

### **Air exchange of the hydraulic system with water-drag-driven dynamics**

Laanearu, Janek Proceedings 39th IAHR World Congress 2022 / p. 1797-1803 <https://doi.org/10.3850/IAHR-39WC2521711920222003>

### **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](#)

### **Analysis and improvement of a perturbation solution for hydraulic flow in a rotating parabolic channel**

Laanearu, Janek; Lundberg, Peter Zeitschrift für angewandte Mathematik und Mechanik 2005 / 7, p. 490-498 : ill  
[https://www.academia.edu/58024357/Analysis\\_and\\_improvement\\_of\\_a\\_perturbation\\_solution\\_for\\_hydraulic\\_flow\\_in\\_a\\_rotating\\_parabolic\\_channel](https://www.academia.edu/58024357/Analysis_and_improvement_of_a_perturbation_solution_for_hydraulic_flow_in_a_rotating_parabolic_channel)

### **Analyzing the emptying process of a large-scale pipeline with three-dimensional CFD simulations**

Chen, Xifeng; Hou, Qingzhi; Tijsseling, Arris S.; Laanearu, Janek; Khu, Soon Thiam Journal of hydraulic engineering 2025 / art. 04025036 <https://doi.org/10.1061/JHEND8.HYENG-14153>

### **Barotropic effects on surface layer on water exchange through horizontal channels with quadratic-shape cross-sections**

Laanearu, Janek; Davies, Peter A. Proceedings of Sixth International Symposium on Stratified Flows : Perth, 11-14.12.2006 2006 / p. 336-341

### **BIAS : a regional management of underwater sound in the Baltic Sea**

Sigray, Peter; Andersson, Mathias; Pajala, Jukka; Laanearu, Janek; Klauson, Aleksander The effects of noise on aquatic life II 2016 / p. 1015-1023 : ill [https://doi.org/10.1007/978-1-4939-2981-8\\_126](https://doi.org/10.1007/978-1-4939-2981-8_126) [Article collection metrics at Scopus](#) [Article at Scopus](#) [Article collection metrics at WOS](#) [Article at WOS](#)

### **Blockage of saline intrusions in restricted, two-layer exchange flows across a submerged sill obstruction**

Cuthbertson, Alan; Laanearu, Janek; Carr, Magda; Sommeria, Joel; Viboud, Samuel Environmental fluid mechanics 2018 / p. 27-57 : ill <https://doi.org/10.1007/s10652-017-9523-2> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Buoyancy-driven two-layer exchange flows across a slowly submerging barrier**

Cuthbertson, Alan; Laanearu, Janek; Davies, Peter A. Environmental fluid mechanics 2006 / p. 133-151 : ill  
[https://www.researchgate.net/publication/227110315\\_Buoyancy-Driven\\_Two-Layer\\_Exchange\\_Flows\\_Across\\_a\\_Slowly\\_Submerging\\_Barrier](https://www.researchgate.net/publication/227110315_Buoyancy-Driven_Two-Layer_Exchange_Flows_Across_a_Slowly_Submerging_Barrier)

### **Dense gravity currents in rotating, up-sloping and converging channel**

Cuthbertson, Alan; Davies, Peter; Laanearu, Janek; Wahlin, Anna Proceedings of VII International Symposium on Stratified Flows (ISSF2011), 22nd-26th of August, Rome, Italy 2011  
[https://www.researchgate.net/publication/283792789\\_Dense\\_Gravity\\_Currents\\_in\\_a\\_Rotating\\_Up-sloping\\_Converging\\_Channel](https://www.researchgate.net/publication/283792789_Dense_Gravity_Currents_in_a_Rotating_Up-sloping_Converging_Channel)

### **Dense-water overflow in a converging and up-sloping channel**

Laanearu, Janek; Cuthbertson, Alan; Davies, Peter Proceedings of VII International Symposium on Stratified Flows (ISSF2011), 22nd-26th of August, Rome, Italy 2011 [https://www.researchgate.net/publication/283792680\\_Dense-Water\\_Overflow\\_in\\_A\\_Converging\\_and\\_Up-sloping\\_Channel](https://www.researchgate.net/publication/283792680_Dense-Water_Overflow_in_A_Converging_and_Up-sloping_Channel)

