

DESMOSES Contributions at EGU 08-12 April 2019

Monday, 08 April 2019

#BG6.1/HS10

POSTER

Hysteretic analysis of nitrate dynamics in the nested Selke catchment (Germany)

Xiaolin Zhang, Xiaoqiang Yang, Seifeddine Jomaa, and Michael Rode

08:30-10:15 Hall A Board A.430

#HS3.1

ORAL

Smart Routing Network Decomposition for the Massive Parallelization of Global Hydrological Models

Maren Kaluza, Luis Samaniego, Stephan Thober, Robert Schweppe, Rohini Kumar, and Oldrich Rakovec

09:00-09:15 Room C

#EOS3.1

POSTER

Agile project management for software development in Earth sciences

L Cristini, N Wieters, and D Barbi

10:45-12:30 Hall X4 Board X4.318

#HS2.3.2

POSTER

Impact of river geomorphology on in-stream nitrate retention in the Bode catchment, central Germany by Xiangqian Zhou, Seifeddine Jomaa, Xiaoqiang Yang, and Michael Rode

10:45-12:30 Hall A Board A.72

#HS2.3.2

POSTER

Spatiotemporal evaluation of a semi-distributed hydrological water quality model in a nested catchment in Central Germany

Salman Ghaffar, Seifeddine Jomaa, and Michael Rode

10:45-12:30 Hall A Board A.66

#CL4.12/AS4.12/CR1.14/OS1.29

POSTER

Advanced prediction in the Arctic and beyond: Half way into the APPLICATE project

P Ortega and L Cristini and the APPLICATE Consortium

14:00-15:45 Hall X5 Board X5.60

#CR3.04/AS4.6/CL2.15/HS2.1.3

Improvement of snow optical properties with respect to grain size in ICON

Anika Rohde, Sven Werchner and Bernhard Vogel

14:10-14:12 PICO spot 4

#BG6.1/HS10.12

ORAL

Event-scale concentration-discharge relationships across catchments

Andreas Musolff, Qing Zhan, Rémi Dupas, Camille Minaudo, Jan H. Fleckenstein, and



Karsten Rinke

14:15–14:30 Room 2.31



#BG6.1/HS10.12

ORAL

Turbidity dynamics in lowland pristine and agricultural streams, Bode catchment, Germany

Nergui Sunjidmaa, Daniel Graeber, and Michael Rode

14:45–15:00 Room 2.31

#HS2.3.2

ORAL

Spatiotemporally distributed sensitivity analysis for catchment water quality models

Xiaoqiang Yang, Seiffedine Jomaa and Michael Rode

15:00–15:15 Room 2.95

#CR4.1/GM9.6

ORAL

Soil temperature and thaw depth differences associated with tundra vegetation types at Trail Valley Creek, NWT, Canada

Inge Grünberg, William L. Cable, Sofia Antonova, Stephan Lange, and Julia Boike

15:15–15:30 Room N2

#HS2.4.1

ORAL

Coevolution of heatwaves and soil moisture droughts: Past, present, and future

Luis Samaniego, Stephan Thober, Rohini Kumar, Andreas Marx, Ming Pan, Niko Wanders, Eric F. Wood, and Oldrich Rakovec

15:30–15:45 Room B

Tuesday, 09 April 2019

#HS2.4.5

POSTER

Extending the CoastDat datasets with high resolution river discharge

Stefan Hagemann and Beate Geyer

10:45–12:30 Hall A

#CR5.3/CL4.06

POSTER

A surface mass balance scheme including the diurnal cycle of solar radiation for ice sheet simulations on long time scales

Uta Krebs-Kanzow, Shan Xu, Paul Gierz, and Gerrit Lohmann

10:45–12:30 Hall X4

#NP3.2

ORAL

The stochastic climate model shows that underestimated Holocene trends and variability represent two sides of the same coin

Gerrit Lohmann

15:00–15:15 Room E2

Wednesday, 10 April 2019

#EOS10.1/AS5.25/BG1.59/GI1.8/OS4.34/SM5.8

ORAL



MOSES: A novel observing system for highly dynamic events
U Weber and C Schuetze and the MOSES Team
12:15–12:30 Room L8

#CL4.09/OS1.28/SSP2.20
POSTER

Separating the impact of sea ice and sea surface temperature changes on Arctic climate and its linkages to mid-latitudes
Ralf Jaiser, Mirseid Akperov, Alexander Timazhev, Dörthe Handorf, and Igor Mokhov
14:00–15:45 Hall X5

#ITS4.6/CL3.09/ERE1.7/NH1.39
ORAL

Multimodel assessment of renewable groundwater resources across Europe at 1.5, 2, and 3 degrees global warming
Rohini Kumar, Stephan Thober, Niko Wanders, Ming Pan, Oldrich Rakovec, Eric Wood, Luis Samaniego, and Sabine Attinger
Wed, 10 Apr, 14:45–15:00 Room L7

