Welcome – Bienvenue

2016 HEPEX Workshop
Ensemble for better hydrological forecasts

June 6 to 8, 2016
Université Laval
Québec, Canada
Ensemble for better hydrological forecasts

- It is not only a call to draw attention to the numerous advantages of pooling efficient hydrological solutions to enhance operational forecasting and decision-making, it also stresses the need for more human collaborations all along the modelling chain: among modelers, forecasters, users and decision-makers.

A lot of work can be better achieved together, sharing accomplishments and lessons learned.
About 60 works and 100 participants

- From all over the world
A broad programme

Advances in data assimilation schemes for operational forecasting systems
[Break-out session: “assimilate your basin”]

Quality of (imperfect) hydro-meteorological predictions for hydrologic applications

Producing ensemble predictions and communicating uncertainty in hydrologic forecasting

Making decisions based on uncertain forecasts and economic value

Enhancing science, applications and operations in hydrologic ensemble prediction systems

Value of (imperfect) hydrologic predictions in decision-making and management of water systems

Practical solutions for uncertainty assessment in operational hydrologic forecasting systems

Extended-range predictions

Towards a socio-hydrology framework for hydrologic forecasting and water-related disaster management
Practical info for the next days

- Coffee breaks – here
- Lunches – downstairs
- Poster session & Ice breaker – downstairs
- Convenience store – bus tickets
- Pub
Thanks to the keynote speakers

How forecasts can trigger humanitarian action  
Andrew Kruczkiewicz, Red Cross Red Crescent Climate Centre

Hydrological forecasting from a Great Lakes perspective  
Andrew Gronewold  
NOAA, Great Lakes Environmental Research Laboratory

Lessons learnt from the 2011 Lake Champlain and Richelieu River floods  
Jean-François Cantin  
Environment and Climate Change Canada
Thanks to the organizing and scientific committee members

**Organization and contact**

**Organizing Committee:** François Anctil (Université Laval, Québec), Antoine Thiboult (Université Laval, Québec), Marie-Amélie Boucher (UQAC, Chicoutimi), Richard Turcotte (CEHQ, Québec), Luc Perreault (IREQ, Canada), Fabian Tito Arandia Martinez (Hydro-Québec), Nathalie Voisin (PNNL, USA), Vincent Fortin (EC, Canada), Maria-Helena Ramos (IRSTEA, France), Fredrik Wetterhall (ECMWF, UK), QJ Wang (CSIRO, Australia), Andy Wood (NCAR, USA), Yu Zhang (NOAA National Water Center)

**Scientific Committee:** Amaury Tilmant (U. Laval, Canada), Bryan Tolson (U. Waterloo, Canada), Florian Pappenberger (ECMWF, UK), John Schaaeke (Consultant, USA), Jutta Thielen (JRC, Italy), Paulin Coulibaly (McMaster University, Canada)
Thanks to our funding supporters
HEPEX: a community of research and practice to advance hydrologic ensemble prediction

- An international community in hydrology since 2004
- ~400 members (mailing list)
- Volunteer-based (no funding)
- Specific mission: to foster the links between communities of research and practice in hydrometeorological forecasting
- Several activities, including workshops, online resources, blog posts, networking
Organisation and chairs

- **Main topics:** Input and pre-processing, Ensemble techniques, Data assimilation, Post-processing, Verification, Communication and use in decision-making
- **4 co-chairs:**
  
  *From left to right:*
  
  Andy Wood
  MH Ramos
  Fredrik Wetterhall
  QJ Wang
Blog (since 2013): www.hepex.org

- 3 website administrators
- Several editors and contributors
- Guest columnists each year (A. Persson, L. Stephens, T. Pagano, B. Schaefli, M. Zappa, M.A. Boucher, A. Holz, J. Danhelka, CSIRO Team, SMHI Team, Irstea Team, LSH Brazil Team)

From left to right:
Florian Pappenberger
MH Ramos
Jan Verkade
Blog (since 2013): www.hepex.org

- A total of 250 posts, more than 110,000 views
- Example of May 2016:

Get your geek on: handling data for ensemble forecasting
Posted on May 10, 2016 by David Robertson

Contributed by James Bennett, David Robertson, Andrew Schepen, Jean-Michel Perraud and Robert Bridgart, members of the CSIRO Columnist Team

There’s something about discussions of data handling that’s particularly soporific – but don’t nod off yet!

Most hydrologists are trained to work on individual catchments and we often opt for simple conceptual models. In the pre-ensemble era, we were often quite happy to use unsophisticated ways of crunching numbers: many of us can remember (perhaps quite recently!) using desktop computers to tune and run models, storing data in text files, and so on.

Maybe it’s because it’s obvious, but it’s little remarked that switching from deterministic forecasts to ensembles means handling much more data. Here at CSIRO we tend to use 1000-member ensembles, and our partners at the Bureau of Meteorology use a method
Blog (since 2013): www.hepex.org

The “best ever” post

Can the world of hydrology accept the truth? Let the reign of MEPEX begin!

Contributed by Dr. Meteo McFool and his meteorological accomplices

For too long, we have tolerated so called Hydrologists claiming to use their voodoo magic to make enhanced forecasts or claim they know anything about the water cycle. These so-called ‘scientists’, ‘engineers’ and ‘experts’ (seriously?) are dangerous as they talk to the public, decision makers and politicians, pretending to possess some esoteric knowledge about extreme events such as floods or droughts — without acknowledging that all their wisdom comes from the only true science: meteorology.
Follow www.hepex.org

- Visit our poster
- Tweet during the workshop: it will be our (ensemble) blog post contribution for the next 3 days!

#hepex
Enjoy the workshop and enjoy Québec!