### **Discussion of "Rigid Water Column Model for Simulating the Emptying Process in a Pipeline Using Pressurized Air" by Oscar E. Coronado-Hernández, Vicente S. Fuertes-Miquel, Pedro L. Iglesias-Rey, and Francisco J. Martínez-Solano**

Hou, Qingzhi; Li, Shunda; Tijsseling, Arris S.; Laanearu, Janek Journal of hydraulic engineering 2020 / art. 07020001, 6 p. : ill  
[https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0001682](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001682) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Dynamic processes of air-water flows in urban water systems = Õhu ja vee koosvoolumise 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](https://www.ester.ee/record=b5527832*est)

### **Dynamics of dense gravity currents and mixing in an up-sloping and converging vee-shaped channel**

Laanearu, Janek; Cuthbertson, Alan; Davies, Peter A. Journal of hydraulic research 2014 / p. 67-80 : ill  
<https://doi.org/10.1080/00221686.2013.841779> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Effects of bottom-height changes on maximal exchange-flow estimates in channels with quadratic shape cross sections**

Laanearu, Janek; Davies, Peter A.; Koppel, Tiit Proceedings of 32nd Congress of IAHR : Venice, Italy, July 1-6, 2007 2007 / ? p  
<https://www.iahr.org/library/infor?pid=15300>

### **Emptying of large-scale pipeline by pressurized air**

Laanearu, Janek; Annus, Ivar; Koppel, Tiit; Bergant, Anton; Vučkovic, Sašo; Hou, Qingzhi; Tijsseling, Arris S.; Anderson, Alexander; Westende, Jos M.C.van't Journal of hydraulic engineering 2012 / p. 1090-1100 : ill  
[https://www.win.tue.nl/~atijssel/pdf\\_files/Laanearu-et-al\\_2012.pdf](https://www.win.tue.nl/~atijssel/pdf_files/Laanearu-et-al_2012.pdf)

**Experimental and analytical investigation of dense gravity currents in a rotating, up-sloping and converging channel**

Cuthbertson, Alan; **Laanearu, Janek**; Wahlin, Anna K.; Davies, Peter A. Dynamics of atmospheres and oceans 2011 / p. 386-409 : ill <https://www.sciencedirect.com/science/article/pii/S0377026511000467>

**Experimental and analytical modelling study of water-front dynamics of two-phase unsteady flows in a large-scale pressurized pipeline**

**Laanearu, Janek**; Hou, Qingzhi; Tijsseling, Arris S. Papers presented at 12th International Conference on Pressure Surges : Dublin, Ireland : 18-20 November 2015 2015 / p. 625-637 : ill

**Experimental and analytical study of the air-water interface kinematics during filling and emptying of a horizontal pipeline**

**Laanearu, Janek**; Hou, Qingzhi; Tijsseling, Arris S. 12th International Conference on Pressure Surges : Dublin, Ireland, 18-20 November 2015 2015 / p. 625-637 : ill

**Experimental and numerical modelling of stratified exchange flows and blocking over a submerged sill**

Cuthbertson, Alan; Berntsen, Jarle; **Laanearu, Janek**; Asplin, Magdali 6th IAHR Europe Congress, Warsaw, Poland : abstract book 2021 / p. 237-238 : ill <https://iahr2020.pl/wp-content/uploads/2021/02/Book-of-Abstracts-15-02-2021.pdf>

**Experimental data on filling and emptying of a large-scale pipeline**

Chen, Xifeng; Hou, Qingzhi; **Laanearu, Janek**; Tijsseling, Arris S. Scientific data 2024 / art. 603 <https://doi.org/10.1038/s41597-024-03441-7> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Experimental investigation on rapid filling of a large-scale pipeline**

Hou, Qingzhi; Tijsseling, Arris S.; **Laanearu, Janek**; **Annus, Ivar**; **Koppel, Tiit** Journal of hydraulic engineering 2014 / art. 04014053, p. 1-14 : ill [https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0000914](https://doi.org/10.1061/(ASCE)HY.1943-7900.0000914) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Experimental investigation on rapid filling of a large-scale pipeline**

Hou, Qingzhi; Tijsseling, Arris S.; **Laanearu, Janek**; **Annus, Ivar**; **Koppel, Tiit** 2013

