PUBLIKATIONEN (publications)

Feldlabor Gersprenz-Einzugsgebiet / field lab Gersprenz basin ihwb TU Darmstadt (06/2025)

Begutachtete Publikationen (peer-reviewed publications)

2025

- Grosser, P.F. & Schmalz, B. (2025): Assessing the Impacts of Climate Change on Hydrological Processes in a German Low Mountain Range Basin: Modelling Future Water Availability, Low Flows and Water Temperatures Using SWAT+. Environments 12(5), 151. DOI: 10.3390/environments12050151.

2024

- Kissel, M., Bach, M. & Schmalz, B. (2024): Impact of model structure and calibration strategy on baseflow modeling in the German Low Mountain Range. Journal of Hydroinformatics 26(7): 1692-1714. DOI: 10.2166/hydro.2024.077.
- Scholand, D. & Schmalz, B. (2024): Automated quantification of contouring as support practice for improved soil erosion estimation considering ridges. International Soil and Water Conservation Research 12 (2024): 761e774. DOI 10.1016/j.iswcr.2024.07.001.

2023

- David, A., Ruiz Rodriguez, E. & Schmalz, B. (2023): Importance of catchment hydrological processes and calibration of hydrological-hydrodynamic rainfall-runoff models in small rural catchments. Journal of Flood Risk Management: e12901; 30 p. DOI: 10.1111/jfr3.12901.
- Grosser, P.F. & Schmalz, B. (2023): Projecting Hydroclimatic Extremes: Climate Change Impacts on Drought in a German Low Mountain Range Catchment. Atmosphere 14(8): 1203. DOI: 10.3390/atmos14081203.
- Kissel, M., Bach, M. & Schmalz, B. (2023): Evaluation of baseflow modeling with BlueM.Sim for long-term hydrological studies in the German low mountain range of Hesse, Germany. Hydrology 10(12): 222. DOI: 10.3390/hydrology10120222.

2022

- Grosser, P.F., Xia, Z., Alt, J., Rüppel, U. & Schmalz, B. (2022): Virtual field trips in hydrological field laboratories: The potential of virtual reality for conveying hydrological engineering content. Education and Information Technologies 28: 6977–7003. Published: 28.11.2022. DOI: 10.1007/s10639-022-11434-5. IF (2022) 5.5.

2021

- David, A. & Schmalz, B. (2021): A Systematic Analysis of the Interaction between Rain-on-Grid-Simulations and Spatial Resolution in 2D Hydrodynamic Modeling. Water 13(17), 2346. DOI: 10.3390/w13172346.
- Grosser, P.F. & Schmalz, B. (2021): Low Flow and Drought in a German Low Mountain Range Basin. Water 13(3): 316, DOI: 10.3390/w13030316.
- Scholand, D. & Schmalz, B. (2021): Deriving the Main Cultivation Direction from Open Remote Sensing Data to Determine the Support Practice Measure Contouring. Land 10(11): 1279. DOI: 10.3390/land10111279.

2020

- David, A. & Schmalz, B. (2020): Flood Hazard Analysis in Small Catchments: Comparison of Hydrological and Hydrodynamic Approaches by the Use of Direct Rainfall. Journal of Flood Risk Management 2020; 13:e12639: 26 p. DOI: 10.1111/jfr3.12639.
- Kissel, M. & Schmalz, B. (2020): Comparison of baseflow separation methods in the German low mountain range. Water 12, 1740. DOI:10.3390/w12061740.

2019

- Schmalz, B. & Kruse, M. (2019): Impact of land use on stream water quality in the German low mountain range basin Gersprenz. Landscape online 72: 1-17. DOI 10.3097/LO.201972.