Workshop IGEM

# Impact of Groundwater in Earth system Models

October 3-5, 2016, Paris

The workshop will take place in a UPMC meeting room, tower 56, 2nd floor, hall 56-46 (maps on page 2).

| **Monday, Oct 3rd: GW use and properties** | | **11 talks** |
|---|---|---|
| 9h | Welcome+coffee | |
| 9h30 | *Introduction/Organisation/Round-Tables (RT)* | |
| 10h | **Aureli** | **UNESCO: Addressing the Challenge of "Groundwater in a Changing Environment"** |
| 10h30 | **Doell** | **Impact of human water use on groundwater, and information content of GRACE for unterstanding groundwater dynamics** |
| 11h | **Villholth** | **Large Scale Groundwater Assessments in Context of the Global Water-Food-Climate-Environment Nexus** |
| 11h30 | **Wada** | **Fate of water pumped from underground and contributions to sea level rise** |
| 12h | *Discussion around the RT questions* | |
| 12h30 | Lunch | |
| 14h | **Longuevergne** | **A few notes on GRACE information content for ESM improvement** |
| 14h30 | **Krakauer** | **Remote sensing for groundwater in the Earth system** |
| 15h | **Yeh** | **Dynamics of Daily and Monthly Groundwater Recharge and Baseflow Based on 30-year Observations in Illinois** |
| 15h30 | Coffee break | |
| 16h | **Schneider** | **Estimation of the base flow characteristic time scale for global applications** |
| 16h20 | **Tootchi** | **Delineation of groundwater-fed riparian wetlands: challenges and advances for the global scale** |
| 16h40 | **Rashid** | **Evaluating groundwater balance components as an indicator of over exploited groundwater resource in a semi-arid crystalline aquifer** |
| 17h | **Habets** | **AquiFR : a national multimodel hydrogeologic system** |
| 17h30 | *Discussion* | |
| 18h | *Constitution of RT groups* | |
| 18h30 | Welcome cocktail: cheese & wine | |

| **Tuesday, Oct 4th: GW modelling** | | **10 talks** |
|---|---|---|
| 9h | **Xie** | **Effects of anthropogenic water regulation and groundwater lateral flow on land processes** |
| 9h30 | **Maxwell** | **Connections between groundwater flow and transpiration partitioning** |
| 10h | **Condon** | **Evaluating groundwater surface water interactions across the continental US using an integrated hydrologic model** |
| 10h30 | Coffee break | |
| 11h | **Leung** | **Modeling surface water - groundwater interactions in the ACME Earth System Model** |
| 11h30 | **Yang** | **Understanding groundwater hydrological coupling in a land surface model based on multi-sensor satellite data assimilation** |
| 12h | *Discussion* | |
| 12h30 | Lunch | |
| 14h | **Sulis** | **Groundwater-landsurface-atmosphere simulations: An overview of experiences and results using TerrSysMP** |
| 14h30 | **Hazenberg** | **Development of a hybrid 3-D hydrological model to simulate hillslopes and the regional unconfined aquifer system in Earth system models** |
| 15h | **Maquin** | **An hydrological column model for predicting interactions between water table and evapotranspiration** |
| 15h30 | Coffee break | |
| 16h | **Reinecke** | **Global-scale gradient-based groundwater modeling within the global hydrological model** |
| 16h30 | **Sutanudjaja** | **A century-long simulation of terrestrial water storage change and its contribution to global sea-level** |
| 17h | *Discussion and RT work* | |
| 18h30 | Departure for the Buttes Chaumont | |
| 19h30 | Social dinner at "Le Pavillon du Lac" | |

| **Wednesday, Oct 5th: GW-climate interactions** | | **7 talks** |
|---|---|---|
| 9h | **Colin** | **Modelling of floodplains and aquifers in global climate simulations : evaluation and impact** |
| 9h30 | **Lo** | **The contrasting impacts of climate change on groundwater hydrology in the world's major aquifers** |
| 10h | **Fan** | **Groundwater and plant root interactions: Impact on global water and carbon cycle** |
| 10h30 | Coffee break | |
| 11h | **Ducharne** | **Groundwater-soil moisture-climate interactions: lessons from idealized model experiments with forced water table depth** |
| 11h30 | **Lan** | **Responses of Atmospheric General Circulation to Groundwater** |
| 11h50 | **Chien** | **Impacts of groundwater on the atmospheric convection in Amazon using multi-GCM simulations from I-GEM project** |
| 12h10 | **Wang** | **Impact of a prescribed groundwater table on the near surface climate in the IPSL land atmosphere coupled model** |
| 12h30 | Lunch | |
| 14h | *Work in RT groups* | |
| 15h30 | *RT restitutions* | |
| 16h30 | **Closure** | |

**UPMC Campus map**. The numbers indicate the « towers », and the entrance is presently at the foot of tower 46.


**From Hotel Saint Christophe, 17 rue Lacépède, to UPMC.** The entrance is at the red pin.