Vienna Catchment Science Symposium, Saturday 14th April, 2018

On the Theme of:

23 unsolved problems in Hydrology that would revolutionise research in the 21st century

Hydrology research is rather fragmented, and this holds back progress. More strongly harmonising our research efforts will focus our research. An example of how this can be done has been shown by mathematician David Hilbert. He set out 23 unsolved mathematical problems at the beginning of the 20th century, which have greatly focused research in mathematics. Can we do something similar in hydrology?

What are the unsolved problems in hydrology that would revolutionise research in the 21st century and raise the level of excitement for the science? To make tangible progress, the problems should:

(1) ideally relate to observed phenomena and why they happen;
(2) they should be universal (i.e. not only apply to one catchment or region); and
(3) they should be specific (so there is hope they can be solved).

In this symposium we aim to identify a set of unsolved problems in hydrology. The list cannot encompass everything we are doing in hydrology, so we need to set priorities. Through panel discussions, breakout groups and plenary sessions we will develop a list that can support all hydrologists to drive hydrology research forward.

Programme

Time	Session	Location
8:30	Tea, coffee, pastries and greetings	3rd Floor Foyer
8:45	**Welcome and Introduction** Günter Blöschl, Vienna University of Technology, Austria	Kuppelsaal
8:50	**Where are the great unknowns and how can we find them?** Panelists present a short opening statement on some great unsolved problems they've encountered (5 mins each): Elena Toth, Jeff McDonnell, Gia Destouni, Elena Volpi, Marc Bierkens, Jim Kirchner Moderator: Günter Blöschl	Kuppelsaal
9:30	The thinking that goes into the identification of scientific problems – experience from ecology William Sutherland	Kuppelsaal
10:00	Tea and coffee	3rd Floor Foyer
10:30	**Let's get to work - generating a list of unsolved problems in hydrology** Three parallel discussion sessions to sort, merge, split and prioritise the list of unsolved problems identified Group 1 (moderator: Elena Toth) Group 2 (moderator: Jeff McDonnell) Group 3 (moderator: Gia Destouni)	Group 1: Kuppelsaal, Group 2: Seminar room Kuppel (4th floor) Group 3: Seminar room 212-232 (3rd

		floor)
12:15	Lunch	3rd Floor Foyer
13:00	**Generating a list of unsolved problems in hydrology (2nd round)** Group 1 (moderator: Elena Volpi) Group 2 (moderator: Marc Bierkens) Group 3 (moderator: Jim Kirchner)	See above
14:45	Tea and coffee	3rd Floor Foyer
15:15	**Generating a list of unsolved problems in hydrology (3rd round)** Group 1 (moderator: Christophe Cudennec) Group 2 (moderator: Hubert Savenije) Group 3 (moderator: Alberto Montanari)	See above
16:30	**Plenary: finalising the list of unsolved problems** Moderator: Günter Blöschl	Kuppelsaal
17:30	Evening drinks reception followed by dinner	3rd Floor Foyer

Location: Kuppelsaal, TU Wien. Karlsplatz 13, 4th floor, 1040 Vienna

To make arrangements we need to know who will attend. Please sign up no later than April 1st by sending an email to office@waterresources.at

See https://www.linkedin.com/groups/13552921 for the IAHS discussion forum

How to reach Karlsplatz 13, Vienna University of Technology, 1040, Vienna

Karlsplatz 13 is located very close to the metro (U-Bahn) station "Karlsplatz" (U-Bahn lines U1, U2, U4).

On leaving Karlsplatz station, follow the signs to Resselpark. Karlsplatz 13 is located directly across the park (2-3 minutes walk from the U-Bahn exit).

The Vienna Catchment Science Symposium will take place in the Kuppelsaal. This is located on the 4th floor. Please use the elevator located at the main entrance of Karlsplatz 13. Tea and coffee will be available from 8:30 am on the 3rd floor, directly by the elevator.

Maps showing location of Karlsplatz 13:

We look forward to seeing you in Vienna!