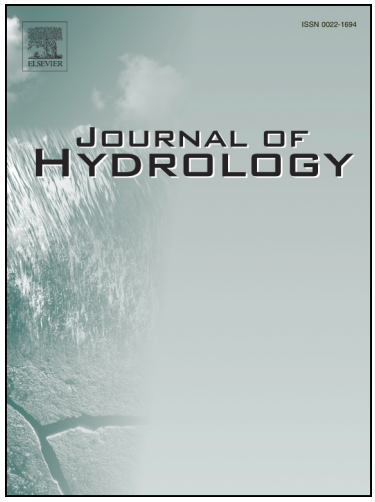

Research papers

An ensemble-based dynamic Bayesian averaging approach for discharge simulations using multiple global precipitation products and hydrological models

Wei Qi, Junguo Liu, Hong Yang, Chris Sweetapple

PII: S0022-1694(18)30025-8
DOI: https://doi.org/10.1016/j.jhydrol.2018.01.026
Reference: HYDROL 22508

To appear in: *Journal of Hydrology*

Received Date: 27 May 2017
Revised Date: 1 December 2017
Accepted Date: 9 January 2018

Please cite this article as: Qi, W., Liu, J., Yang, H., Sweetapple, C., An ensemble-based dynamic Bayesian averaging approach for discharge simulations using multiple global precipitation products and hydrological models, *Journal of Hydrology* (2018), doi: https://doi.org/10.1016/j.jhydrol.2018.01.026

An ensemble-based dynamic Bayesian averaging approach for discharge simulations using multiple global precipitation products and hydrological models

Wei Qi[1, 2*], Junguo Liu[1*], Hong Yang[3, 4] and Chris Sweetapple[5]

[1] School of Environmental Science and Engineering, South University of Science and Technology of China, Xueyuan Road 1088, Nanshan Districit, Shenzhen, 518055, Shenzhen, China

[2] State Key Laboratory of Water Resource & Hydropower Engineering Science, Wuhan University, Wuhan, 430072, China

[3] Eawag, Swiss Federal Institute of Aquatic Science and Technology, Duebendorf, Switzerland

[4] Department of Environmental Science, University of Basel, Basel, Switzerland

[5] Centre for Water Systems, College of Engineering, Mathematics and Physical Sciences, University of Exeter, North Park Road, Exeter, Devon EX4 4QF, United Kingdom

*Email: qiwei_waterresources@hotmail.com; junguo.liu@gmail.com; liujg@sustc.edu.cn

Highlights:

An ensemble-based dynamic Bayesian averaging approach is proposed

Estimate joint probability of precipitation and hydrological models being correct

Estimate posterior distribution based on magnitude and timing of flows

Outstanding capability to estimate expected discharges