

Peer-reviewed ISI ranked journal articles, <https://orcid.org/0000-0002-6301-1634>

*(co-)advised graduate student, **(co-)advised postdoc, EH: Editor's Highlight, AW: Paper received an award

- [57] *Fabiani, G., Barbeta, A., Penna, D., **Klaus, J.** (2022): Sapwood and heartwood are not isolated compartments: consequences for isotope ecohydrology. *Ecohydrology*, e2478.
- [56] **Klaus, J.**, Monk, W., Zhang, L., Hannah, D.M. (2022): Ecohydrological Interactions during Drought. *Ecohydrology*, 15(5), e2456.
- [55] He, Q., Xu, B., Yetemen, Ö., Lütfi Şen, Ö., **Klaus, J.**, Schoppach, R., Çağlar, F., Yu Fan, P., Dieppois, B., Chen, L., Danaila, L., Massei, N., Chun, K.P. (2022): Impact of the North-Sea Caspian pattern on Meteorological drought and Vegetation Response over diverging environmental systems in western Eurasia. *Ecohydrology*, 15(5), e2446.
- [54] *Fabiani, G., **Schoppach, R., Penna, D., **Klaus J.** (2022): Transpiration patterns and water use strategies of beech and oak trees along a hillslope. *Ecohydrology* 15(2), e2382.
- [53] Dugdale, S., **Klaus, J.**, Hannah, D.M. (2022): Looking to the skies: realising the potential of drones and thermal infrared imagery to advance hydrological process understanding in headwaters. *Water Resources Research*, 58, e2021WR031168.
- [52] *Glaser, B., Hopp, L., Partington, D., Brunner, P., Therrien, R., **Klaus, J.** (2021): Sources of surface water in space and time: Identification of delivery processes and geographical sources with hydraulic mixing-cell modelling. *Water Resources Research*, 57, e2021WR030332, <https://doi.org/10.1029/2021WR030332>
- [51] **Schoppach, R., Chun, K.P., He, Q., *Fabiani, G., **Klaus, J.** (2021): Species-specific control of DBH and landscape characteristics on tree-to-tree variability of sap velocity. *Agriculture and Forest Meteorology*, 307, 108533, <https://doi.org/10.1016/j.agrformet.2021.108533>
- [50] Chun, K.P., Dieppois, B., He, Q., Sidibe, M., Eden, J., Paturel, J.E., Mahe, G., Rouché, N., **Klaus, J.**, Conway, D. (2021): Identifying drivers of streamflow extremes in West Africa to inform a nonstationary prediction model. *Weather and Climate Extremes*, 33, <https://doi.org/10.1016/j.wace.2021.100346>.
- [49] He, Q., Chun, K.P., Tan, M.L., Dieppois, B., Juneng, L., **Klaus, J.**, Fournier, M., Massei, N., Yetemen, O. (2021): Tropical drought patterns and their linkages to large-scale climate variability over Peninsular Malaysia. *Hydrological Processes*, 35, e14356, <https://doi.org/10.1002/hyp.14356>
- [48] *Bonanno, E., Blöschl, G., **Klaus, J.** (2021): Flow directions of stream-groundwater exchange in a headwater catchment during the hydrologic year. *Hydrological Processes*, 35, e14310, <https://doi.org/10.1002/hyp.14310>
- [47] Radolinski, J., Pangle, L., **Klaus, J.**, Stewart, R.D. (2021): Testing the “Two Water Worlds” hypothesis under variable preferential flow conditions. *Hydrological Processes*, 35, e14252, <https://doi.org/10.1002/hyp.14252>
- [46] Hissler, C., Martínez-Carreras, N., Barnich, F., Gourdol, L., Iffly, J.-F., Juilleret, J., **Klaus, J.**, Pfister, L. (2021): The Weierbach experimental catchment in Luxembourg: a decade of critical zone monitoring in a temperate forest - from hydrological investigations to ecohydrological perspectives. *Hydrological Processes*, 35, e14140.
- [45] Sternagel, A., Loritz, R., **Klaus, J.**, Berkowitz, B., Zehe, E. (2021): Simulation of reactive solute transport in the critical soil zone: A Lagrangian model framework for transient flow and preferential transport across time scales, *Hydrology and Earth System Sciences*, 25, 1483–1508, 202.

- [44] *Rodriguez, N.B., Pfister, L., Zehe, E., **Klaus, J.** (2021): A comparison of catchment travel times and storage deduced from deuterium and tritium tracers using StorAge Selection functions, *Hydrology and Earth System Sciences*, 25, 401–428, <https://doi.org/10.5194/hess-25-401-2021>
- [43] *Rodriguez, N.B., Benettin, P., **Klaus, J.** (2020)^{AW}: Multimodal water age distributions and the challenge of complex hydrological landscapes. *Hydrological Processes*, 34, 2707-2724.
- [42] *Glaser, B., *Antonelli, M., Hopp, L., **Klaus, J.** (2020): Intra-catchment variability of surface saturation – insights from physically-based simulations in comparison with biweekly thermal infrared image observations. *Hydrology and Earth System Sciences*, 24, 1393–1413.
- [41] *Antonelli, M., *Glaser, B., Teuling, A.J., **Klaus, J.**, Pfister, L. (2020): Saturated areas through the lens: 2. Spatio-temporal variability of streamflow generation and its relationship with surface saturation. *Hydrological Processes*, 34, 1333-1349.
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- [39] Hopp, L., *Glaser, B., **Klaus, J.**, *Schramm, T. (2020): The relevance of preferential flow in catchment scale simulations: Calibrating a 3D dual-permeability model using DREAM. *Hydrological Processes*, 34, 1237–1254.
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- [22] *Glaser, B., **Klaus, J.**, Frei, S., Pfister, L., Hopp, L. (2016): On the value of surface saturated area dynamics mapped with thermal infrared imagery for modeling the hillslope-riparian-stream continuum. *Water Resources Research*, 52 (10), 8317-8342.
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