**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

**Experimental studies of internal and near-bed dynamics of restricted exchange flows [Electronic resource]**

Carr, Magda; Cuthbertson, Alan; **Laanearu, Janek**; Sommeria, Joel; Kean, Jonathan; **Lilover, Madis-Jaak**; **Kollo, Monika**; Berntsen, Jarle; Thiem, Øyvind; Viboud, Samuel E-proceedings of the 36th IAHR World Congress : 28 June - 3 July, 2015, The Hague, the Netherlands 2015 / p. 1-4 : ill

**Experimental study of eddy viscosity for breaking waves on sloping bottom and comparisons with empirical and numerical predictions**

**Oldekop, Nelly**; Liiv, Toomas; **Laanearu, Janek** Proceedings of the Estonian Academy of Sciences 2019 / p. 299-312 : ill <https://doi.org/10.3176/proc.2019.3.07> [http://www.kirj.ee/public/proceedings\\_pdf/2019/issue\\_3/proc-2019-3-299-312.pdf](http://www.kirj.ee/public/proceedings_pdf/2019/issue_3/proc-2019-3-299-312.pdf) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Experimental study of filling and emptying of a large-scale pipeline**

Hou, Qingzhi; Tijsseling, Arris S.; **Laanearu, Janek**; **Annus, Ivar**; **Koppel, Tiit**; Bergant, Anton; Vučkovič, S.; Gale, Janez; Anderson, A.; Westende, Jos M.C.van't; Pandula, Zoltan; Ruprecht, A. 2012 [https://www.researchgate.net/publication/254810149\\_Experimental\\_study\\_of\\_filling\\_and\\_emptying\\_of\\_a\\_large-scale\\_pipeline](https://www.researchgate.net/publication/254810149_Experimental_study_of_filling_and_emptying_of_a_large-scale_pipeline)

**Experimental study of uni- and bi-directional exchange flows in a large scale rotating trapezoidal channel**

De Falco, Maria Chiara; Adduce, Claudia; Cuthbertson, Alan; Negretti, Maria Eletta; **Laanearu, Janek**; Malcangio, Daniela; Sommeria, Joel Physics of Fluids 2021 / art. 036602, 17 p. : ill <https://doi.org/10.1063/5.0039251> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Experimental study on dynamical blocking conditions of net exchange flows**

**Laanearu, Janek**; Cuthbertson, Alan; Carr, Magda; Sommeria, Joel; **Lilover, Madis-Jaak**; Viboud, Samuel; Berntsen, Jarle VIIIth International Symposium on Stratified Flows : San Diego 2016 2016 / p. 1-8 : ill <http://escholarship.org/uc/item/48s7m6h9>

**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

**Gravity currents in rotating, topographically-controlled channels**

Cuthbertson, Alan; Davies, Peter A.; Chafik, Leon; Lundberg, Peter; **Laanearu, Janek**; Wahlin, Anna Proceedings of 3rd International Symposium on Shallow Flows (ISSF) : June 4-6, 2012, Iowa City, IA, USA 2012 / p. 146-155 : ill

[https://www.researchgate.net/publication/283791457\\_Gravity\\_Currents\\_in\\_Rotating\\_Topographically-controlled\\_Channels](https://www.researchgate.net/publication/283791457_Gravity_Currents_in_Rotating_Topographically-controlled_Channels)

### **Gravity currents in rotating, wedge-shaped, adverse channels**

Cuthbertson, Alan; Lundberg, Peter; Davies, Peter A.; **Laanearu, Janek** Environmental fluid mechanics 2014 / p. 1251-1273 : ill  
<https://doi.org/10.1007/s10652-013-9285-4> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Hoone kanalisatsioon [Võrguteavik] = Draining system inside buildings / Eesti Standardimis- ja Akrediteerimiskeskus**  
2021 [https://www.ester.ee/record=b5449156\\*est](https://www.ester.ee/record=b5449156*est)

### **Hydraulic characteristics of test rig used in filling and emptying experiments of large-scale PVC pipeline**

**Laanearu, Janek**; Westende, Jos M.C.van't Proceedings of the HYDRALAB III Joint Transnational Access User Meeting : Hannover, February 2010 2010 / p. 5-8 : ill [https://hydralab.eu/uploads/proceedings/Delft-4\\_Laanearu.pdf](https://hydralab.eu/uploads/proceedings/Delft-4_Laanearu.pdf)

