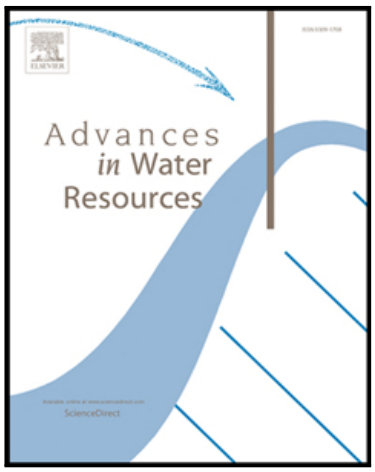

Enhancing Hydrologic Data Assimilation by Evolutionary Particle Filter and Markov Chain Monte Carlo

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Highlights:

- A new data assimilation technique based on Particle Filter, Genetic algorithm and MCMC is proposed.
- The approach considerably enhances the effectiveness and robustness of data assimilation.
- The particle degeneracy and sample impoverishment in particle filtering is considerably reduced with small ensemble size.