

Dear Sir or Madame,

We would like to draw your attention to the special section in Water Resources Research titled “*Engagement, Communication, and Decision-Making Under Uncertainty*”. This special section is sponsored by the AGU Technical Committee on Hydrologic Uncertainty, and is now accepting submissions on the AGU GEMS website (<http://wrr-submit.agu.org/cgi-bin/main.plex>).

The purpose of this special section is to highlight how technical and procedural efforts to understand, quantify, and communicate uncertainties can be improved by understanding the needs of the end-users of these estimates. That is, we would like to develop a better community-wide understanding about how and why hydrologic uncertainty estimates are valuable for societal applications, and we are doing this in an effort to ultimately provide guidance to hydrological scientists about how to approach uncertainty quantification and communication. The perspective that we intend to emphasize is that technical methods should be aimed at addressing real concerns of the end-users of hydrological models, data, and science. This is especially important when it comes to uncertainty because there is no potential to develop perfect methods for either quantifying, partitioning, or reducing uncertainty.

Please know that special sections in WRR do not confer any special consideration on articles during the review process. So your article would be treated the same as any other article submitted to this journal.

Of special note: The article needs to be submitted to Water Resources Research no later than January 1, 2017. Please ask for the paper to be considered for inclusion in the special section on uncertainty analysis in your cover letter, and note such during the online submission process.

Thank you for your consideration,

- Grey Nearing; *NASA GSFC*
- Mary Hill; *University of Kansas*
- Ming Ye; *Florida State University*
- Tony Jakeman; *Australian National University*

Purpose Statement for the Special Issue

The purpose of this special issue is to highlight why and in what circumstances uncertainty matters, and how science and research-oriented hydrologists can help identify and provide germane information and support required by decision-makers. Modern hydrologic literature contains a large number of technical approaches to estimating and managing uncertainty, but relatively few insights into how these estimates relate to one another, how they are best used to solve practical problems, and about how the needs of decision making processes can be used to drive the tradeoffs that are inherent in any technical exercise in uncertainty analysis or accounting. Toward this objective, this issue solicits, for example, papers related to the following:

- 1. Frameworks, methodologies, and/or case studies that help to understand which uncertainties are important and to track uncertainties that arise from things like problem framing, modeling, and model evaluation through to the end user. Especially methods that simultaneously and separately consider identifying and managing uncertainty from many sources and facets of the problem.*
- 2. Insights into how users and decision makers can be engaged to influence technical efforts to manage and quantify uncertainty.*
- 3. Methodologies and ontologies for communicating uncertainty that allow for bi-directional feedback between scientists and decision-makers. These may include decision-support systems, web interfaces, and visualization techniques.*

This issue highlights the need for holistic management of uncertainty throughout the entire lifecycle of water resource simulations.