### **Hydraulic control of two-layer flow in "quadratic"-type channels**

**Laanearu, Janek**; Davies, Peter Journal of hydraulic research 2007 / 1, p. 3-12

### **Hydraulic formulae of two-layer exchange flow in an obstructed channel with trapezoidal cross-section**

**Laanearu, Janek**; Cuthbertson, Alan 6th IAHR Europe Congress, Warsaw, Poland : abstract book 2021 / p. 245-246  
<https://iahr2020.pl/wp-content/uploads/2021/02/Book-of-Abstracts-15-02-2021.pdf>

### **Hydraulic modelling challenges of river-basin restoration channels in some Estonian rivers**

**Laanearu, Janek** 10th International Symposium on Environmental Hydraulics 2024 : book of abstracts 2024 / 2 p

### **Hydraulic modelling of interfacial processes for two-layer maximal exchange**

**Laanearu, Janek**; Cuthbertson, Alan 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. 305-306  
<https://www.erasmus.gr/microsites/1227/book-of-abstracts>

### **Hydraulic modelling of oil spill through submerged orifices in damaged ship hulls**

**Kollo, Monika**; **Laanearu, Janek**; **Tabri, Kristjan** Ocean engineering 2017 / p. 385-397 : ill  
<https://doi.org/10.1016/j.oceaneng.2016.11.032> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Hydraulic modelling of stratified bi-directional flow in a river mouth**

**Laanearu, Janek**; **Vassiljev, Anatoli**; Davies, Peter A. Engineering and computational mechanics 2011 / p. 207-216 : ill  
[https://www.researchgate.net/publication/259638019\\_Hydraulic\\_modelling\\_of\\_stratified\\_bi-directional\\_flow\\_in\\_a\\_river\\_mouth](https://www.researchgate.net/publication/259638019_Hydraulic_modelling_of_stratified_bi-directional_flow_in_a_river_mouth)

### **Hydraulic modelling of submerged oil spill including tanker hydrostatic overpressure**

**Sergejeva, Monika**; **Laanearu, Janek**; **Tabri, Kristjan** Analysis and design of marine structures : proceedings of the 4th International Conference on Marine Structures (MARSTRUCT 2013), Espoo, Finland, 25-27 March 2013 2013 / p. 209-217 : ill

### **Hydraulics of stratified sill flows within varying channel geometries : investigating energy loss and mixing of maximal two-layer exchange**

**Laanearu, Janek**; Cuthbertson, Alan Environmental fluid mechanics 2023 / p. 429-464 <https://doi.org/10.1007/s10652-022-09899-6>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Improved one-dimensional models for rapid emptying and filling of pipelines**

Tijsseling, Arris S.; Hou, Qingzhi; Bozkus, Zafer; **Laanearu, Janek** Journal of pressure vessel technology 2016 / p. 031301-1 - 031301-11 : ill <https://doi.org/10.1115/1.4031508> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Improvements of series convergence to the rotating-channel flow problem using hydraulic solutions for a parabolic passage**

Lundberg, Peter; **Laanearu, Janek** Journal of hydraulic research 2018 / p. 313-323 : ill <https://doi.org/10.1080/00221686.2017.1354929>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Interfacial mixing of dense-water overflow in a converging and up-sloping channel**

**Laanearu, Janek**; Cuthbertson, Alan; Davies, Peter A. Proceedings of the 2nd IAHR European Conference : June 27-29, 2012, München, Bavaria, Germany 2012 / [6] p <https://www.iahr.org/library/infor?pid=11198>

### **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](https://www.iahr2024.inec.pt/_files/ugd/366a17_38aaf3e046644a339de05fee8f280f7a.pdf)

### **Internal dynamics of a dense-water overflow in an up-sloping and converging vee-shaped channel**

**Laanearu, Janek**; Cuthbertson, Alan; Davies, Peter A. Proceedings of 3rd International Symposium on Shallow Flows (ISSF) : June 4-6, 2012, Iowa City, IA, USA 2012 / [10] p [https://www.researchgate.net/publication/283791510\\_Internal\\_Dynamics\\_of\\_a\\_Dense-water\\_Overflow\\_in\\_an\\_Up-sloping\\_and\\_Converging\\_Vee-shaped\\_Channel](https://www.researchgate.net/publication/283791510_Internal_Dynamics_of_a_Dense-water_Overflow_in_an_Up-sloping_and_Converging_Vee-shaped_Channel)

**Investigation of the eddy viscosity for a breaking wave in the surf zone = Turbulentse viskoossusteguri määramine murdlaine piirkonnas ranna-alal**

