Publikationen

1. Abbaszadeh, S. et al.: A design concept and kinematic model for a soft aquatic robot with complex bio-mimicking motion; *Journal of Bionic Engineering,* 19, 16-28, (2022), DOI: 10.1007/s42235-021-00126-4
2. Pauwels, I. et al.: Archimedes Screw-An Alternative for Safe Migration Through Turbines? *Novel Developments for Hydropower, DOI: › 10.1007/978-3-030-99138-8_11* (2022)
3. Powalla, D. et al.: A numerical approach for active fish behaviour modelling with a view toward hydropower plant assessment, *Renewable Energy,* DOI: › 0.1016/j.renene.2022.02.064 , (2022)
4. Khan, A. H. et al.: An open 3D CFD model for the investigation of flow environments experienced by freshwater fish; *Journal of Ecologial Informatics, DOI: › 10.1016/j.ecoinf.2022.101652 (2022)*
5. Cleynen, O. et al.: An efficient method for computing the power potential of bypass hydropower installations,*Energies, DOI: › 10.3390/en15093228 (2022)*
6. Helbig, U. et al.: The meander-type fish pass: An alternative to the conventional vertical slot pass *River Research and Applications, 1*–13, (2021), DOI: 10.1002/rra.3827
7. Powalla, D. et al.: A computational fluid dynamics model für a water power plant as platform for etho- and ecohydrauli research*, Energies 14, 639, 1-14, (2021), DOI: 10.3390/en14030639*
8. Roth, M. S. et al.: Turbulent eddy identification of a meander and vertical slot fishways in numerical models applying t IPOS-framework. Journal of Ecohydraulics, (2021), DOI: 10.1080/24705357.2020.1869916
9. Müller, S. et al.: Numerical analysis of the compromise between power output and fish-friendliness in a vortex power plant. *Journal Ecohydraulics,DOI: 10.1080/24705357.2018.1521709, (2019) 1-13.*
10. Stamm, J. et al.: Hydrodynamic and ethohydraulic analysis of a water vortex power plant for assessment of fish passability, Wim Uijttewaal & Mário J. Franca, et al.: River Flow 2020 - Proceedings of the 10th Conference on Fluvial Hydraulics. Taylor & Francis Group, London: 2372–2380,(2020) DOI: 10.1201/b22619
11. Ghani R. et al.: Experimental investigation of a water vortexpower plant – performance and degree ofefficiency,*International Conference on Environment and Natural Science*¸DOI: http://iraj.in, Prague (2019)
12. Müller, S. et al.: Numerical analysis of the compromise between power output and fish-friendliness in a vortex power plant. *Journal Ecohydraulics*, 1-13, (2019), DOI: 10.1080/24705357.2018.1521709
13. Abbaszadeh, S., Kiiski, Y., Leidhold, R. and Hoerner, S., On the influence of head motion on the swimming kinematic of robotic fish. *Bioinspir. Biomim.* 18, (2023) 056007/1-13.

Veröffentlichungen vor Beginn des Projekts

1. Foust, J.M., et al: › Model Testing for Fish Passage: Evaluation of Ice Harbor Turbine Improvements, Proceedings of HydroVision International 2013, PennWell Corp, Tulsa, Okla., (2013)
2. Wagner, F. & Schmalz, W.: › A working guide for site specific evaluations of fish protection and bypass systems, Fish Passage , International conference on river connectivity best practices innovations, Groningen, Niederlande, (2015).
3. I. Kopecki, et al: "Leitströmung an Fischaufstiegsanlagen: Bewertung und Optimierung über ethohydraulische Modellierung". Deutsch. In: Wasserwirtschaft 10/2016, S. 37-42, DOI: 10.1007/s35147-016-0152-3, (2016).
4. I. Kopecki, I. & M. Schneider: › Betriebliche und bauliche Maßnahmen zur Verringerung der Auswirkungen des Schwallbetriebs auf Fischlarven , La Houille Blanche, (2016)
5. I. Kopecki, et al: Depth-dependent hydraulic roughness and its impact on the assessment of hydropeaking, Sci. Total Environ. 575, 1597-1605, DOI: › 10.1016/j.scitotenv.2016.10.110 (2017)
6. N. Müller und J. Stamm. "› Errichtung eines 1:1 Labormodells für ethohydraulische Untersuchungen an einem Wasserwirbelkraftwerk ". In: Dresdner Wasserbauliche Mitteilungen (Heft 60). Deutschland, Dresden: Technische Universität Dresden, Institut für Wasserbau und technische Hydromechanik, 2018, S. 123-132.

