

Air pocket dynamics under bridging of stratified flow during rapid filling of a horizontal pipe

Kaur, Katrin; Laanearu, Janek; Annus, Ivar Journal of hydraulic engineering 2023 / art. 04022030, 11 p. : ill

[https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0002021](https://doi.org/10.1061/(ASCE)HY.1943-7900.0002021) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

ChangeMakers – promoting engineering through developing the soft skills of youngsters

Annus, Ivar; Kaur, Katrin Futureproofing Engineering Education for Global Responsibility : Proceedings of the 27th International Conference on Interactive Collaborative Learning (ICL 2024) ; vol. 3 2025 / p. 184-194 https://doi.org/10.1007/978-3-031-83523-0_17

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](#)

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](#)

Dynamic processes of air-water flows in urban water systems = Õhu ja vee koosvoolamise dünaamilised protsessid linna veesüsteemides

Kaur, Katrin 2022 <https://doi.org/10.23658/taltech.68/2022> <https://digikogu.taltech.ee/et/Item/0a655a67-74aa-457e-8640-e7b3ab212695>

https://www.ester.ee/record=b5527832*est

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>

Experimental measurements of momentum changes at hydraulic jump in a transparent horizontal pipe

Kaur, Katrin; Annus, Ivar; Laanearu, Janek Papers presented at 13th International Conference on Pressure Surges, Bordeaux, France, 14th-16th November, 2018 ; volume 2 2018 / p. 925–935 : ill

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>

Flow dynamics in a pipe with a sudden change in diameter

Annus, Ivar; Kaur, Katrin; Vassiljev, Anatoli; Laanearu, Janek; Šanin, Märt 14th International CCWI Conference : 7-9 November

2016 2016 / [8] p. : ill

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>

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](#)

Interfacial mixing of the stratified flow in the trapezoidal-shape channel with presence of background vorticity

Laanearu, Janek; Kaur, Katrin; Malcangio, Daniela 8th IAHR Europe Congress "Water - across boundaries" : book of abstracts 2024 / p. 177-178 https://www.iahr2024.inec.pt/_files/ugd/366a17_38aaf3e046644a339de05fee8f280f7a.pdf

Kooliõpilased loovad ülikooli kaasabil jätkusuutlikke idufirmasid

Kaur, Katrin; Truu, Murel; Annus, Ivar; Kallau, Kädi Mente et Manu 2020 / lk. 41 <https://dea.digar.ee/cgi-bin/dea?a=is&oid=AKmenteetmanu202011&type=staticpdf>

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 nitrogen leaching from watersheds with large drained peat areas

Vassiljev, Anatoli; Kaur, Katrin; Annus, Ivar Advances in engineering software 2018 / p. 94-100 : ill <https://doi.org/10.1016/j.advengsoft.2018.03.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Numerical and experimental investigation on flow dynamics in a pipe with an abrupt change in diameter

Annus, Ivar; Kartušinski, Aleksander; Vassiljev, Anatoli; Kaur, Katrin Journal of fluids engineering 2019 / art. 101301, 9 p. : ill <https://doi.org/10.1115/1.4043233> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

Numerical modelling of the bottom gravity current in an obstructed channel with trapezoidal cross-section

Laanearu, Janek; Kaur, Katrin; Malcangio, Daniela; Cuthbertson, Alan; Adduce, Claudia; De Falco, Maria Chiara; Negretti, Eletta; Sommeria, Joel 6th IAHR Europe Congress, Warsaw, Poland : abstract book 2021 / p. 247-248 <https://iahr2020.pl/wp-content/uploads/2021/02/Book-of-Abstracts-15-02-2021.pdf>

Numerical study of Tallinn storm-water system flooding conditions using CFD simulations of multi-phase flow in a large-scale inverted siphon

Kaur, Katrin; Laanearu, Janek; Annus, Ivar IOP conference series : materials science and engineering 2017 / art. 012128, 8 p. : ill <https://doi.org/10.1088/1757-899X/251/1/012128> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Numerical study of Tallinn storm-water system flooding conditions using CFD simulations of multi-phase flow in a large-scale inverted siphon : [conference paper]

Kaur, Katrin; Laanearu, Janek; Annus, Ivar 3rd International Conference "Innovative Materials, Structures and Technologies" : Riga, Latvia, 27-29 September 2017 : [abstracts] 2017 / p. 78

Numerical study of turbulence characteristics of bidirectional flow through a trapezoidal channel

Kaur, Katrin; Malcangio, Daniela; **Laanearu, Janek** Proceedings of the 7th Europe Congress of the International Association for Hydro-environment Engineering and Research (IAHR), Athens, Greece, September 7 – 9, 2022 : Abstract Book 2022 / p. 287-288 <https://www.erasmus.gr/microsites/1227/book-of-abstracts>

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](#)

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](#)

Source apportionment of nitrogen in Estonian rivers

Kaur, Katrin; Vassiljev, Anatoli; Annus, Ivar; Stalnacke, Per Journal of water supply : research and technology - AQUA 2017 / p. 469-480 <https://doi.org/10.2166/aqua.2017.036>

Stability study of the stratified flow in the trapezoidal-shape channel with presence of background vorticity

Laanearu, Janek; Kaur, Katrin; Malcangio, Daniela 10th International Symposium on Environmental Hydraulics 2024 : book of abstracts 2024 / 2 p

The dynamics of bi-directional exchange flows

Adduce, Claudia; De Falco, Maria Chiara; Cuthbertson, Alan; **Laanearu, Janek**; Malcangio, Daniela; **Kaur, Katrin**; Negretti, Eletta; Sommeria, Joel 6th IAHR Europe Congress, Warsaw, Poland : abstract book 2021 / p. 231-232 <http://iahr2020.pl/wp-content/uploads/2021/02/Book-of-Abstracts-15-02-2021.pdf>

The Dynamics of bi-directional exchange flows : implications for morphodynamic change within estuaries

Adduce, Claudia; De Falco, Maria Chiara; Cuthbertson, Alan; **Laanearu, Janek**; **Kaur, Katrin** Trans-national Access in Hydralab+ : proceedings of the Joint User Meeting Bucharest - May 23, 2019 2019 / p. 19-26 : ill <https://hydralab.eu/assets/Proceedings-Hydralab-Joint-User-Meeting-May-23-Bucharest.pdf>

Two-phase CFD modelling of air-water flow transition in a horizontal circular pipe and comparisons with experimental results

Laanearu, Janek; **Kaur, Katrin** Papers presented at 13th International Conference on Pressure Surges, Bordeaux, France, 14th-16th November, 2018 ; volume 2 2018 / p. 937-948 : ill

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/>

Using CFD to simulate multi-phase flow in a large-scale inverted siphon : Tallinn storm-water system case study

Kaur, Katrin; **Laanearu, Janek**; **Annus, Ivar** 14th International CCWI Conference : 7-9 November 2016 2016 / [8] p. : ill