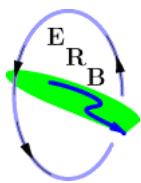


17th Biennial Conference ERB 2018

*Euromediterranean Network of Experimental and Representative Basins
(ERB)*

**Innovative monitoring techniques and modelling approaches for
analysing hydrological processes in small basins**

Darmstadt / Germany, September 11 - 14, 2018



ihwb



TECHNISCHE
UNIVERSITÄT
DARMSTADT

DHG Deutsche
Hydrologische
Gesellschaft

PROGRAM

Tuesday, Sept. 11, 2018

ERB Steering Committee meeting (by invitation)

Wednesday, Sept. 12, 2018

08:00 – 09:00	Registration
09:00 – 09:30	Opening Ceremony
09:30 – 10:30	Session 1
10:30 – 11:15	Coffee Break
11:15 – 12:30	Session 2
12:30 – 14:00	Lunch Break
14:00 – 15:00	Session 3
15:00 – 16:15	Poster session I (The authors in attendance time refers to topics A and C) and Coffee Break
16:15 – 17:30	Session 4
19:00	Conference Dinner

Thursday, Sept. 13, 2018

09:00 – 10:00	Session 5
10:00 – 11:00	Poster session II (The authors in attendance time refers to topics B and D) and Coffee Break
11:00 – 12:00	Session 6
12:00 – 13:15	Lunch Break
13:15 – 14:15	Session 7
14:15 – 14:45	Coffee Break
14:45 – 15:30	Session 8
15.30 – 17:00	ERB General Assembly, awards, closing ceremony

Friday, Sept. 14, 2018

Field trip

ORAL PRESENTATIONS

Wednesday, Sept. 12, 2018

09:30 – 10:30 Session 1 New monitoring techniques for analysing hydrological and biogeochemical processes, I

1. Berta Singla, Jérôme Latron, Kazuki Nanko, Delphis F. Levia, Antonio J. Molina, Carles Cayuela, Mireia Oromí, Francesc Gallart and Pilar Llorens: Relationship between throughfall drop size and isotopic composition: Preliminary insights from an ongoing experiment in Mediterranean conditions (Vallcebre, North-Eastern Spain)
2. Barbara Glaser, Marta Antonelli, Luisa Hopp, Julian Klaus: Surface saturation within a headwater catchment – observation and simulation of spatio-temporal variabilities
3. João R.C.B. Abrantes, João L.M.P. de Lima: Detecting the movement of very shallow surface flows by means of thermal tracers: results from laboratory to field tests
4. Daniele Penna, Ilja van Meerveld: How does spatial variability in the isotopic composition of different water compartments affect mixing model results for small catchments? A global analysis

11:15 – 12:30 Session 2 New monitoring techniques for analysing hydrological and biogeochemical processes, II

1. Klaudija Sapač, Nejc Bezak, Katarina Zabret, Andrej Vidmar, Mitja Brilly, Simon Rusjan: Identification of rainfall-runoff processes formation with high-frequency monitoring of water chemistry
2. Monika Nausch, Sandra Jahn, Petra Kahle, Günther Nausch, Thomas Leipe, Bernd Lennartz: Phosphorus losses from small catchments and across spatial scales
3. Stefan Julich, Emanuel Rabe von Pappenheim, Raphael Benning, Karl-Heinz Feger: Quantification and comparison of C,N,P – Fluxes from small basins with different land uses
4. Paul D. Wagner, Georg Hörmann, Britta Schmalz, Nicola Fohrer: Characterisation of the water and nutrient balance in the small rural lowland catchment of the Kielstau
5. Edvinas Stonevicius, Dalia Grendaite, Jurate Karosiene, Ksenija Savadova, Jurate Kasperoviciene: Sentinel 2 data for retrieval of chlorophyll- α concentration in small lakes

14:00 – 15:00 Session 3 New monitoring techniques for analysing water balance components