Oldekop, Nelly 2019 <https://digikogu.taltech.ee/et/Item/4bff81c5-ce66-4efb-a833-0ae8e0fbbdd9>

**Is the Baltic deep-water transport through the Stolpe trench hydraulically controlled?**

Borenäs, K.; Hietala, R.; Laanearu, Janek; Lundberg, Peter Abstract publications of the 23rd CBO, Helsinki, 2003. 1 2003 / p. 87

**Joint influence of river stream, water level and wind waves on the height of sand bar in a river mouth**

Laanearu, Janek; Koppel, Tiit; Soomere, Tarmo; Davies, Peter A. Nordic hydrology 2007 / 3, p. 287-302

<https://iwaponline.com/hr/article/38/3/287/688/Joint-influence-of-river-stream-water-level-and>

**Lugeja küsib: kuidas linnaõhu lehest vabaneda?**

Laanearu, Janek novaator.err.ee 2025 <https://novaator.err.ee/1609711500/lugeja-kusib-kuidas-linnaohu-lehest-vabaneda>

**Management study of low-temperature water in the urban environment as a potential thermal-energy source**

Laanearu, Janek; Borodinecs, Anatolijs; Rimeika, M.; Palm, B. 3rd International Conference "Innovative Materials, Structures and Technologies" : Riga, Latvia, 27-29 September 2017 : [abstracts] 2017 / p. 90

**Mere- ja jõevee koostoime dünaamikast Pärnu jõe suudmealal**

Laanearu, Janek Keskkonnatehnika 2013 / lk. 10-12 : ill [https://artiklid.elnet.ee/record=b2639626\\*est](https://artiklid.elnet.ee/record=b2639626*est)

**Mixing associated with density-driven exchange flow over estuarine barriers**

Davies, Peter A.; Cuthbertson, Alan; Laanearu, Janek Mixing of coastal, estuarine and riverin shallow flows 2008 / p. 31-32

**Modelling of exchange flow in horizontal channels with quadratic-shape cross sections : Pärnu river mouth case study**

Laanearu, Janek; Vassiljev, Anatoli; Davies, Peter First IAHR European Division Congress : Herriot Watt University, Edinburgh, UK, 4th, 5th, 6th May 2010 : paper abstracts 2010 / p. 18

**Modelling of odour dispersion from multiple point sources**

Palmiste, Ülar; Kurnitski, Jarek; Laanearu, Janek IX International Symposium on Stratified Flows : abstracts 2022 / p. 77

[https://www.dropbox.com/s/em57tmgs3ivcv5a/Abstract\\_book\\_Opt.pdf?dl=0](https://www.dropbox.com/s/em57tmgs3ivcv5a/Abstract_book_Opt.pdf?dl=0)

**Modelling of stormwater discharge and quality in urban area**

Koppel, Tiit; Vassiljev, Anatoli; Puust, Raido; Laanearu, Janek International journal of ecological science and environmental engineering 2014 / p. 80-90 : ill

**Mürarikas Läänemeri : [TTÜ osaleb Läänemere veealuse müra mõõtmistööde projektis BIAS]**

Laanearu, Janek Mente et Manu 2012 / lk. 9 [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Numbrilised arvutuskeemid voolamise hüdraulikas**

Laanearu, Janek; Piirsalu, Andres 2022 [https://www.ester.ee/record=b5525227\\*est](https://www.ester.ee/record=b5525227*est) <https://digikogu.taltech.ee/et/Item/33c0c06f-f558-4025-a59b-2bb7b943c95e>

**Numerical analysis of air-water stratified flow in pipe with branch junctions**

Laanearu, Janek Proceedings of the 40th IAHR World Congress (Vienna, 2023) 2023 / p. 3196 - 3204 [https://doi.org/10.3850/978-90-833476-1-5\\_iahr40wc-p0353-cd](https://doi.org/10.3850/978-90-833476-1-5_iahr40wc-p0353-cd)

**Numerical modeling study of stratified flow and related air exchange in large-diameter water collection systems**

Laanearu, Janek World environmental and water resources congress 2023 : adaptive planning and design in an age of risk and uncertainty 2023 / p. 1161-1174 <https://doi.org/10.1061/9780784484852.106>

