler, Nils; Vassiljev, Anatoli; Kaur, Katrin Water 2021 / art. 3340, 19 p. : ill <https://doi.org/10.3390/w13233340> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Integrating drone-captured sub-catchment topography with multiphase CFD modelling to enhance urban stormwater management

Kaur, Katrin; Annus, Ivar; Truu, Murel; Kändler, Nils; Paalmäe, Iris The 3rd International Joint Conference on Water Distribution Systems Analysis & Computing and Control for the Water Industry (WDSA/CCWI 2024) 2024 / art. 31 <https://doi.org/10.3390/engproc2024069031> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Is water quality based stormwater management actually feasible? A SWMM-based study on the trade-offs of various stormwater management approaches

Suits, Kristjan; Vassiljev, Anatoli; Annus, Ivar; Kändler, Nils WDSA CCWI : proceedings book 2022 / 11 p. : ill <https://drive.google.com/file/d/1sTPCrwLPmq-2C0-NX8siSfWp9WLd54A/view>

Modelling of nitrogen concentrations in water from drained peat soils

Vassiljev, Anatoli; Annus, Ivar; Kändler, Nils; Kaur, Katrin Journal of water supply : research and technology - AQUA 2019 <https://doi.org/10.2166/aqua.2019.104>

Modelling of sewer systems: a key to sustainable stormwater management

Vaabel, Joonas; Kändler, Nils "Environmental Impact and Water Management in a Catchment Area Perspective" : 24-26 September, 2001, Tallinn, Estonia : proceedings of the Symposium dedicated to the 40th Anniversary of Institute of Environmental Engineering at Tallinn Technical University 2001 / p. 250-257 : ill

Monitoring and control of smart urban drainage systems using NB-IoT cellular sensor networks

Roosipuu, Priit; Annus, Ivar; Kuusik, Alar; Kändler, Nils; Alam, Muhammad Mahtab Water science & technology Water science and technology 2023 / p. 339-354 <https://doi.org/10.2166/wst.2023.222> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

National environmental action plan 2001-2003 : Estonia

Kiili, Jaanus; Kask, Ülo; Vares, Villu; Liik, Olev; Metsvahi, Tiit; Paadam, Katrin; Adamson, Alo; Hendre, Marju; Hääl, Maire-Liis; Kask, Ülo; Kändler, Nils; Loigu, Enn; Randla, Tiina; Reinsalu, Enno; Seepõld, Marit; Udal, Andres; Veiderma, Mihkel; Vilu, Raivo 2001 https://www.ester.ee/record=b1593753*est

Nordic urban planning : holistic approach for extreme weather

Kändler, Nils; Annus, Ivar; Keinänen-Toivola, Minna; Rubulis, Janis Nature-Based Solutions - from Innovation to Common-Use : ebook of abstracts 2017 / p. 112 https://nbs2017.eu/wp-content/uploads/2017/12/NBS2017_AbstractBook_211217.pdf

Numerical investigation of the impact of irregular pipe wall build-up on velocity in the water distribution system
Kaur, Katrin; Vassiljev, Anatoli; Annus, Ivar; Kändler, Nils; Roosimägi, Janet Journal of Water Supply: Research and Technology - AQUA 2020 / p. 647–655 <https://doi.org/10.2166/aqua.2020.035>

Overview of the (Smart) Stormwater Management around the Baltic Sea

Suits, Kristjan; Annus, Ivar; Kändler, Nils; Karlsson, Tobias; Van Maris, Antonius; Kaseva, Antti; Kotoviča, Nika; Kuttuva Rajarao, Gunaratna Water 2023 / art. 1623 <https://doi.org/10.3390/w15081623> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peak flow reduction from small catchments using smart inlets

Kändler, Nils; Annus, Ivar; Vassiljev, Anatoli; Puust, Raido Urban water journal 2020 / p. 577-586
<https://doi.org/10.1080/1573062X.2019.1611888> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pipeline rehabilitation combined strategy for urban water systems

Annus, Ivar; Kändler, Nils; Vaksman, Marti; **Kaur, Katrin; Truu, Murel;** Koor, Margus; **Vassiljev, Anatoli;** Kütt, Urmas Urban water journal 2024 / p. 155 - 167 <https://doi.org/10.1080/1573062X.2023.2273535> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Principle of locality and its application to water network model calibration

Ainola, Leo; Koppel, Tiit; Kändler, Nils; Vassiljev, Anatoli Water software systems : theory and applications. Vol. 1 2001 / p. 111-120

Protecting the Baltic Sea from untreated wastewater spillages : handbook of the NOAH CONCEPT

Annus, Ivar; Truu, Murel; Kändler, Nils; Rissanen, Hanna; Vorne, Virpi; Waara, Sylvia; Ramm, Klara; Ulanczyk, Rafał; Kolecka, Katarzyna; Dakša, Gints 2021 https://www.ester.ee/record=b5473512*est https://sub.samk.fi/wp-content/uploads/2021/12/NOAH_Handbook_30112021.pdf

Real time controlled sustainable urban drainage systems in dense urban areas

Kändler, Nils; Annus, Ivar; Vassiljev, Anatoli; Puust, Raido Journal of water supply : research and technology - AQUA 2020 / p. 238–247 : ill <https://doi.org/10.2166/aqua.2019.083>

Rehabilitation aspects of oversized water distribution networks

Ainola, Leo; Koppel, Tiit; Kändler, Nils Hydraulic information management 2002 / p. 351-360

Smart nature-based solutions for stormwater management in urban areas—an analysis of pilot cases

Kõiv, Kerta; Annus, Ivar; Kändler, Nils; Truu, Murel; Kaur, Katrin; Suits, Kristjan Engineering Proceedings 2024 / art. 18
<https://doi.org/10.3390/engproc2024069018> [Journal metrics at Scopus](#) [Article at Scopus](#)

Targad sademeveesüsteemid tagavad puhtama Läänemere

Suits, Kristjan; Annus, Ivar; Kändler, Nils Viimsi Teataja 2023 / lk. 10 : ill https://www.viimsivald.ee/sites/default/files/inline-files/viimsi-teataja-20-01-2023_1.pdf

Use of nonlinear regression for estimating emission of nitrogen to Estonian rivers

Vassiljev, Anatoli; Annus, Ivar; Kaur, Katrin; Kändler, Nils Ecology & safety 2017 / p. 33-40 : ill <https://www.scientific-publications.net/en/article/1001351/>

Water network model as a tool for making rehabilitation decisions

Ainola, Leo; Koppel, Tiit; Kändler, Nils XXII Nordic Hydrological Conference : Roros, Norway 4-7 August 2002. Vol. II 2002 / p. 749-756 : ill

Water quality in networks in the conditions of substantial decrease of water consumption

Koppel, Tiit; Kändler, Nils; Tiiter, K.; Vassiljev, Anatoli Proceedings : Frontiers in urban water management : Deadlock or hope? : symposium, 18-20 June 2001, Marseille, France 2001 / p. 38-45 : ill

Väliskanalisaatsioonivõrk [Võrguteavik] = Sewer system inside buildings

2021 https://www.ester.ee/record=b5449238*est

Разработка модели системы водопроводной сети

Kändler, Nils; Koppel, Tiit; Vassiljev, Anatoli Четверты международный конгресс "Вода : экология и технология" : ЭКВАТЕК-2000 : Москва, 30 мая - 2 июня 2000 : тезисы докладов 2000 / с. 369-370