Norwegian Hydrological Council

4th Conference on "MODELLING HYDROLOGY, CLIMATE AND LAND SURFACE PROCESSES"

12th-14th of September 2017 – Lillehammer, Norway

PROGRAMME

12th of Sept.		
10:30 – 11:30	*Registration*	
11:30 – 12:45	*Lunch*	
	Introduction	
13:00 – 13:10	Welcome	Prof. Lena M. Tallaksen University of Oslo
	Session 1: Land-atmosphere interactions	
13:10 – 13:55	*Keynote: Title to be given*	Dr. Aaron Boone, Centre National de Recherche Météorologique, Météo-France
13:55 – 14:15	Understanding land/atmosphere interactions through the DIurnal land/atmosphere Coupling Experiment (DICE)	Martin Best, Met Office, United Kingdom
14:15 – 14:35	Data-driven assessments of surface energy and water balance responses to land cover or management change	Ryan M. Bright, Norwegian Institute of Bioeconomy Research
14:35 – 14:55	Carbon and soil moisture interactions – the Mocabors project	Holger Lange, Norwegian Institute of Bioeconomy Research
14:55 – 15:25	*Coffee break*	
15:25 – 16:10	*Keynote:* Coupled and uncoupled atmosphere - land surface modelling involving vegetation, permafrost and snow surfaces	Prof. Frode Stordal, University of Oslo
16:10 – 16:30	Identifying feedbacks between the land surface and the atmosphere in a seasonally snow covered region (Southern Norway)	Irene Brox Nilsen, University of Oslo/Norwegian Water Resources and Energy Directorate
16:30 – 16:50	Solving the surface energy balance: the quality of model estimates of downward radiation and near surface humidity for mainland Norway	Helene B. Erlandsen, Norwegian Water Resources and Energy Directorate
16:50 – 17:10	Reproduce October 2014 Flood at a small basin in Voss, Western Norway by a fully coupled atmosphere-hydrological modelling system	Lu Li, Uni Research Climate/Bjerknes Centre for Climate Research
17:10 – 18:15	*Break*	
18:15 – 19:30	Poster session with drinks	
19:30	*Dinner*	

13th of Sept.		
	Session 2: Land-atmosphere interactions	
09:00 – 09:45	*Keynote:* Assimilation of snow observations for numerical weather prediction	Dr. Patricia de Rosnay, European Centre for Medium-Range Weather Forecasts, United Kingdom
09:45 – 10:05	Ensemble-based subgrid snow data assimilation	Kristoffer Aalstad, University of Oslo
10:05 – 10:25	Assimilation of SMOS and SMAP Brightness Temperature into a Land Surface Model over Northern Latitudes	Jostein Blyverket, Norwegian Institute for Air Research/University of Bergen
10:25 – 10:45	The Mesoscale Ensemble Prediction System (MEPS): a New Tool for Extreme Weather Forecasting	Richard Moore, Norwegian Meteorological Institute/University of Oslo
10:45 – 11:15	*Coffee break*	
11:15 – 11:35	Regional Snow Modeling in Norway with SURFEX/Crocus	Hanneke Luijting, Norwegian Meteorological Institute
11:35 – 11:55	On the use of an explicit snow scheme in NWP	Trygve Aspelien, Norwegian Meteorological Institute
11:55 – 12:15	Use of precipitation radar for improving estimates and forecasts of precipitation estimates and streamflow	Kolbjørn Engeland, Norwegian Water Resources and Energy Directorate
12:15 – 12:35	Flow estimation using hydrological modelling by RADAR-estimated precipitation	Denis Duda Costa, Lund University, Sweden
12:35 – 13:45	*Lunch*	
	Session 3: From modelling to decisions	
13:45 – 14:30	*Keynote:* Title to be given	Prof. Markku Rummukainen, Lund University, Sweden
14:30 – 14:50	Added value of regional and convective-permitting simulations of present and future precipitation in Northern Europe	Louis Marelle, Center for International Climate Research, Norway
14:50 – 15:10	An integrated assessment framework to study the impacts of forest structure and management on hydrological fluxes in Norway	Stephanie Eisner, Norwegian Institute of Bioeconomy Research
15:10 – 15:30	The use of national forest inventory data to model soil moisture and soil carbon dynamics in earth system models	Jogeir N. Stokland, Norwegian Institute of Bioeconomy Research
15:30 – 15:50	Modeling Snow Dynamics Using a Bayesian Network	Bernt Viggo Matheussen, Agder Energi/University of Agder
15:50 – 16:15	*Break*	
16:15 – 18:15	Excursion	
20:00	*Conference dinner*	