1. Johannes Deelstra, Synnøve Rivedal: Is subsurface drainage needed
2. Leonie Kiewiet, Ilja van Meerveld, Jan Seibert, Manfred Stähli: Spatial variability in shallow groundwater chemistry and its potential influence on isotope hydrograph separation results

3. Giulia Zuecco, Daniele Penna, Luisa Pianezzola, Ilja van Meerveld, Chiara Marchina, Anam Amin, Ylenia Gelmini, Marco Borga: Do different tracers help to identify runoff components in a small forested catchment?
4. Gerald Krebs, Johannes Leimgruber, David Camhy, Robert Schatzl, Dirk Muschalla: Hydro-meteorological trends in a small research basin

16:15 – 17:30 Session 4 Assessment of water balance components

1. Tetiana Zabolotnia, Liudmyla Gorbachova, Borys Khrystiuk: The main tendencies of input parameters for hydrological modeling on small mountain catchments (Ukraine)
2. Babar Mujtaba, Hana Hlaváčiková, Ladislav Holko, João L.M.P. de Lima: The role of stony soils in hillslope and catchment runoff formation
3. Julian Klaus, C. Rhett Jackson: How far does interflow travel down slope: a comparison study across seventeen hillslopes
4. Eva Olmo Gil, Martin Trappe, Benno Kuegel, Ulrich Kaul: Influence of karst tributaries and their seasonal variability on the water quality of the Altmühl River in South Franconia (Germany)
5. Noemí Lana-Renault, Estela Nadal-Romero, José Ángel Llorente, Makki. Khorchani, David Regüés, Purificación Ruiz-Flaño, José Arnáez: Differences in streamflow after farmland abandonment – a comparative study in four small mountain catchments

Thursday, Sept. 13, 2018

09:00 – 10:00 Session 5 Measuring erosion and associated transport processes

1. Abelardo A.A. Montenegro, Iug Lopes, Ailton Alves, João Pedroso de Lima, Hélio Araújo, João Gabriel de Souza, Thayná Almeida, Hugo G.L. Montenegro: Spatio temporal soil moisture dynamics under different soil cover conditions in a semiarid representative basin in Brazil
2. Peter Fiener, Florian Wilken, Karl Auerswald: Eight year monitoring of surface runoff and sediment delivery from 14 small watersheds under soil conservation – what can we learn from the Scheyern data-set?
3. Angela Rebscher, Britta Schmalz: How to generate input for small-scale modeling - Example of soil erosion
4. Janine Köhn, Frido Reinstorf, Andrea Heilmann, Hardy Pundt, Martin Scheinert: Erosion mitigation investigations and knowledge transfer from the small catchment Schäferbach to other regions of the Harz Mountains in the project “BebeR”

11:00 – 12:00 Session 6 New modelling approaches for analysing (eco-) hydrological processes

1. Matthias Kopp, Markus Disse: Measuring and modeling of snow cover in subalpine regions of the Bavarian Alps – The Dreisäulerbach catchment
2. Šípek Václav, Tesař Miroslav: Seasonal variability of soil hydraulic properties in soil water content modelling
3. Roel Dijkema, Bart Middelburg, Kas Lange: Modelling complex flow patterns in an area with abandoned coal mines in the Netherlands
4. Przemyslaw Wachniew, D. Bar-Michalczyk, J. Kania, T. Michalczyk, K. Różański, S. Witczak, D. Zieba, A. J. Żure: Groundwater controls nitrate pollution in an agricultural catchment

13:15 – 14:15 Session 7 New modelling approaches for analysing (eco-) hydrological processes and extreme events

1. Andreas Bauwe, Petra Kahle, Bernd Lennartz: Predicting stream flow, flow components, nitrate losses and crop yields in a small artificially drained catchment employing the SWAT model
2. Maite Meaurio, Ane Zabaleta, Jesus Angel Uriarte, Garikoitz Bengoa, Raghavan Srinivasan, Iñaki Antiguada: Streamflow and suspended sediment hourly simulation using SWAT: strengths and weaknesses in a small forested catchment
3. Amrei David, Britta Schmalz: Modeling approaches for floods in different spatio-temporal scales – Do smaller catchments need smarter models?
4. Janusz Siwek, Joanna P. Siwek, Mirosław Żelazny, Wojciech Szymański: The hysteresis patterns of phosphates and potassium concentration as the indicator of flowpaths during high flow events (Carpathian Foothills, Poland)

