2021 academic opportunities

ASABE 2021 International Symposium on Soil Erosion Research under a Changing Climate

- https://www.asabe.org/21SoilErosion
- ~~Abstracts due by Saturday, February 15, 2020~~
- Sunday, January 10–Friday, January 15, 2021
- Punta Borinquén Resort, Aguadilla, Puerto Rico
- Submitted abstract
  - Modification of the Universal Soil Loss Equation Model with Climate-Change Induced Parameters and Process Automation
    - Authors: Sudhanshu Panda, Owen Smith, Huidae Cho, Johnny M. Grace III, Devendra M. Amatya, Peter V. Caldwell
- Cancelled because of COVID-19

Free and Open Source Software Developers' European Meeting (FOSDEM) 2021

- https://fosdem.org/2021/
- https://www.osgeo.org/foundation-news/osgeo-at-fosdem-2021-online-call-for-participation/
- https://fosdem.org/2021/schedule/track/geospatial/
- Saturday, February 6–Sunday, February 7, 2021
- Online
- ~~Abstracts due by Saturday, December 26, 2020~~
- Accepted abstract
  - r.accumulate: Efficient computation of hydrologic parameters in GRASS—Improving the performance of geospatial computation for web-based hydrologic modeling
    - Author: Huidae Cho
    - Abstract: The longest flow path is one of the most important geospatial parameters that is used for hydrologic analysis and modeling. However, there are not many available GIS tools that can compute this watershed parameter. At the same time, there have been almost little to no efforts in improving its computational efficiency since its first, to the presenter's best knowledge, introduction by Smith (1995) when the geospatial data resolution was relatively coarser. In this talk, the presenter introduces a new algorithm that applies Hack's law to the discovery of the longest flow path and its efficient implementation as a GRASS module called r.accumulate. He compares its performance to that of commercial ArcHydro's Longest Flow Path tool. Lastly, he introduces a proof-of-concept version of the Web-based Hydrologic Modeling System (WHydroMod) built using GRASS, PyWPS, MapServer, and OpenLayers, and discusses how r.accumulate can be used to improve the efficiency of geospatial computation for WHydroMod.
    - Start time: Sunday, February 7, 2021 at 2:40pm CET (same day at 8:40am EST)
    - Room: D.geospatial
    - https://fosdem.org/2021/schedule/event/raccumulate/
- FOSDEM 2021 video email to speakers

Georgia Water Resources Conference (GWRC) 2021

- https://rivercenter.uga.edu/georgia-water-resources-conference/
- https://rivercenter.uga.edu/propose-a-session/
- Monday, March 22–Tuesday, March 23, 2021
- Online
- Abstracts due by Friday, January 22 at 4pm EST
- Accepted abstract
    - Uncertainty estimation in hydrologic modeling using Bayesian model averaging within the GLUE framework
        - Authors: Huidae Cho, Aboalhasan Fathabadi, Seyed Morteza Seyedian, Bahram Choubin
        - Abstract: The generalized likelihood uncertainty estimation (GLUE) framework has widely been used for uncertainty estimation in hydrologic modeling thanks to its ease of implementation and less strict statistical assumptions about residual errors. However, its subjective factors such as likelihood functions, their threshold values for model classification, and how individual likelihood values are weighted to construct cumulative likelihood distributions play a non-significant role in uncertainty estimation. In this research, we used Bayesian model averaging (BMA), multi-objective optimization, and the k-nearest neighbor (KNN) algorithm within the GLUE framework to replace the conventional likelihood weighting method and compared their performance. We tested two likelihood functions including the Nash-Sutcliffe efficiency (NSE) and flow duration curve (FDC) to evaluate the predictive uncertainty of the Genie Rural (GR) model for the Chehelchay mountain watershed in Minodasht, Golestan province, Iran. The conventional weighting, multi-objective optimization, and KNN methods were more sensitive to the selection of a likelihood function and the FDC likelihood function produces wider predictive uncertainty bounds compared to the NSE function. In contrast, the BMA method produced predictive uncertainty bounds that are more reliable and similar for both likelihood functions, and hence was less sensitive to the selection of a likelihood function. These reliability and insensitivity of a likelihood weighting method to the likelihood function are important features in uncertainty estimation within the GLUE framework.

UNG's 26th Annual Research Conference

- https://digitalcommons.northgeorgia.edu/ngresearchconf/2021virtual/
- Friday, March 26, 2021 from 9am to 3pm
- Online
- Abstracts due by Friday, February 19, 2021 at midnight

GeoPython 2021

- https://2021.geopython.net/
- Thursday, April 22–Friday, April 23, 2021
- Online
- Abstracts due by Monday, January 25, 2021

Asia Oceania Geosciences Society (AOGS) 18th Annual Meeting

- https://www.asiaoceania.org/aogs2021/
- Sunday, August 1–Friday, August 6, 2021
- Online
- Abstracts due by Tuesday, February 23, 2021
- Early registration Tuesday, March 23–May 18, 2021

International Commission on Statistical Hydrology-Statistical Hydrology (ICSH-STAHY) Workshop 2021

- https://stahy2021.congresos.upv.es/
- Thursday, September 16–Friday, September 17, 2021
- València, Spain or online
- Workshop main topics
    - Extreme hydrological and meteorological analysis under global changes
    - Quantifying uncertainty in hydrological predictions
    - Hydrological design and risk assessment under changing environment
    - Applications of big data, data mining and information theory
    - Data assimilation for hydrological forecasts
    - New approaches in time series analysis
    - Spatio-temporal variability and scaling
    - Geostatistics in groundwater and surface hydrology
- Abstracts due by Monday, May 31, 2021
- Invited for serving as and accepted a member of the Scientific Committee