

## Northern European FRIEND

### Project 4: Techniques for Extreme Rainfall and Flood Runoff Estimation

#### Selected Publications

- Beven, K. J. (2005) On the concept of model structural error. *Water Science and Technology* **52**(6): 167-175
- Beven, K. J. (2006a) A Manifesto for the Equifinality Thesis. *Journal of Hydrology* **320**(1-2): 18-36
- Beven, K. (2006b) Working towards integrated environmental models of everywhere: uncertainty, data, and modelling as a learning process. *Hydrology and Earth System Science* (in print)
- Beven, K.J., Romanowicz, R., Pappenberger, F., Young, P.C. and Werner, M. (2005) The Uncertainty Cascade in Flood Forecasting. In: Balbanis, P., Lambroso, D. and Samuels, P. (Eds.) Innovation, Advances and Implementation of Flood Forecasting Technology, Proceedings of the ACTIF meeting, Tromsø, abstract, p.33, paper 9 p on CD (ISBN 978-1-898485-12-4)
- Blazkova, S. and Beven K. (2002) Flood Frequency Estimation by Continuous Simulation for a Catchment Treated as Ungauged (with Uncertainty). *Water Resour. Res.* **38** (8), doi: 10.1029/2001WR000500
- Blazkova, S. and Beven, K. (2004) Flood frequency estimation by continuous simulation of subcatchment rainfalls and discharges with the aim of improving dam safety assessment in a large basin in the Czech Republic. *Journal of Hydrology* **292**:153-172
- Blazkova, S. and Beven, K. (2005) Uncertainty in Flood Estimation. In: Bergmeister, K., Straus, A., Rickenmann, D. (Eds.). Proceedings, 3<sup>rd</sup> Probabilistic Workshop – Technical Systems, Natural Hazards, BOKU, Vienna, Schriftenreihe des Departments fuer Bautechnik + Naturgefahren, Nr. 7, November 2005, 163-172, ISSN 1811-8747
- Blazkova, S. and Beven, K. (2007) Uncertainty in flood estimation. *Structure and Infrastructure Engineering* (in press). print ISSN: 1573-2479, Online ISSN: 1744-8980
- Blazkova, S., Beven, K.J. and Kulasova, A. (2002a) On constraining TOPMODEL hydrograph simulations using partial saturated area information. *Hydrological Processes* **16**: 441-458
- Blazkova, S., Beven, K., Tacheci, P. and Kulasova, A. (2002b) Testing the distributed water table predictions of TOPMODEL (allowing for uncertainty in model calibration): the death of TOPMODEL? *Water Resour. Res.* **38**(11), doi: 10.1029/2001WR000912
- Choi, H T and Beven, K J (2006) Multi-period and Multi-criteria Model Conditioning to Reduce Prediction Uncertainty in Distributed Rainfall-Runoff Modelling within GLUE framework, *J. Hydrology*, in press
- Hughes, D., Greenwood, P., Coulson, G., Blair, G., Pappenberger, F., Smith, P., Beven. K. (2006) GridStix: Supporting Flood Prediction using Embedded Hardware and Next Generation Grid Middleware, 4<sup>th</sup> IEEE International Workshop on Mobile Distributed Computing (MDC 2006), co-located with WoWMoM
- Pappenberger, F. and Beven, K.J. (2004) Functional classification and evaluation of hydrographs based on Multicomponent Mapping (Mx). *Intl. J. River Basin Management* **2**(1): 1-12

- Pappenberger, F. and Beven, K.J. Ignorance is bliss - or 7 reasons not to use uncertainty analysis. *Water Resources Research* (in review)
- Pappenberger, F. et al. Influence of uncertain boundary conditions and model structure on flood inundation predictions. *Advances in Water Resources* (in press)
- Pappenberger, F. et al. (2005) Cascading model uncertainty from medium range weather forecasts (10 days) through a rainfall-runoff model to flood inundation predictions within the European Flood Forecasting System (EFFS). *Hydrology and Earth System Science*
- Pappenberger, F., Beven, K.J., Horritt, M. and Blazkova, S. (2005) Uncertainty in the calibration of effective roughness parameters in HEC-RAS using inundation and downstream level observations. *Journal of Hydrology* **302**(1-4): 46-69
- Pappenberger, F., Matgen, P., Beven, K.J., Henry, J.-B., Pfister, L. and de Fraipont, P. Influence of uncertain boundary conditions and model (in press)
- Pappenberger, F., Beven, K.J., Frodsham, K., Romanovicz, R. and Matgen, P., Fuzzy set approach to calibrating distributed flood inundation models using remote sensing observations. *Hydrology and Earth System Sciences* (in press)
- Romanowicz, R., Beven, K J., Young, P C. (2006) Uncertainty propagation in a sequential model for flood forecasting. *IAHS Publication* **303**: 177-184
- Romanowicz, R., Young, P C. and Beven, K J. (2006) Data assimilation and adaptive forecasting of water levels in the River Severn catchment, UK. *Water Resour. Res.*, **42**, W06407, doi:10.1029/2005WR004373
- Romanowicz, R. and Beven, K J. (2006) Comments on Generalised Likelihood Uncertainty Estimation. *Reliability Engineering and System Safety* **91**: 1315–1321
- Skaugen, T. (1999) Estimating the mean areal snow water equivalent by integration in time and space. *Hydrological Processes* **13**: 2051-2066
- Skaugen, T., Beldring, S. and Udnæs, H.-C. (2003) Dynamical properties of the spatial distribution of snow. *Hydrology and Earth System Sciences* **7**(5): 744-753
- Skaugen, T., Alfnes, E., Langsholt E. G. and Udnæs, H.-C. (2004) Time variant snow distribution for use in hydrological models. *Annals of Glaciology* **38**: 180-186
- Skaugen, T., Langsholt, E. G., Alfnes, E. and Udnæs, H.-C. (2005) Linking the variability of precipitation to the spatial distribution of snow. *Hydrological Processes*
- Skaugen, T., Langsholt E. G., Alfnes, E. and Udnæs, H.-C. (2005) Updating the snow reservoir in hydrological models using remotely sensed SCA with the gamma sum model. *Hydrological Processes*
- Wagener, T., Freer, J., Zehe, E., Beven, K., Gupta, H. V. and Bardossy, A. (2006) Towards an uncertainty framework for predictions in ungauged basins: the uncertainty working group. *IAHS Publication* **303**: 454-462
- Werner, M.G.F., Blazkova, S. and Petr, J. (2005a) Spatially distributed observations in constraining inundation modelling uncertainties. *Hydrological Processes* **19**
- Werner, M.G.F., Hunter, N.M. and Bates, P.D. (2005b) Identifiability of distributed floodplain roughness values in flood extent estimation. *Journal of Hydrology* **314**(1-4): 139-157