UrbanRain23 - 12th International Workshop on Precipitation in Urban Areas

29 Nov - 2 Dec 2023, Sporthotel, Pontresina

>> WEDNESDAY 29.11.2023 PROGRAM <<

WEDNESDAY, 29 November 2023		
15:00 - 19:00		*Arrival of participants (check-in and registration)*
19:00 - 19:20	Molnar, Burlando	*Welcome and presentation of UrbanRain23 program*
19:20 - 19:30	Schertzer	*IGUR International Group on Urban Rainfall (https://igur.org/)*
19:30		**Dinner (Sporthotel)**

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>> THURSDAY 30.11.2023 PROGRAM <<

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		Session 1 Precipitation measurement and data (Chair: NADAV PELEG)
8:30 - 8:45	Fennig, hydro&meteo GmbH (DE)	*Rain gauge data quality revisited: old-fashioned or new trend?*
8:45 - 9:00	Špačková, CVUT Prague (CZ)	*Error components in rainfall retrieval from collocated commercial microwave links*
9:00 - 9:15	Kyaw, DICAM Bologna (IT)	*Private sensors and crowdsourced rainfall data: accuracy and potential for modelling pluvial flooding in urban areas*
9:15 - 9:30	Seidel, Uni Stuttgart (DE)	*Using personal weather station data for improving precipitation estimates and gauge adjustment of radar data*
9:30 - 9:45	van de Beek, SMHI (SWE)	*Evaluation and integration of professional and opportunistic high-resolution rainfall observations in the Öresund region*
9:45 - 10:00	Liernur, EPFL (CH)	*Sub-grid peaks in localized intense rain events using high-resolution operational radar data in Switzerland*
10:00 - 10:30		**Coffee Break**
		Session 2 Precipitation measurement and data (Chair: AUGUSTE GIRES)
10:30 - 10:45	Gabella, MeteoSwiss (CH)	*Seventeen years of real-time hourly precipitation estimation: an improved agreement since 2016 among various conventional and remotely sensed MeteoSwiss operational products*
10:45 - 11:00	Einfalt, hydro@meteo GmbH (DE)	*Open Data: the LAWA heavy rain portal based on more than 20 years of DWD radar data*
11:00 - 11:15	Hosseini, Lund Uni (SWE)	*Melting layer prediction via surface weather and its correlation with classes of rainfall rate*
11:15 - 11:30	Gugerli, EPFL (CH)	*Operational implementation of a random forest approach to perform quantitative precipitation estimation with measurements from the Swiss polarimetric radar network*
11:30 - 11:45	Thorndahl, Aalborg Uni (DEN)	*Spatial extreme value rainfall statistics from weather radar and rain gauges*
11:45 - 12:00	Meier, Uni Memphis (USA)	*Hershfield rainfall sampling adjustment factors: A review of existing methods and a unified proposal for engineering practice*
12:00 - 13:00		**Lunch (own cost)**
13:00 - 16:00		Optional excursion (Morteratsch Walk or Pontresina Village Walk)
16:15 - 17:00		**POSTER POP-Ups (1 minute talks), Chairs: GABELLA, MOLNAR**
17:00 - 17:30		**Coffee Break and Posters**
		Session 3 Urban areas and climate change (Chair: URS GERMANN)
17:30 - 17:45	Koukoula, Uni Lausanne (CH)	*Urbanization and climate change impacts on future convective precipitation in Milan, Italy*
17:45 - 18:00	Lian, Rieckermann, EAWAG (CH)	*A comprehensive evaluation of applicability of Poisson cluster rainfall generators for planning and operation of urban drainage system in Switzerland*
18:00 - 18:15	Torelló-Sentelles, Uni Lausanne (CH)	*Changing spatial patterns of convective rainfall across urban areas*
18:15 - 18:30	Brandi, EPFL (CH)	*Thermo-dynamical impacts of cities on cloud formation and precipitation*
18:30 - 18:45	Onof, Imperial College (UK)	*Towards understanding the impact of future rainfall upon urban drainage*
18:45 - 19:00	Nguyen, McGill Uni (CAN)	*Linking climate change to urban water infrastructure design: recent advances and shortcomings in modeling of extreme rainfall processes*
19:30		**Dinner (Sporthotel)**
21:30 - 22:00	Schertzer	*IGUR Meeting, https://igur.org/, discussion on new UrbanRain Organizer*

