

Accepted Manuscript

Research papers

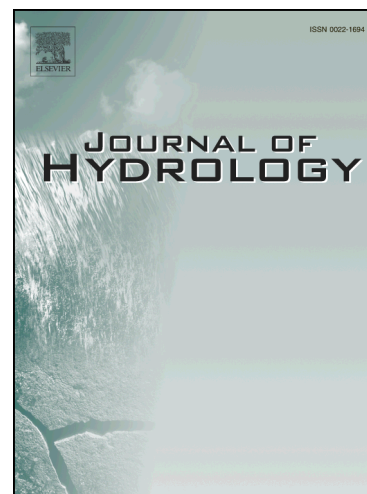
Optimization of rainfall networks using information entropy and temporal variability analysis

Wenqi Wang, Dong Wang, Vijay P. Singh, Yuankun Wang, Jichun Wu, Lachun Wang, Xinqing Zou, Jiufu Liu, Ying Zou, Ruimin He

PII: S0022-1694(18)30086-6
DOI: <https://doi.org/10.1016/j.jhydrol.2018.02.010>
Reference: HYDROL 22559

To appear in: *Journal of Hydrology*

Received Date: 14 October 2017
Revised Date: 4 February 2018
Accepted Date: 6 February 2018



Please cite this article as: Wang, W., Wang, D., Singh, V.P., Wang, Y., Wu, J., Wang, L., Zou, X., Liu, J., Zou, Y., He, R., Optimization of rainfall networks using information entropy and temporal variability analysis, *Journal of Hydrology* (2018), doi: <https://doi.org/10.1016/j.jhydrol.2018.02.010>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Title: Optimization of rainfall networks using information entropy and temporal variability analysis

Authors: Wenqi Wang¹, Dong Wang^{*1}, Vijay P. Singh², Yuankun Wang^{*1}, Jichun Wu¹, Lachun Wang³, Xinqing Zou³, Jiufu Liu⁴, Ying Zou⁴, Ruimin He⁵

¹Key Laboratory of Surficial Geochemistry, Ministry of Education, Department of Hydrosiences, School of Earth Sciences and Engineering, State Key Laboratory of Pollution Control and Resource Reuse, Nanjing University, Nanjing, P.R. China

²Department of Biological and Agricultural Engineering, Zachry Department of Civil Engineering, Texas A & M University, College Station, TX77843, USA

³School of Geographic and Oceanographic science, Nanjing University, Nanjing, P.R. China

⁴Nanjing Hydraulic Research Institute, Nanjing, P.R. China

⁵State Key Laboratory of Hydrology, Water Resources and Hydraulic Engineering, Nanjing Hydraulic Research Institute, Nanjing, P.R. China

(*Corresponding author: Dong Wang, wangdong@nju.edu.cn; Yuankun Wang, yuankunw@nju.edu.cn)

- **Key points:**
- Temporal variability analysis of optimal rainfall network from MIMR
- Optimal network varies significantly under sliding time series with fixed window
- The framework of dynamic network evaluation is proposed for decision support
- Optimal networks from dry season and wet season are compared

Abstract: Rainfall networks are the most direct sources of precipitation data and their optimization and evaluation are essential and important. Information entropy can not only represent the uncertainty of rainfall distribution but can also reflect the

Download English Version:

<https://daneshyari.com/en/article/8894873>

Download Persian Version:

<https://daneshyari.com/article/8894873>

[Daneshyari.com](https://daneshyari.com)