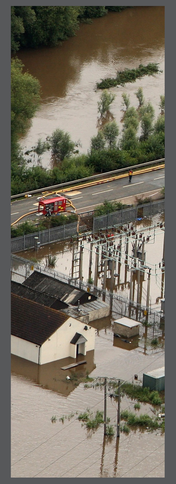

HEPEX

a community of research and practice to advance hydrologic ensemble prediction

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← Melbourne HEPEX "Breaking the Barriers" convention – Twitter feed

Bridging the gap between forecasters and operational hydrologists: an OzEWEX summer institute project →

Summary of the 2018 HEPEX 'Breaking the Barriers' Workshop, Melbourne Australia.

Posted on February 27, 2018 by David Robertson

Contributed by David Robertson, James Bennett, QJ Wang, Daehyok Shin, Andy Wood, Maria-Helena Ramos, Ilias Pechlivanidis and Fredrik Wetterhall.

More than 120 HEPEXers from 15 countries descended on Melbourne, Australia, for three days of sunshine, science and applications at the 2018 HEPEX 'Breaking the Barriers' Workshop.

The meeting kicked off with a warm welcome from the local organizing team (James Bennett, QJ Wang, David Robertson and DH Shin) and a series of short talks recognizing the importance of water predictions and science, and from an elder of the Wurundjeri people, who stressed the long history of indigenous peoples living in balance with the land and water. The Workshop was supported by CSIRO, the University of Melbourne and the Bureau of Meteorology.

CSIRO's James Bennett does the honors in opening up the meeting (left), and Uncle Ron Jones welcomes HEPEX to Wurundjeri country (right)

The participants had the opportunity to listen and interact during the 38 oral presentations (including 3 keynote speeches and 10 invited talks), and 40 posters

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What are the challenges for HEPEX over the next decade?

As we have seen more and more hydrological ensemble forecasts becoming operational, the focus of the Melbourne workshop was to find out what our future priorities should be. Here are the key findings:

Challenge	Suggestions
Education: How do we best educate the next generation of hydrometeorological ensemble forecasters?	Curriculum, training material, short courses
Communication: How do we best support the uptake of hydrometeorological ensembles in the wider community?	Event-based verification, webinars, forecast scenarios
Decision-making: How do we aid the forecasters in probabilistic, risk-based decision-making?	Dissemination tools, training, forecast-based financing
New data: How do we best use new data in our forecasting systems?	Big data, harness social media, data assimilation

The above challenges are just a few examples of the wide range of activities within HEPEX, but they point to a slight shift in direction of HEPEX activities towards more effort in the activities in the interface between modellers and users. It is clear that we need more effort in **co-design and co-development** of our forecast systems together with end-users.

Come and meet us at EGU 2018!

On the second day, we dive into flash floods in the morning and the afternoon offers the very popular PICO session on operational forecasting and warning system for natural hazards:

08:30–10:00 / Room B: Flash floods and associated hydro-geomorphic processes: observation, modelling and warning – This session offers a number of highlighted talks, such as near real-time flash flood impact forecasting, validating impacts from insurance data and monitoring of ungauged catchments with photogrammetric methods

The **meeting of the Sub-Division on Hydrological Forecasting** will be convened by MH Ramos, on Tue, **10 Apr, 10:30–12:00 / Room 2.83** It is open to everybody. Come and join us, notably if you want to meet colleagues or get more involved in the organization of sessions

13:30–17:00 / PICO spot A: Operational forecasting and warning systems for natural hazards: challenges and innovation – as last year, this interactive PICO session aims to bridge the gap between science and practice in operational forecasting for different water-related natural hazard

POSTER SESSION 17:30–19:00 / Hall A: The posters for the flash flood session is as always a good venue to discuss science and enjoy the hospitality

Wednesday is another packed day, with the session on droughts and water scarcity in the morning and games and statistical post-processing in the afternoon. Do not forget the HS division meeting at lunch!

08:30–12:00 / Room 2.44: Drought and water scarcity: monitoring, modelling and forecasting to improve hydro-meteorological risk management – the session includes everything from megadroughts in Chile to crop vulnerability in Kenya alongside presentations on new techniques to monitor and model droughts.

The **Division meeting for Hydrological Science**s (HS) will be convened by Elena Toth, on **Wed, 11 Apr, 12:15–13:15 / Room B**. It is the opportunity to learn more about the way sessions related to Hydrological Sciences are organized at the EGU Assembly. You're all welcome!

13:00–15:30 / Room L7: Games for Geoscience – Learn how games can be a good way to promote science and practice!

15:30–17:00 / Room 0.49: Advances in statistical post-processing for deterministic and ensemble forecasts – learn more about Bayesian post-processing techniques, post-processing of spatial extremes and proper scoring rules.

POSTER SESSION 15:50 – 17:00 Hall X1 for the games and **17:30–19:00 Hall A** for the droughts and **Hall X4** for post-processing

Even though the hydrological forecasting sessions are already over, there are plenty of more interesting presentations to look forward to:

08:30–10:00 / Room 2.95: Advances in socio-hydrology, which attempt to better understand the dynamic interactions and feedbacks within diverse coupled human-water system

13:30–17:00 / Room C: History of hydrology – brush up on your hydrological history and learn more on hydrology in ancient Greece and India, and of course the history of HEPEX!

POSTER SESSION 17:30–19:00, will be in **Hall A**

Another tradition in Vienna: the **HEPEX social gathering @ EGU**. As in last year, it will be co-organized with partners of the IMPREX H2020 project. It will take place on Thursday evening at 8:30pm. Sign up here!

Do you want to join us?

Join & Contact

You can join HEPEX through multiple channels:

- Subscribe to the mailing list.
- Follow us on twitter (@hepexorg), LinkedIn, Facebook or YouTube
- Come to our meetings and exchange ideas in person with other HEPEX members.
- Follow the blog, (blog@hepex.org) submit comments and propose your own posts to be published online.
- Contact HEPEX co-chairs and other local/regional points of contact below for the organization of Hepex-related activities

About HEPEX

HEPEX mission is:

To demonstrate the added value of hydrological ensemble predictions (HEPS) for emergency management and water resources sectors to make decisions that have important consequences for economy, public health and safety.

Key questions of HEPEX are:

- What adaptations are required for meteorological ensemble systems to be coupled with hydrological ensemble systems?
- How should the existing hydrological ensemble prediction systems be modified to account for all sources of uncertainty within a forecast?
- What is the best way for the user community to take advantage of ensemble forecasts and to make better decisions based on them?

HEPEX is organised around six major themes:

- Input and pre-processing
- Ensemble techniques and process modelling
- Data assimilation
- Post-processing
- Verification
- Communication and use in decision making

HEPEX is a community initiative with many people contributing and working on specific topics.

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The HEPEX Portal welcome your comments