14:45 – 15:30

Session 8 Adaptation of water management to climate change

1. Marcus Beylich, Janine Köhn, Frido Reinstorf: Precipitation-runoff modeling and simulation of current climate projections in the catchment area of the Schäferbach / Harz Mountains
2. Henning Meeseburg, Johannes Sutmoeller, Birte Scheler: Increasing drought stress caused by climate change and forest growth at Lange Bramke, Harz Mountains, Germany
3. Christian Peters, Thomas Hirschhäuser, Matthias Reimers: A modelling approach for future water management in a lowland area under special consideration of large-scale subsidences

POSTER PRESENTATIONS

A) New monitoring techniques for analysing hydrological and biogeochemical processes

1. Britta Schmalz, Stephan Dietrich, Ulrich Looser, Henning Meesenburg, Konrad Miegel, Frido Reinstorf: Small hydrological research basins in Germany
2. Leonie Kiewiet, Manfred Stähli, Ilja van Meerveld, Jana von Freyberg, Andrea Rücker, Rick Assendelft, Jan Seibert, James Kirchner: 50-years of hydrological research in the pre-alpine Alptal catchment
3. Marion Kruse, Britta Schmalz: Assessing the impact of land use on stream water quality in the German low mountain range basin Gersprenz
4. Josef Fürst, Karsten Schulz, Hans-Peter Nachtnebel, Hubert Holzmann: A forested (hydrological) experimental research watershed to study transport processes in the system of soil, water, plants and atmosphere: Test site Rosalia
5. Nataliia Osadcha, L. Holko, V. Osadchyi, M. Lytvyn: Runoff components in a small agricultural catchment in Ukraine studied by water chemistry, stable isotopes and hydrograph separation
6. Joanna P. Siwek, Joanna Pociask-Karteczka, Janusz Siwek, Mirosław Żelazny: Monitoring of hydrological processes in high mountain environment – the Tatra Mountains (Carpathians, Europe)
7. Christophe Hissler, Ladislav Holko, Laurent Gourdol, Jean François Iffly, Laurent Pfister: Towards more pertinent tracers for studying hydrological processes at catchment scale: a comparative study between experimental sites in Luxembourg and Slovakia
8. Stefan Koch, Andreas Bauwe, Petra Kahle, Bernd Lennartz: Assessing phosphorus transport pathways from the field to the catchment scale
9. Tiago Alexandre, João R.C.B. Abrantes, João L.M.P. de Lima: Application of infrared thermography to estimate velocity fields in riverine areas: Fieldwork
10. Mariola Kędra: Analysing air and water temperatures by wavelet and EMD methods
11. Giulia Zuecco, Michael Rinderer, Daniele Penna, Marco Borga, Ilja van Meerveld: Application of graph theory to describe subsurface connectivity: results for four headwater catchments and sensitivity analysis
12. Rick S. Assendelft, Ilja van Meerveld, Jan Seibert: Spatiotemporal variation in the flowing stream network in a mountainous headwater catchment
13. Jean François Iffly, Olivier Faber, Viola Huck, Jérôme Juilleret, Cyrille Tailliez, Christophe Hissler, Laurent Pfister: Technological progress and innovation in environmental monitoring
14. Xiuming Sun, Naicheng Wu, Claas Faber, Nicola Fohrer: Sampling frequency affects the assessment of water quality using diatom-based indices in a German lowland river

