Norwegian Hydrological Council

7th Conference on
Modelling Hydrology, Climate and Land Surface Processes
Scandic Victoria Lillehammer, 19.–21. September 2023

Program

Tuesday 19. September 2023		
1030 - 1130	Registration	
1130 - 1230	Lunch	
1230 - 1300	*Opening talk:* Forecasting natural disasters	Bård Fjukstad The Norwegian Meteorological Institute (MET)
Session 1: **Methods and models for natural hazard prediction, including machine learning**		*Chairs:* Karianne Ødemark, MET Sjur Kolberg, NVE
1300 - 1340	*Keynote 1.1:* Global HYPE modelling as a short-cut to national/regional prediction systems	Berit Arheimer Swedish Meteorological and Hydrological Institute, SMHI
1340 - 1400	Trends in hydrometeorological avalanche indicators in Norway and Svalbard in 1957-2023	Tuomo M. Saloranta NVE
1400 - 1420	Modeling streamflow response to climate change in Wamkurumadzi River, Shire Basin in Malawi using the SWAT Model	Lusungu Nkhoma University of Oslo
1420 - 1440	Coffee break	
1440 - 1520	*Keynote 1.2:* A machine learning revolution for weather forecasting?	Matthew Chantry European Centre for Medium Range Weather Forecasts
1520 - 1540	Flood forecasting everywhere - putting PUB to work	Thomas Skaugen NVE
1540 - 1600	The distributed regression hydrological model (DRM)	Bernt V. Matheussen Å Energi
1600 - 1620	Stormwater calculations using AI to predict and prevent flooding along railway lines. Case: Meråkerbanen	Werner Svellingen 7 Analytics
1620 - 1640	Buffer and break	
1640 - 1700	River discharge extremes in Norwegian regulated catchments: simulations using a hydro-logic model including human interventions	Emiliano Gelati University of Oslo
1700 - 1720	SPI-Based Hybrid Wavelet–ANN Models for Drought Forecasting in north Tunisia	Rim Ouachani Sousse University, Tunis

1730 - 1930	Posters/drinks	
	Benchmarking multiple hydrology models at seventy catchments in southern Norway – work in progress	Bernt. V. Matheussen Å Energi
	A data-driven model for Fennoscandian wildfire danger	Sigrid Jørgensen Bakke NVE
	The EMERGE project: Multi-hazards and emergent risks in Northern Europe's remote and vulnerable regions	Katy Freeborough British Geological Survey
	From climate projections to guidelines on climate change allowances	Irene Brox Nilsen NVE
	Return values for extreme precipitation in Norway - a comparison of estimates from new approaches combining ensemble data and gridded observations to PMP values	Karianne Ødemark MET
	Enabling the comparison of high-resolution precipitation observations with numerical weather prediction model simulations at every model time-step	Harald Sodemann University of Bergen
1930	Dinner	

Wednesday 21. September 2023		
Session 2: **Forecasting of weather-induced natural hazards, including data assimilation**		*Chairs:* Ole Einar Tveito, MET Trine Jahr Hegdahl, NVE
0830 - 0910	*Keynote 2.1:* Probabilistic impact-based approaches for flood forecasting and prediction	Steven Cole Centre for Ecology and Hydrology, UK
0910 - 0930	A land data assimilation system for NWP initial conditions and hydrometeorological forecasting	Jostein Blyverket MET
0930 - 0950	How can we make ensemble flood forecast more reliable?	Byman H. Hamududu NVE
0950 - 1010	Coffee break	
1010 - 1050	*Keynote 2.2:* Risk-based flood forecasting in Norway – the way(s) forwards	Kolbjørn Engeland NVE
1050 - 1110	Understanding the influence of soil moisture and surface water fluxes on extreme convective precipitation events during summer in South Norway	Laura Ehrnsperger MET
1110 - 1230	Lunch	

Session 3: **Impact-based natural hazard warnings: User needs and risk communication**		*Chairs:* Lena Merete Tallaksen, UiO Anders Doksæter Sivle, MET
1230 - 1310	*Keynote 3.1:* From drought impact information to impact-based forecasting: progress and setbacks	Kerstin Stahl University of Freiburg
1310 - 1330	Monitoring drought indices for decision support concerning the management of cereal productivity in Tunisia	Nesrine Abid El Manar University, Tunis
1330 - 1350	Serious gaming as a tool for involving local stakeholders in risk management	Ingrid Vigna MET
1350 - 1410	Coffee break	
1410 - 1450	*Keynote 3.2:* Evolving Early Warnings with the Power of Impact Data	Juhana Hyrkkânen Finnish Meteorological Institute
1450 - 1510	FlomRisk - user centered design to support impact-based flood warnings	Trine J. Hegdahl NVE
1510 - 1530	Actionable warnings - a joint effort on how to communicate warnings with one voice	Mai-Linn F. Svehagen MET
1545 - 1900	Social event	
1930	Conference dinner	

Thursday 22. September		
Session 4: **Dimensioning and planning for natural hazard risks, including climate change issues**		*Chairs:* Trine Jahr Hegdahl, NVE Sjur Kolberg, NVE
0830 - 0910	*Keynote 4.1:* Safe rivers – is it possible – or not?	Oddbjørn Bruland Norwegian University of Science and Technology
0910 - 0930	Mitigation measure manual	Priska H. Hiller NVE
0930 - 0950	Floods during the last millennium - what are the trends and how exceptional was the Storofsen flood in 1789?	Kolbjørn Engeland NVE
0950 - 1010	Coffee break	
1010 - 1050	*Keynote 4.2:* Handling and mitigation of a flood event – Before, during and after	Bjørg Lirhus Ree Voss herad
1050 - 1140	Panel discussion	Hege Hisdal, NVE (chair)
1140 - 1200	Closing remarks	
1200 - 1300	Lunch	