

Accepted Manuscript

Review papers

Hysteresis in Hydrology and Hydrological Modeling: Memory, Path-Dependency, or Missing Physics?

S. Gharari, S. Razavi

PII: S0022-1694(18)30459-1

DOI: <https://doi.org/10.1016/j.jhydrol.2018.06.037>

Reference: HYDROL 22886

To appear in: *Journal of Hydrology*

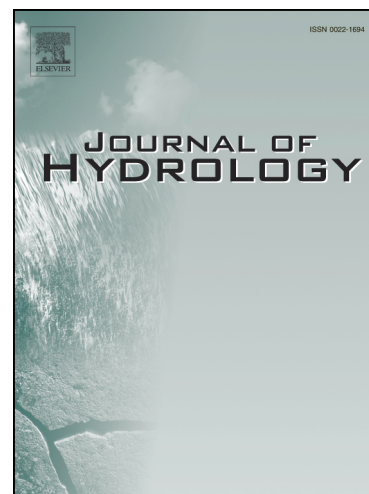
Received Date: 25 October 2017

Revised Date: 12 June 2018

Accepted Date: 15 June 2018

Please cite this article as: Gharari, S., Razavi, S., Hysteresis in Hydrology and Hydrological Modeling: Memory, Path-Dependency, or Missing Physics?, *Journal of Hydrology* (2018), doi: <https://doi.org/10.1016/j.jhydrol.2018.06.037>

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.



Hysteresis in Hydrology and Hydrological Modeling: Memory, Path-Dependency, or Missing Physics?

S. Gharari^{1,2}, S. Razavi^{1,2,3}

1- Global Institute for Water Security, National Hydrology Research Centre, University of Saskatchewan, Saskatoon, Canada.

2- School of Environment and Sustainability, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

3- Department of Civil, Geological, and Environmental Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

Corresponding author: Shervan Gharari (shervan.gharari@usask.ca)

Highlights:

- Hysteresis is manifestation of an incomplete representation of a physical process.
- A system might seem path-dependent due to lack of physical knowledge.
- Hysteresis in hydrology is both rate- and scale- dependent.
- Model structure to a large extent enables the reproduction of observed hysteresis.

Download English Version:

<https://daneshyari.com/en/article/10224048>

Download Persian Version:

<https://daneshyari.com/article/10224048>

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