7. N. Müller, J. Stamm, and F. Wagner. "Ein Wasserwirbelkraftwerk als ethohydraulisches Versuchsfeld". In: Proceeding of the Congress-International Association for Hydraulic Research (IAHR). Italy, Trentino, 2018. DOI: 10.3850/978-981 11-2731-1_282-cd.
8. S. Müller, O. Cleynen, S. Hoerner, N. Lichtenberg, und D. Thévenin. "Numerische Analyse des Kompromisses zwischen Leistung und Fischfreundlichkeit in einem Wirbelkraftwerk". In: Journal of Ecohydraulics (2018). DOI: 10.1080/24705357.2018.1521709.
9. Müller, N. et al: Ein Wasserwirbelkraftwerk als ethohydraulisches Testfeld, Proceedings of the Congress-International Association for Hydraulic Research (IAHR), (2018). DOI: 10.3850/978-981-11-2731-1_282-cd

Konferenzen

1. Benigni, H. et al.: Numerical Simulation and Experimental Verification of Downstream Migration in a Bulb Turbine. In: *31st IAHR Symposium on Hydraulic Machinery and Systems*, Trondheim, Norway, (2022)
2. Evans, O., et al: Not just the pump; broader considerations for downstream migrating silver eels at a 'fish-friendly' pumping station. In: *Fish Passage 2022:International Conference on River Connectivity*, Richland, USA, (2022)
3. Hoerner, S. et al.: The RETERO project: 3R motivated risk assessment method for downstream fish passage through hydraulic structures, *14th International Symposium on Ecohydraulics*, Nanjing, China, (2022)
4. Wagner et al.: A new, non-invasive fish backpack biologger to measure the physical conditions experienced by swimming fish during downstream passage, *Fish Passage 2022:International Conference on River Connectivity*, Richland, USA, (2022)
5. Powalla, D., Hoerner, S. and Thévenin, D.: Numerical assessment of fish injury risk combining agent-based fish behavior with turbine blade-strike detection,*Fish Passage 2022:International Conference on River Connectivity*, Richland, USA, (2022)
6. Powalla, D. et al.: Fish injury assessment of a hydropower facility bypass, *Conference on Modelling Fluid Flow (CMFF'22)*, Budapest, Hungary, (2022)
7. Roth, M. S. et al.: Ethohydraulic Laboratory Experiments on Fish Descent in Accelerated Flows,*39th IAHR World Congress*, Granada, Spain, (2022
8. Weber, C. et al.: Experimental and numerical evaluation of a multi-degree of freedom biomimicking fish locomotion wi micro fibre composite actuation for a flexible robot, *MECHCOMP7 – 7th International Conference on Mechanics of Composites*, Porto, Spain, (2021)
9. Powalla, D. et al.: Near body flow field measurements on a fish robot,*9th International Symposium on Enviromental Hydraulics,* Seoul, Korea, (2021)
10. Stoltz, U. et al.: Influence of operation modes and fish behavior on fish passage through turbines In: 30th *IAHRSymposium on Hydraulic Machinery and Systems,* Lausanne, Switzerland, , (2021)
11. Stamm, J. et al.: Hydrodynamic and ethoydraulic analysis of a water vortex plant for assessment of fish passability, *Proceedings of the River Flow 2020 conference,* Delft, (2020),