**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 atrapezoidal 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 : Abstrack Book 2022 / p. 287-288  
<https://www.erasmus.gr/microsites/1227/book-of-abstracts>

### **Observed thermohaline fields and low-frequency currents in the Narva Bay**

**Laanearu, Janek; Lips, Urmas** Proceedings of the Estonian Academy of Sciences. Engineering 2003 / 2, p. 91-106 : ill  
[https://artiklid.elnet.ee/record=b1012786\\*est](https://artiklid.elnet.ee/record=b1012786*est)

### **On coastal waves and related upwellings in the Narva Bay**

**Laanearu, Janek** Coastal Engineering VI : Computer Modelling and Experimental Measurements of Seas and Coastal Regions : [papers of international conference] 2003 / p. 53-61 : ill

### **On determination of flow routes in a stormwater network using the least squares method**

**Laanearu, Janek; Annus, Ivar; Vassiljev, Anatoli; Koppel, Tiit** Integrating Water Systems : proceedings of the Tenth International Conference on Computing and Control in the Water Industry 2009 : CCWI2009 : Sheffield, UK, 1-3 September 2009 2009 / p. 731-734

### **On long-wave dependent flow transitions in partially filled large-scale pipeline [Electronic resource]**

**Laanearu, Janek; Annus, Ivar; Koppel, Tiit** Water Engineering for a Sustainable Environment : 33rd IAHR Congress, Vancouver, British Columbia, Canada, 9-14 August, 2009 2009 / p. 6553-6560 <https://www.iahr.org/library/infor?pid=24429>

### **On parameterization of emulsification and heat exchange in the hydraulic modelling of oil spill from a damaged tanker in winter conditions**

**Kollo, Monika; Laanearu, Janek; Tabri, Kristjan** Progress in the Analysis and Design of Marine Structures : proceedings of the 6th International Conference on Marine Structures (MARSTRUCT 2017), Lisbon, Portugal, 8–10 May 2017 2017 / p. 43-50  
<https://www.taylorfrancis.com/books/e/9781351653411>

### **An online platform for rapid oil outflow assessment from grounded tankers for pollution response**

**Tabri, Kristjan; Heinvee, Martin; Laanearu, Janek; Kollo, Monika; Goerlandt, Floris** Marine pollution bulletin 2018 / p. 963-976 : ill  
<https://doi.org/10.1016/j.marpolbul.2018.06.039> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **An optimal solution of thermal energy usage in the integrated system of stormwater collection and domestic-water heating**

**Kollo, Monika; Laanearu, Janek** Urban water journal 2017 / p. 212-222 : ill <https://doi.org/10.1080/1573062X.2015.1086006> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Optimal utilization of rain-water heat in domestic water system of public building**

**Sergejeva, Monika; Laanearu, Janek** CLIMA 2013 : 11th REHVA World Congress and the 8th International Conference on IAQVEC : June 16–19, 2013, Prague Congress Centre, Czech Republic : programme 2013 / p. 114

### **Parameterization of moderate net exchange-flow solutions for quadratic horizontal channels**

**Laanearu, Janek; Davies, Peter A.** Mixing of coastal, estuarine and riverin shallow flows 2008 / p. 69-70

### **Parametric modelling study for filling of horizontal pipe containing water**

**Laanearu, Janek; Annus, Ivar; Sergejeva, Monika; Koppel, Tiit; Puust, Raido** WDSA 2012 : 14th Water Distribution Systems Analysis Conference : 24-27 September 2012 in Adelaide, South Australia 2012 / p. 678-693  
[https://www.researchgate.net/publication/286954531\\_Parametric\\_modelling\\_study\\_for\\_filling\\_of\\_horizontal\\_pipe\\_containing\\_water](https://www.researchgate.net/publication/286954531_Parametric_modelling_study_for_filling_of_horizontal_pipe_containing_water)

### **Passenger ship source level determination in shallow water environment**

**Mustonen, Mirko; Klauson, Aleksander; Laanearu, Janek; Ratassepp, Madis; Folegot, Thomas; Clorennec, Dominique** Proceedings of Meetings on Acoustics 2016 / art. 070015, p. 1-9 : ill <http://dx.doi.org/10.1121/2.0000323>