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>> FRIDAY 1.12.2023 PROGRAM <<

FRIDAY, 1 December 2023		
		Session 1 Precipitation simulation and extremes (Chair: THOMAS EINFALT)
8:30 - 8:45	Kašpar, IAP CAS Prague (CZ)	*Spatial variability of the course of precipitation intensity during heavy rains in Czechia*
8:45 - 9:00	Gires, Ecole des Ponts (FR)	*Characterizing and simulating with blunt extension of discrete cascades rainfall anisotropy in a Universal Multifractals framework*
9:00 - 9:15	Maloku, Uni Grenoble Alpes (FR)	*Mean Areal Precipitation simulation with GWEX-MRC, a hybrid WGEN combining daily generation and disaggregation with a Multiplicative Random Cascade*
9:15 - 9:30	Ebers, Müller-Thomy, TU Braunschweig (DE)	*Future rainfall extreme values: Temperature-dependent disaggregation of climate model data*
9:30 - 9:45	Thomassen, DMI (DEN)	*The impact of sub-kilometre resolution climate model simulations on extreme rainfall events*
9:45 - 10:00	Haruna, Uni Grenoble Aples (FR)	*Modeling Areal Precipitation Risks: A Data-driven Approach to model Intensity-Duration-Area-Frequency Relationships in Switzerland*
10:00 - 10:30		**Coffee Break**
		Session 2 Nowcasting and uncertainty (Chair: SOREN THORNDAHL)
10:30 - 10:45	Müller, IAP CAS Prague (CZ)	*Is the antecedent precipitation before precipitation extremes average on average?*
10:45 - 11:00	Wang, National Taiwan Uni (TW)	*Exploring the use of 3D radar measurements for predicting the lifespans of single-core convective rain cells*
11:00 - 11:15	Sideris, MeteoSwiss (CH)	*NowPrecip version 2: Precipitation nowcasting within the complex terrain of Switzerland*
11:15 - 11:30	Koltermann da Silva, Ruhr West UAS (DE)	*Nowcasting of heavy rainfall events with AI-based precipitation forecast models: Influence of number of model parameters and of input images on the prediction accuracy*
11:30 - 11:45	Krämer, ITWH GmbH (DE)	*The relevance of radar rainfall on urban drainage dimensioning and performance*
11:45 - 12:00	Kritidou, Uni Zurich (CH)	*Robustness evaluation of simulated extreme floods over Switzerland: an experiment based on weather generator changes*
12:00 - 13:00		**Lunch (own cost)**
13:00 - 16:00		Optional excursion (Morteratsch Walk or Pontresina Village Walk)
		Session 3 Urban flood risk (Chair: JOAO LEITAO)
16:30 - 16:45	Treis, Emschergenoss. (DE)	*How to deal with uncertainties in flood forecast*
16:45 - 17:00	Emmanouil, Uni Connecticut (USA)	*Decomposing the effects of compound mechanisms on flood risk estimation for urban environments: A case study over Greater Boston*
17:00 - 17:30		**Coffee Break and Posters**
17:30 - 17:45	Jackson, Strehz, Water Technology (AUS)	*Enhanced urban drainage management for Melbourne Water with the Hydronet Water Control Room*
17:45 - 18:00	Cache, Uni Lausanne (CH)	*Improving the generalizability of urban pluvial flood emulators to untrained cities and rainfall*
18:00 - 18:15	Wenzel, Deutscher Wetterdienst (DE)	*HoWa-Pro: A project setting up a flood risk warning system using radar, rain gauge, and opportunistic data from a telecommunication network*
18:15 - 18:30	Asher, Uni Leeds (UK)	*The sensitivity of urban surface water flood modelling to the temporal distribution of rainfall*
18:30 - 18:45	Reinoso-Rondinel, KU Leuven (BE)	*On the integration of a probabilistic seamless prediction model and a hydrological model for flooding prediction*
18:45 - 19:00	**Molnar, Burlando**	***UrbanRain23 Wrapup and Plan for the future***
19:30		**Dinner (Sporthotel)**

