25/11/2022

Dear all

In this week's digest:

- The Research Institute for Environment and Livelihoods at Charles Darwin University is recruiting a PhD student to help develop the first nationwide assessment of carbon export via streams and rivers. The PhD student will undertake river flow and carbon measurements at observatories of the Terrestrial Ecosystem Research Network (TERN) and will combine these measurements with geospatial data and machine learning modelling to extrapolate findings to the continental scale. More info here https://www.seek.com.au/job/59008358 Contact Dr Clément Duvert (clem.duvert@cdu.edu.au)

- The Sax Institute is hiring a Senior System Dynamics Modeller (maternity cover). This role will provide a unique opportunity to build simulation models to solve real-world problems and leave a positive impact on the health and wellbeing of Australians. Being a maternity leave cover, this is a great chance for someone who is looking to step into the health research sector and use their modelling skills in a different and rewarding space. https://www.saxinstitute.org.au/about-us/career-opportunities/

- The call for abstracts is open for the EGU General Assembly to be held in Vienna, Austria in April 2023. An example session is *Revisiting good modelling practices – where are we today and where to tomorrow?* (scroll down for more details below) see https://meetingorganizer.copernicus.org/EGU23/session/45496

- Registration for MODSIM2023 is open, take advantage of the early bird price and book your accommodation now to avoid disappointment, Darwin gets very busy in July.

- Submissions are also open, start by reading the instructions for authors

If you would like something included in this digest, please email it to office@mssanz.org.au
Kind regards, Karen

HS1.3.1

Revisiting good modelling practices – where are we today and where to tomorrow?

Many papers have advised on careful consideration of the approaches and methods we choose for our hydrological modelling studies as they potentially affect our modelling results and conclusions. However, there is no common and consistently updated guidance on what good modelling practice is and how it has evolved since e.g. Klemes (1986), Refsgaard & Henriksen (2004) or Jakeman et al. (2006). In recent years several papers have proposed useful practices such as benchmarking (e.g. Seibert et al., 2018), controlled model comparison (e.g. Clark et al., 2011), careful selection of calibration periods (e.g. Motavita et al., 2019) and methods (e.g. Fowler et al., 2018), or testing the impact of subjective modelling decisions along the modelling chain (Melsen et al., 2019). However, despite their very justified existence, none of the proposed methods have become quite as common and indispensable as the split sample test (KlemeŠ, 1986) and its generalisation to cross-validation.

This session intends to provide a platform for a visible and ongoing discussion on what ought to be the current standard(s) for an appropriate modelling protocol that considers uncertainty in all its facets and promotes transparency in the quest for robust and reliable results. We aim to bring together, highlight and foster work that develops, applies, or evaluates procedures for a trustworthy modelling workflow or that investigates good modelling practices for particular aspects of the workflow. We invite research that aims to improve the scientific basis of the entire modelling chain and puts good modelling practice in focus again. This might include (but is not limited to) contributions on:

(1) Benchmarking model results
(2) Developing robust calibration and evaluation frameworks
(3) Going beyond common metrics in assessing model performance and realism
(4) Conducting controlled model comparison studies
(5) Developing modelling protocols and/or reproducible workflows
(6) Examples of adopting the FAIR (Findable, Accessible, Interoperable and Reusable) principles in the modelling chain
(7) Investigating subjectivity along the modelling chain
(8) Uncertainty propagation along the modelling chain
(9) Communicating model results and their uncertainty to end users of model results
(10) Evaluating implications of model limitations and identifying priorities for future model development and data acquisition planning

Share: https://meetingorganizer.copernicus.org/EGU23/session/45496
Convener: Diana Spieler[ECS] | Co-conveners: Janneke Remmers[ECS], Keirnan Fowler[ECS], Lieke Melsen[ECS], Wouter Knoben[ECS]
Abstract submission