B) Assessment of water balance components

15. Karolina Mostowik, Marta Kisiel, Janusz Siwek, Bartłomiej Rzonca: Runoff trends in a changing climate in small catchments in the Eastern Carpathians (Bieszczady Mountains, Poland)
16. Péter Csáki, Kornél Czimber, Géza Király, Péter Kalicz, Zoltán Gribovszki: Downscaling of the CREMAP actual evapotranspiration map using MODIS NDVI data
17. Péter Kalicz, Péter Csáki, Katalin Zagyvai-Kiss, Santiago Navarro Palacios, Zoltán Gribovszki: Automation efforts of interception measurements in the Hidegvíz Valley,

Hungary - Interception measurements in the Hidegvíz Valley, Hungary – Comparing traditional and novel sampling methods

18. Adam Beran, Eva Melišová, Roman Kožín, Petra Fialová: Derivation of regression equations for calculation of evaporation from a free water surface and identification of trends in measured variables in Hlasivo station
19. Gianina Neculau, Florentina Iuliana Stan: The effect of evapotranspiration on the water reserve of Romanian lakes (Case Study)
20. Michal Danko, Ladislav Holko: Overland flow in a mountain microcatchment during rainfall simulator experiments
21. Johannes Deelstra: Flow processes and subsurface drainage systems
22. Carles Cayuela, J. Latron, J. Geris, P. Llorens: Uncertainty in the isotope-based hydrograph separation due to spatiotemporal variations of the input signal in a partially forested catchment

C) Measuring erosion and associated transport processes

23. Martin Neumann, Jakub Stašek, Adéla Roudnická, Tomáš Dostál, David Zumr, Josef Krása, Luděk Strouhal, Petr Kavka, Tomáš Laburda: Field measurement of surface runoff and soil loss on agricultural land using rainfall simulator
24. João R.C.B. Abrantes, João L.M.P. de Lima, Sérgio A. Prats, J. Jacob Keizer: Application of rice straw mulching strips to reduce runoff and soil loss: Results from laboratory soil flume experiments
25. Jakub Stašek, Josef Krása, Tomáš Dostál, Václav David, David Zumr, Petr Kavka, Markéta Báčová, Adam Tejkl: Monitoring of soil erosion by water in multiple scales
26. Dominik Scholand, Britta Schmalz: Spatial and temporal variability of suspended sediment in low mountain range Gersprenz basin
27. Joaquim Farguell, X. Úbeda, E. Pacheco: Dissolved sediment transport and ion characteristics of runoff and groundwater at a low Mediterranean mountain catchment: the Vernegà river, Gavarres Massif, NE Spain.

D) New modelling approaches for analysing (eco-)hydrological processes

28. Michael Kissel, Angela Rebscher, Anna Bach, Britta Schmalz: Hydrological modelling of the Fischbachtal catchment using two sources of precipitation data
29. Florentina Stan, Vinicius Carmello, Gianina Neculau, J.L. Sant'Anna Neto: Validation of the Cropwat Model at a Romanian experimental station and in other different climatic regions (Brazil, India and USA)
30. Jana Votrubová, Veronika Mikešová, Michal Dohnal, Miroslav Tesař: Modeling soil water regime under varying climatic, soil profile, and vegetation conditions
31. Michal Dohnal, Tomáš Vogel, Jaromír Dušek, Jana Votrubová: Coupled water flow and heat transport modeling under winter season conditions at a small mountainous catchment of Central Europe
32. P. V. Femeena, I. Chaubey, A. Aubeneau, S. McMillan, P. D. Wagner, N. Fohrer: Predicting nutrient uptake in streams using an enhanced physically-based solute transport model

Convened by

- ERB Steering Committee
- Chair of Engineering Hydrology and Water Management (ihwb), Technische Universität Darmstadt, Germany

In cooperation with

- International Centre for Water Resources and Global Change, UNESCO Cat 2 Centre, Koblenz, Germany
- Technische Universität Darmstadt, Germany

Supported by

- International Centre for Water Resources and Global Change, UNESCO Cat 2 Centre, Koblenz, Germany
- Deutsche Hydrologische Gesellschaft (DHG)

Contact

- erb2018@ihwb.tu-darmstadt.de