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>> POSTER LIST <<

NO.	FIRST AUTHOR	AFFILIATION	TITLE
1	Alonso	L&F Enviroconsulting (FR)	*Impact of rainwater trees on urban cooling: 1st case study in Lyon (France)*
2	Blagojevic	ETH Zurich (CH)	*Globally applicable workflow for urban pluvial risk estimates in data-scarce environments*
3	Bližňák	Institute of Atmospheric Physics CAS (CZ)	*How well can a new high-resolution atmospheric reanalysis ALADIN reforecast heavy precipitation?*
4	Cancelliere	University of Catania (IT)	*SPEI based severity-area-frequency curves for drought monitoring*
5	Cauteruccio	University of Genova (IT)	*Estimation of flooded areas from post-event survey and mitigation scenarios using permeable pavement solutions: a case study in the Italian territory*
6	Chakravarty	Indian Institute of Tropical Meteorology (India)	*Unravelling the contrasting microphysical features of clouds and precipitation for Mumbai and Chennai - the urban coastal megacities of India*
7	Chinchella	University of Genova (IT)	*Assessing the wind-induced bias for the OTT Parsivel2 optical gauge using CFD and particle tracking.*
8	Dias Kovalczuk, Schertzer	HM&Co Lab (FR)	*Towards conclusive climate projections for precipitation*
9	Fencl	CVUT Prague (CZ)	*Applying operational attenuation data from the telecommunication network in the city of Olomouc for predicting inflows to WWTP*
10	Hulec	Institute of Atmospheric Physics CAS (CZ)	*The comparison of design precipitation totals in the border region of the Czech Republic and Germany*
11	Hung	National Taiwan University (Taiwan)	*IMERG Run Deep: Can we produce a low-latency IMERG Final run product with a deep learning based prediction model?*
12	Jahnke-Bornemann	hydro & meteo GmbH (DE)	*heavyRain - Use of IoT rain sensors to improve heavy rain forecasts in Lübeck*
13	Kavka	CVUT Prague (CZ)	*Classification of Czech urban areas by their characteristics in link to potential of retention of heavy rainfall*
14	Kohnova	Slovak University of Technology (SK)	*Detecting futures changes in the characteristics of short-term rainfall in Slovakia*
15	Kvak	Institute of Atmospheric Physics CAS (CZ)	*Convective environment in ALADIN Reanalysis*
16	Laursen, Jensen	VeVa (DK)	*Streamlining the use of weather radar data for Urban run-off simulation*
17	Ntoumos	EPF Lausanne, Meteoswiss	*Forecast verification analysis of the CombiPrecip ensemble*
18	Pedersen	Danish Meteorological Institute (DK)	*Evaluation of subkilometer scale NWP for short-term predictions of convective rainfall events*
19	Renard	University of Lyon (FR)	*Measured and perceived urban heat island: cross-measurements and lived paradoxes*
20	Steiner, Micev, Rieckermann	EAWAG (CH)	*Measuring diameters and velocities of artificial raindrops with a neuromorphic dynamic vision sensor disdrometer*
21	Rossi, Einfalt	World Meteorological Organization (CH)	*WMO Guide to Operational Weather Radar Best Practices – progress and plans*
22	Seidel	University of Stuttgart (DE)	*A Flood Monitoring System for the City of Reutlingen in South-West Germany*
23	Simon	University Bochum (DE)	*Compound flood risk in small, ungauged catchments using LSTMs*
24	Špačková	CVUT Prague (CZ)	*Identifying predictors within information theory framework for uncertainty reduction in commercial microwave links quantitative precipitation estimates*
25	Walther	Hochschule Ruhr West (DE)	*Soil-pipe system as an element of climate-adapted urban drainage (BoRSiS)*
26	Wilke	Deutscher Wetterdienst (DE)	*A new member of the DWD radar product palette*
27	Winterrath	Deutscher Wetterdienst (DE)	*The DWD Catalogue of Radar-based heavy Rainfall Events (CatRaRE) and its application in hazard and risk analysis*
28	Zhu	ETH Zurich (CH)	*Association between urban morphology and the spatial distribution of pluvial floodwater*
29	Zhuang	Tongji Univerisity (China)	*Land-water-atmosphere interactions and urbanization effects on precipitation: insights from the coastal city of Shanghai*
30	Zou	University of Lausanne (CH)	*Spatial downscaling of heavy rainfall with a multiple-point geostatistics model: Beijing case study*