14th of Sept.		
	Session 3: From modelling to decisions	
09:00 – 09:45	*Keynote:* Translating weather extremes into the future – a case for Norway	Dr. Jana Sillman, Center for International Climate Research, Norway
09.45 – 10:05	Projected changes in flooding under a future climate in Norway: How 'certain' are our estimates?	Deborah Lawrence, Norwegian Water Resources and Energy Directorate
10:05 – 10:25	Evaluation of summer precipitation from EUR-11 simulations over Norway	Anita Verpe Dyrrdal, Norwegian Meteorological Institute
10:25 – 10:55	*Coffee break*	
10:55 – 11:40	*Keynote*: Title to be given	Prof. Oddbjørn Bruland, Norwegian University of Science and Technology
11.40 – 12.00	Can hydrological non-stationarity be achieved with event-based conceptual models in northern regions?	Justice O. Akanegbu, University of Oulu, Finland
12:00 – 12:20	Spatially Consistent Post-processing of Daily Mean RCM Temperature Projections in Norway – a Case Study in Trøndelag	Qifen Yuan, Norwegian Water Resources and Energy Directorate/University of Oslo
12:20 – 12:40	Modeling the Hydro-Climatic Effects of Land Use and Land Cover Changes in the Euphrates and Tigris Basin Under a Changing Climate	Yeliz Yılmaz, Istanbul Technical University
12:40 – 14:00	*Lunch*	
14:00	*Thank you and good bye*	

POSTERS

Seasonal and interannual variability of moisture transport to the East Asian Summer Monsoon
Astrid K. Fremme, Harald Sodemann, University of Bergen/Bjerknes Centre for Climate Research

Runoff dynamics in a forested catchment - investigating the relations between river network density, subsurface water capacity and subsurface water celerities
Thomas Skaugen[1], Søren Boje[1], Ivar Olaf Peerebom[1], Knut M. Møen[1] and Steinar Myrabø[2]
[1]Norwegian Water Resources and Energy
[2]Norconsult AS, Lillehammer

Estimation of energy balance components in a mountain environment based on high resolution climate data
Vatne A., Engeland K., Burkhart J.F, Tallaksen L.M., University of Oslo

Automatic Model Calibration using Multi-objective Optimization
1. Min Shi, Norwegian Meteorological Institute
2. Hong Li, Norwegian Water Resources and Energy Directorate

Evaluation of conventional climatological datasets for snow- and hydrological modeling in Norway
Tuomo Saloranta[1], Cristian Lussana[2], Thomas Skaugen[1], Jan Magnusson[1], Ole Einar Tveito[2], and Jess Andersen[1]
[1]Norwegian Water Resources and Energy Directorate
[2]Norwegian Meteorological Institute

A stochastic PQRUT model for flood estimation in small and medium-sized catchments
Valeriya Filipova[1], Deborah Lawrence[2], Harald Klempe[1], Thomas Skaugen[2]
[1]Telemark University College, INHM
[2]Norwegian Water Resources and Energy Directorate

Comparison of regionalization approaches' robustness under climate change: a case study in Norway
X. Yang, C.Y. Xu, University of Oslo
J. Magnusson, Norwegian Water Resources and Energy Directorate

Using model and satellite data to investigate the effect and uncertainties of light absorbing impurities in snow on the discharge generation in an Indian high-mountain catchment
Felix Matt, University of Oslo
John F. Burkhart, University of Oslo/Statkraft AS

The Morphological Evolution of a Wind-Shaped Snow Surface during a Storm Event at Finse, Norway
Simon Filhol[1], Norbert Pirk[1], Thomas V. Schuler[1], John F. Burkhart[1]
[1] Department of Geosciences, University of Oslo

Spatial distribution of peatland in the boreal zone
Jogeir N. Stokland, Norwegian Institute of Bioeconomy

Integrating soil moisture satellite retrievals in land surface simulations

Å. Bakketun[1], J. Blyverket[2], W. Lahoz[2], H, Luijting[3], M. Homleid[3], T. Aspelien[3], J. Kristiansen[3], F. Stordal[1]

[1]Department of Geosciences, University of Oslo

[2]Norwegian Institute for Air Research, Kjeller

[3]Norwegian meteorological institute

The surface energy exchange of Alpine and Arctic ecosystems in response to snowmelt and rain events

Norbert Pirk, Astrid Vatne, Torben R. Christensen, John F. Burkhart, Lena M. Tallaksen, University of Oslo

Parameterizing snow redistribution effect of terrain parameters in a conceptual hydrological model

Tweldebrahn, A.T., Burkhart, J.F. and Schuler, T.V., University of Oslo

Climate oscillation and effects on the interannual-to-multiannual variability of the rainy season in Eastern Northeast Brazil

Denis Duda Costa[1*]; Carlos R. Fragoso Jr[2] & Cintia B. Uvo[1]

[1] Lund University, Department of Water Resources Engineering

[2] Federal University of Alagoas, Center for Technology, Brazil

Hydro-glacial modelling in the Hardangerjøkullen area

Hong Li, Stein Beldring, Kjetil Melvold, Gusong Ruan

Norwegian Water Resources and Energy Directorate