#AS1.27
POSTER

Response of convective boundary layer and shallow cumulus to soil moisture heterogeneity: A large-eddy simulation study
Cunbo Han, Slavko Brdar, and Stefan Kollet
16:15–18:00 Hall X5

Thursday, 11 April 2019

#AS3.17
POSTER

Effects of transport emissions on reactive nitrogen and ozone during EMeRGe Europe
Mariano Mertens, Astrid Kerkweg, Patrick Jöckel, Helmut Ziereis, Volker Grewe, Hans Schlager, Maria D. Andrés Hernández, and John P. Burrows
08:30–10:15 Hall X5

#PICO CL0.00

Temperatures from Energy Balance Models: the effective heat capacity matters
Gerrit Lohmann
08:38–08:40 PICO spot 5a

#HS7.1/AS4.24
ORAL

Performance analysis of more than one year of countrywide rainfall derived from commercial microwave link data in Germany
M Graf, C Chwala, and H Kunstmann
09:30–09:45 Room 2.31

#HS2.5.1
POSTER

Large scale groundwater model of the Danube Basin, an demonstrator model for the construction of global groundwater models
Estanislao Pujades, Oldrich Rakovec, Rohini Kumar, Luis Samaniego, and Sabine Attinger
10:45–12:30 Hall A

#AS3.20
POSTER

A Novel Concept for Automated Quality Control of Atmospheric Time Series
N Kaffashzadeh, S Schröder, and M G Schultz
10:45-12:30, Hall X5 - board number X5.389

#AS4.36/BG1.62/CL5.08/NP1.3/OS4.23
ORAL

Advancing Earth System Modelling to address pressing challenges
L Cristini, T Jung, and ESM Project Steering Group
12:15-12:30 Room 0.60

#AS1.5/CL5.05/ESSI1.2/NP1.4/OS4.20
POSTER

esm-interfaces: Towards a Modular ESM Coupling Approach
N Wieters and D Barbi
14:00-15:45 Hall X5 Board X5.209

#NH1.7/AS4.4/HS4.2.3
POSTER

Hydrological benchmarking improves local-scale streamflow estimates in a large-scale hydrological model
Alessandro Todaro, Bibi S. Naz, Stefan Kollet, Alberto Bellin, and Bruno Majone
14:00-15:45 Hall X3

#HS2.5.1
ORAL

Atmospheric feedbacks induced by human water use and their impact on local to remote water resource availability
Jessica Keune, Diego G. Miralles, Mauro Sulis, Stefan Kollet, Stephan Henne, Dominik Schumacher, Anita Drumond, Stefan Siebert, and Yoshihide Wada
Thu, 11 Apr, 14:00-14:15 Room B

#AS1.6/CL5.07/ESSI1.5/OS4.25
POSTER

Estimating global ocean heat content from tidal magnetic signals in space
Christopher Irrgang, Jan Saynisch, and Maik Thomas
14:00-15:45 Hall X5

#SM3.1/NH4.11
POSTER

Assimilating Stress and Strain in an Energy-Based PSHA Workflow
Malte J. Ziebarth, Oliver Heidbach, Fabrice Cotton, John G. Anderson, Graeme Weatherill, and Sebastian von Specht
Thu, 11 Apr, 14:00-15:45 Hall X2

#HS2.5.1
ORAL

Technology fusion for large scale terrestrial monitoring
Stefan Kollet
Thu, 11 Apr, 15:30-15:45 Room B

#HS2.5.1
ORAL

Seamless reconstruction of global scale hydrologic simulations: challenges and opportunities
Oldrich Rakovec, Rohini Kumar, Maren Kaluza, Robert Schweppe, Stephan Thober, Sabine Attinger, and Luis Samaniego

#AS1.4/CL5.06/NP5.5/OS4.19

ORAL

Oceanic impacts on the atmospheric and terrestrial moisture budgets in RCMs

Klaus Goergen and Stefan Kollet

17:45–18:00 Room 0.11

Friday, 12 April 2019

#ESSI3.2

POSTER

ESM-TOOLS: A common infrastructure for modular coupled Earth system modelling

D Barbi, N Wieters, L Cristini, P Gierz, S Khosravi, J Kjellson, S Wahl, and V Klemann

08:30–10:15 Hall X1 Board X1.72

#ESSI3.1

POSTER

MOSES Data Management Platform – Concept and status of implementation

D Kerschke, H Fuchs, A Schäfer, P Fischer, G Breitbach, R Kunkel, C Faber, F Neidl, M Kohler, T Schnicke, and J Bumberger and the MOSES Data Management Team