### **Rakenduslik hüdromehaanika**

**Laanearu, Janek** 2019 [https://www.ester.ee/record=b5187522\\*est](https://www.ester.ee/record=b5187522*est)

### **Reovee kogumise süsteem - riskid ja ohud, mida peaksime teadma**

**Piirsalu, Andres; Laanearu, Janek** visionest.institute 2023 [Reovee kogumise süsteem — riskid ja ohud, mida peaksime teadma](#)

### **A review on potential use of low-temperature water in the urban environment as a thermal-energy source**

**Laanearu, Janek; Borodinecs, Anatolijs; Rimeika, M.; Palm, B.** IOP conference series : materials science and engineering 2017 / art. 012054, p. 1-9 : ill <https://doi.org/10.1088/1757-899X/251/1/012054> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Reviewing the effectiveness of GPU power when used for water network optimization problems**

**Puust, Raido; Maddison, Madis; Laanearu, Janek** Urban Water Management: Challenges and Opportunities : proceedings of the

11th International Conference on Computing and Control for the Water Industry (CCWI 2011), University of Exeter, 5-7 September 2011 2011 / p. 3-7 : ill

[https://www.researchgate.net/publication/262911610\\_Reviewing\\_the\\_effectiveness\\_of\\_GPU\\_power\\_when\\_used\\_for\\_water\\_network\\_optimization\\_problems](https://www.researchgate.net/publication/262911610_Reviewing_the_effectiveness_of_GPU_power_when_used_for_water_network_optimization_problems)

### **River-basin restoration hydraulic complexities in some Estonian rivers**

**Laanearu, Janek** 8th IAHR Europe Congress "Water - across boundaries" : book of abstracts 2024 / p. 533-534

[https://www.iahr2024.lnec.pt/files/ugd/366a17\\_38aaf3e046644a339de05fee8f280f7a.pdf](https://www.iahr2024.lnec.pt/files/ugd/366a17_38aaf3e046644a339de05fee8f280f7a.pdf)

### **River-basin restoration hydraulic complexities in some Estonian rivers : Quadratic-type channel flow characteristics at weirs and rapids**

**Laanearu, Janek** 8th IAHR Europe Congress "Water - across boundaries" : full papers 2025 / p. 35-44

<https://www.iahr2024.lnec.pt/proceedings> <http://doi.org/10.34638/3zcb-9082>

### **Rotational effects on exchange flows across a submerged sill**

Cuthbertson, Alan; Brentsen, J.; **Laanearu, Janek**; Asplin, Magdeli Environmental fluid mechanics 2021 / p. 405-432 : ill

<https://doi.org/10.1007/s10652-021-09779-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Semi-empirical method for estimation of energy losses in a large-scale pipeline**

**Laanearu, Janek**; **Annus, Ivar**; **Sergejeva, Monika**; **Koppel, Tiit** Procedia engineering 2014 / p. 969-977 : ill

<https://doi.org/10.1016/j.proeng.2014.02.108> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Some aspects of fluid elasticity related to filling and emptying of large-scale pipeline**

**Laanearu, Janek**; **Bergant, Anton**; **Annus, Ivar**; **Koppel, Tiit**; **Westende, Jos M.C.van't** Proceedings of the 3rd IAHR International Meeting of the Workgroup on Cavitation and Dynamic Problems in Hydraulic Machinery and Systems : Brno, Czech Republic, October 14-16, 2009. Part II 2009 / p. 465-474 : ill

### **Some estimates of the Baltic deep-water transport through the Stolpe trench**

Borenäs, K.; Hietala, R.; **Laanearu, Janek**; Lundberg, Peter Tellus series A : dynamic meteorology and oceanography 2007 / 2, p.

238-248 <https://www.tandfonline.com/doi/abs/10.1111/j.1600-0870.2006.00221.x>

### **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

### **A study on relationships between forcing factors and morphological parameters of outlet areas of some rivers flowing into the Estonian coastal sea**

**Koppel, Tiit**; **Laanearu, Janek** River basin management III : Third International Conference on River Basin Management 2005 / p.

