Results of the STAHY Best Paper Award 2021

The STAHY Best Paper Award 2021 is assigned to:

- David McInerney, University of Adelaide
- Mark Thyer, University of Adelaide
- Dmitri Kavetski, University of Adelaide
- Julien Lerat, Australian Bureau of Meteorology
- George Kuczera, Newcastle University

D. McInerney

M.Thyer

D. Kavetski

J. Lerat

G. Kuczera

for the paper:

McInerney, D., Thyer, M., Kavetski, D., Lerat, J., & Kuczera, G. (2017). *Improving probabilistic prediction of daily streamflow by identifying Pareto optimal approaches for modeling heteroscedastic residual errors*. Water Resources Research, 53(3), 2199-2239, 10.1002/2016WR019168.

The STAHY Best Paper Award 2021 will be assigned during the STAHY'21 Conference - September 2021.

The STAHY Best Paper 2021 is the result of evaluation of the following 20 papers, proposed by the ICSH Officers and published in 2017-2018-2019, ordered by citations (SCOPUS database, excluding self-citations):

1. Chapi, K., Singh, V. P., Shirzadi, A., Shahabi, H., Bui, D. T., Pham, B. T., & Khosravi, K. (2017). A novel hybrid artificial intelligence approach for flood susceptibility assessment. Environmental modelling & software, 95, 229-245. (122 citations)
2. Sadegh, M., Ragno, E., & AghaKouchak, A. (2017). Multivariate Copula A nalysis T oolbox (MvCAT): describing dependence and underlying uncertainty using a B ayesian framework. Water Resources Research, 53(6), 5166-5183. (80 citations)
3. Kundzewicz, Z. W., Krysanova, V., Benestad, R. E., Hov, Ø., Piniewski, M., & Otto, I. M. (2018). Uncertainty in climate change impacts on water resources. Environmental Science & Policy, 79, 1-8. (78 citations)
4. Tyralis, H., Papacharalampous, G., & Langousis, A. (2019). A brief review of random forests for water scientists and practitioners and their recent history in water resources. Water, 11(5), 910. (72 citations)
5. Feng, Z. K., Niu, W. J., Cheng, C. T., & Liao, S. L. (2017). Hydropower system operation optimization by discrete differential dynamic programming based on orthogonal experiment design. Energy, 126, 720-732. (50 citations)
6. Sheikholeslami, R., & Razavi, S. (2017). Progressive Latin Hypercube Sampling: An efficient approach for robust sampling-based analysis of environmental models. Environmental modelling & software, 93, 109-126. (48 citations)

7. Zhao, T., Bennett, J. C., Wang, Q. J., Schepen, A., Wood, A. W., Robertson, D. E., & Ramos, M. H. (2017). How suitable is quantile mapping for postprocessing GCM precipitation forecasts?. Journal of Climate, 30(9), 3185-3196. (47 citations)
8. Peleg, N., Marra, F., Fatichi, S., Paschalis, A., Molnar, P., & Burlando, P. (2018). Spatial variability of extreme rainfall at radar subpixel scale. Journal of Hydrology, 556, 922-933. (33 citations)
9. Şen, Z. (2017). Hydrological trend analysis with innovative and over-whitening procedures. Hydrological Sciences Journal, 62(2), 294-305. (29 citations)
10. McInerney, D., Thyer, M., Kavetski, D., Lerat, J., & Kuczera, G. (2017). Improving probabilistic prediction of daily streamflow by identifying P areto optimal approaches for modeling heteroscedastic residual errors. Water Resources Research, 53(3), 2199-2239. (27 citations)
11. Yang, T., Cui, T., Xu, C. Y., Ciais, P., & Shi, P. (2017). Development of a new IHA method for impact assessment of climate change on flow regime. Global and planetary change, 156, 68-79. (23 citations)
12. Li, B., Liang, Z., Zhang, J., & Wang, G. (2017). A revised drought index based on precipitation and pan evaporation. International Journal of Climatology, 37(2), 793-801. (18 citations)
13. Gong, W., & Duan, Q. (2017). An adaptive surrogate modeling-based sampling strategy for parameter optimization and distribution estimation (ASMO-PODE). Environmental Modelling & Software, 95, 61-75. (16 citations)
14. Tyralis, H., Papacharalampous, G., & Tantanee, S. (2019). How to explain and predict the shape parameter of the generalized extreme value distribution of streamflow extremes using a big dataset. Journal of Hydrology, 574, 628-645. (14 citations)
15. Peng, Y., Chen, K., Yan, H., & Yu, X. (2017). Improving flood-risk analysis for confluence flooding control downstream using copula Monte Carlo method. Journal of Hydrologic Engineering, 22(8), 04017018. (12 citations)
16. Barth, N. A., Villarini, G., & White, K. (2019). Accounting for mixed populations in flood frequency analysis: Bulletin 17C perspective. Journal of Hydrologic Engineering, 24(3), 04019002. (10 citations)
17. Bertola, M., Viglione, A., & Blöschl, G. (2019). Informed attribution of flood changes to decadal variation of atmospheric, catchment and river drivers in Upper Austria. Journal of Hydrology, 577, 123919. (8 citations)
18. Renard, B., & Thyer, M. (2019). Revealing hidden climate indices from the occurrence of hydrologic extremes. Water Resources Research, 55(9), 7662-7681. (5 citations)
19. Thorarinsdottir, T. L., Hellton, K. H., Steinbakk, G. H., Schlichting, L., & Engeland, K. (2018). Bayesian regional flood frequency analysis for large catchments. Water Resources Research, 54(9), 6929-6947. (3 citations)
20. Perez, G., Mantilla, R., Krajewski, W. F., & Wright, D. B. (2019). Using physically based synthetic peak flows to assess local and regional flood frequency analysis methods. Water Resources Research, 55(11), 8384-8403. (3 citations)