08:30–10:15 Hall X1 Board X1.53

#AS1.24

POSTER

Assessing dynamical stratospheric processes in Northern Hemisphere winter simulated with ICON-NWP

Raphael Köhler, Ralf Jaiser, Dörthe Handorf, Markus Rex, and Klaus Dethloff

08:30–10:15 Hall X5

#HS1.2.7/EOS8.1/GM2.16

PICO

V-FOR-WaTer – the virtual research environment to access and process environmental data

M Strobl, S Hassler, E Azmi, M Mälicke, J Meyer, and E Zehe

11:13–11:15 PICO spot 5b

#OS4.2/AS1.23/G3.8/HS11.51

POSTER

Analysis of ocean tide induced magnetic fields — Climate trends and the remarkable role of shelf regions

Johannes Petereit, Jan Saynisch-Wagner, Christopher Irrgang, and Maik Thomas

08:30–10:15 Hall X4

#OS4.2/AS1.23/G3.8/HS11.51

POSTER

Ocean Tide Model Uncertainties For Electromagnetic Inversion Studies

Jan Saynisch, Christopher Irrgang, and Maik Thomas

08:30–10:15 Hall X4

#HS2.2.4

POSTER

Application of the Multiscale Parameter Regionalization (MPR) to the land-surface model HTESSEL

Stephan Thober, Robert Schweppe, Sabine Attinger, and Luis Samaniego
08:30–10:15 Hall A

#AS1.24

POSTER

A Comparison between Interactive-ozone and Non-interactive-ozone in ICON-ART

Shaoyin Wang, Jennifer Schröter, and Peter Braesicke

08:30–10:15 Hall X5

#AS3.21

POSTER

Spectral Sizing and Sensitivity Studies of a Proposed Passive Space-Borne CO₂ Monitoring Mission at High Spatial Resolution

Jonas Wilzewski, Johan Strandgren, Bernhard Mayer, André Butz, Patrick Jöckel, Klaus Gierens, Mariano Mertens, Carsten Paproth, and Anke Roiger

08:30–10:15 Hall X5

#AS3.26

ORAL

Mountain-wave induced Polar Stratospheric Clouds in ICON-ART: Impact on Polar Ozone

Michael Weimer, Jennifer Schröter, Oliver Kirner, Roland Ruhnke, and Peter Braesicke

11:00–11:15 Room 0.60

#AS3.26

ORAL

Ozone hole induced southern hemispheric climate change signals in ICON-ART climate simulations

Marleen Braun, Jennifer Schröter, Roland Ruhnke, and Peter Braesicke

11:15–11:30 Room 0.60

#HS1.2.9/AS4.26/BG1.28/NP5.6/OS4.24/SSS11.9

ORAL

Assimilation of satellite sea surface temperature and profile observations into a coupled ocean-atmosphere model

Qi Tang, Dmitry Sidorenko, and Lars Nerger

12:00–12:15 Room 2.15

#HS1.2.9/AS4.26/BG1.28/NP5.6/OS4.24/SSS11.9

POSTER

Soil moisture data assimilation in high-resolution integrated models at the hillslope scale

Harrie-Jan Hendricks Franssen, Sebastian Gebler, Wolfgang Kurtz, Valentijn

Pauwels, Stefan Kollet, and Harry Vereecken

14:00–15:45 Hall A

#HS1.2.9/AS4.26/BG1.28/NP5.6/OS4.24/SSS11.9

POSTER

Building an Efficient Ensemble Data Assimilation System for Coupled Models with the Parallel Data Assimilation Framework

Lars Nerger, Qi Tang, Longjiang Mu, and Dmitry Sidorenko

14:00–15:45 Hall A

#HS1.2.9/AS4.26/BG1.28/NP5.6/OS4.24/SSS11.9

POSTER



Evaluation of ensemble simulations of a coupled atmosphere-land-surface-subsurface model for cross-compartmental data assimilation

Bernd Schalge, Harrie-Jan Hendricks Franssen, Stefan Kollet, Tobias Finn, Barbara Haese, Emilio Sánchez, and Clemens Simmer

14:00–15:45 Hall A

#HS1.2.9/AS4.26/BG1.28/NP5.6/OS4.24/SSS11.9

POSTER

Understanding large scale transport: ICON-ART N2O satellite data assimilation with an independent POLSTRACC validation

Jennifer Schröter, Peter Hoor, Jens Krause, Lars Nerger, Roland Ruhnke, Björn-Martin Sinnhuber, and Peter Braesicke

14:00–15:45 Hall A

HS2.2.4

ORAL

Development of a stand-alone Multiscale Parameter Regionalization (MPR) tool for the estimation of effective model parameters for any distributed model

Robert Schweppe, Stephan Thober, Sabine Attinger, and Luis Samaniego

16:45–17:00 Room C