225-235 : ill <https://www.witpress.com/elibrary/wit-transactions-on-ecology-and-the-environment/83/15405>

### **Teadlased uurivad linnateedel liikuvaid kaevuluuke**

**Laanearu, Janek** postimees.ee 2025 <https://teadus.postimees.ee/8260743/teadlased-uurivad-linnateedel-liikuvaid-kaevuluuke>

### **The behaviour of dense gravity currents in a rotating channel with converging topography**

Cuthbertson, Alan; **Laanearu, Janek**; Davies, Peter; Wahlin, Anna Proceedings of the HYDRALAB III Joint Transnational Access User Meeting : Hannover, February 2010 2010 / p. 155-158 : ill

[https://www.academia.edu/74207598/The\\_behaviour\\_of\\_dense\\_gravity\\_currents\\_in\\_a\\_rotating\\_channel\\_with\\_converging\\_topography](https://www.academia.edu/74207598/The_behaviour_of_dense_gravity_currents_in_a_rotating_channel_with_converging_topography)

### **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>

### **Three-dimensional CFD analysis of liquid slug acceleration and impact in a voided pipeline with end orifice**

He, Junling; Hou, Qingzhi; Lian, Jijian; Tijsseling, Arris S.; Bozkus, Zafer; **Laanearu, Janek**; Lin, Lei Engineering Applications of Computational Fluid Mechanics 2022 / p. 1444-1463 <https://doi.org/10.1080/19942060.2022.2095440> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Topographically constrained deep-water flows in the Baltic Sea**

**Laanearu, Janek**; Lundberg, Peter Journal of sea research 2003 / p. 257-265 : ill

### **Transient flow during filling of horizontal pipe containing water**

**Laanearu, Janek; Annus, Ivar; Raidmaa, Meelis; Koppel, Tiit** Urban Water Management: Challenges and Opportunities : proceedings of the 11th International Conference on Computing and Control for the Water Industry (CCWI 2011), University of Exeter, 5-7 September 2011 2011 / p. 913-918 : ill

**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

**Underwater soundscape**

Pajala, Jukka; **Klauson, Aleksander; Laanearu, Janek;** Peltonen, Heikki; **Mustonen, Mirko** The Gulf of Finland assessment 2016 / p. 292-305 : ill <http://hdl.handle.net/10138/166296>

**Uni- and bidirectional stratified flows in submerged openings of built environment = Ühe- ja kahesuunaline stratifitseeritud voolamine konstruktsioonipiirde uputatud avades**

**Kollo, Monika** 2018 <https://digi.lib.ttu.ee/i/?9257> [https://www.ester.ee/record=b4758708\\*est](https://www.ester.ee/record=b4758708*est)

**Use of the rotating hydraulics for description of overflows through the Baltic Straits**

**Laanearu, Janek** The 2nd Meeting on the Physical Oceanography of Sea Straits, Villefranche, 15th-19th April 2002 2002 / p. 147-150 : ill

**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

**Using MOC based method to detect abnormal conditions in water networks with less computational effort**

**Puust, Raido; Sergejeva, Monika; Laanearu, Janek** Proceedings of HIC 2012 : 10th International Conference on Hydroinformatics : Hamburg (Germany), July 14-18, 2012 2012

**Using transient flow equations for modelling of filling and emptying of the large-scale pipeline**

**Koppel, Tiit; Laanearu, Janek; Annus, Ivar; Raidmaa, Meelis** Water Distribution System Analysis 2010 : WDSA2010 : Tucson, AZ, USA, Sept. 12-15, 2010 2010 / [9] p.: ill <https://ascelibrary.org/doi/10.1061/41203%28425%2912>

**Uued inimesed ja positsioonid**

**Tammet, Tanel; Uska, Riina; Laanearu, Janek; Tabri, Kristjan; Vendelin, Marko; Margus, Madis; Kindsigo, Merit; Talpsepp, Tõnn; Tähemaa, Toivo; Laos, Katrin; Liiv, Innar; Rüütmann, Tiia; Sarapuu, Külli; Kikkas, Kaido; Pachel, Karin** Mente et Manu 2022 / lk. 40-49 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Water-column mass losses during the emptying of a large-scale pipeline by pressurized air**

**Laanearu, Janek;** Hou, Qingzhi; **Annus, Ivar;** Tijsseling, Arris S. Proceedings of the Estonian Academy of Sciences 2015 / p. 8-16 : ill [https://artiklid.elnet.ee/record=b2717477\\*est](https://artiklid.elnet.ee/record=b2717477*est) <https://doi.org/10.3176/proc.2015.1.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#) [Article at WOS](#)

**Väliskanalisatsioonivõrk [Võrguteavik] = Sewer system inside buildings**

2021 [https://www.ester.ee/record=b5449238\\*est](https://www.ester.ee/record=b5449238*est)

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