

Report of the 13th International Young Geomorphologists Meeting Wolfshausen (near Gießen) 17th-19th May 2019

The German Young Geomorphologists (YG) held the 13th International Young Geomorphologists' Meeting close to Gießen from May 17-19, 2019. A group of 59 German and international guests from Austria, Egypt, India, Poland and the UK gathered in Wolfshausen for a three-day meeting. Undergraduate, graduate, PhD students as well as postdocs from 23 different institutions and universities contributed to an inspiring diverse program of scientific contributions on various geomorphological topics. The focus was to present and discuss own research and general geomorphological topics in a rather informal and friendly environment.

The main frame of the program consisted of four mixed blocks of oral presentations and spotlights, two poster sessions, one keynote, and an excursion (see detailed program attached). The sessions for oral presentations and spotlights were organized as follows:

Session I: "Sediment dynamics in fluvial systems" featuring talks by Steffi Tofelde (University of Potsdam) and Renee van Dongen (GFZ-Potsdam) as well as one spotlight by David Puhl (FU Berlin / GFZ-Potsdam)

Session II: "Methods in geomorphology" featuring one talk by Matthias Konzett (University of Vienna) and two spotlights by Anna Iglseder (University of Vienna) and Nina Marlovits (University of Vienna)

Session III: "Mixed topics" featuring spotlights by Anne Voigtländer (GFZ Potsdam), Andrea Junge (Justus-Liebig-University Gießen) and Dorothee Post (freelancer)

Session "Geoarcheology" featuring one talk by Julian Trappe (University of Würzburg)

Session IV: "Tectonics, erosion and climate in high mountainous areas" featuring one spotlight by Stefan Haselberger (University of Vienna) and two talks by Kai Deng (GFZ-Potsdam) and Donovan Dennis (GFZ-Potsdam)

Proceedings

The program started by the same procedure as the last years with the "Scales Game" where participants group themselves according to their research's time and spatial scales. The attendees continued the get to know each other during dinner. Subsequently, **Prof. Dr. Todd Ehlers** (Tübingen University) presented his invited **keynote lecture** on "Latitudinal Effects of Vegetation and Climate on Catchment Denudation". His talk triggered a very lively discussion on landscape evolution modeling and how important vegetation might be in shaping topography. Afterwards, the persons responsible for the individual posters were asked to advertise their work with one slide in a limited

time of 30 seconds (for further details on the broad selection of topics see program in the attachment). This was followed by the actual poster session, which was open ended, so that discussion kept on going far into the night.

Saturday began with the first oral session on sediment dynamics in fluvial systems. Then, the organizing team of the German YG gave a short overview of their activities in the past year and upcoming events (e.g. YG session at EGU, social events at conferences, YG meeting 2020 in Würzburg). The YG introduced funding possibilities and awards from the German Working Group on Geomorphology (AK Geomorphologie) which is available to the YG members of the AK. In addition, the chairpersons of the YG draw attention to the upcoming elections of the YG chairpersons and the scientific advisory board on Sunday. Prior to the field trip in the afternoon, the second oral session was held on "Methods in geomorphology". The field trip led by Dr. Johanna Lomax (Justus-Liebig-University Gießen) and Andrea Junge (Justus-Liebig-University Gießen) introduced the geological and geomorphological situation of the surroundings of Wolfshausen located at the margin of the Lahn valley (Fig. 1). The main stop in the quarry Niederweimar fostered in-depth discussions of fluvial landscape evolution based on outcrops of fluvial Lahn deposits that cover the Late Pleistocene and Holocene including (reworked) remains of the Laacher See tephra. The trip also provided the opportunity for further discussion and networking. After dinner the dedicated spotlight session took place on "Mixed topics". Spotlights were introduced in 2018 as a new format with a maximum of 5 minutes of presentation which is followed by an in depth discussion of 10 minutes. This allows young researchers to present their work in progress, unsolved problems or issues they face during their research. The evening ended with the continuation of the successful poster session.

On Sunday, the program started with the last oral presentations on Geoarcheology and Tectonics, erosion and climate in high mountainous areas. Afterwards, a new board was elected. The meeting ended with an evaluation of the conference (see feedback).



Figure 1: Field trip in the Lahn valley

General points

On Sunday morning, three chairpersons and a support team of seven young geomorphologists were elected: Johannes Buckel (TU Braunschweig), Stefan Haselberger (University of Vienna) and Anna Schoch (University of Bonn) will chair the YG for a two-year period until the 2021 meeting. They are supported by Mario Kirchhoff (Trier University), Simon Meyer-Heintze (University of Würzburg), Jörn Profe (Justus-Liebig-University Gießen), Stefanie Tofelde (University of Potsdam), Julian Trappe (University of Würzburg), Renee van Dongen (GFZ-Potsdam), and Janek Walk (RWTH Aachen) in the upcoming tasks.

Jun.-Prof. Dr. Julia Meister (University of Würzburg) will organize the **14**th international meeting of the German Young Geomorphologists group. It will take place near Würzburg from June **26-28**, **2020**. Please save the date.

The YG group is thankful for the financial support of the AK Geomorphologie and sponsoring institutions (see attached) which makes it possible to run a Young Geomorphologists' meeting every year affordable for young scientists. We also thank Simon Meyer-Heintze (University of Würzburg) for handling participant communication. We would like to specially thank Prof. Dr. Todd Ehlers for his excellent keynote lecture, Dr. Johanna Lomax and Andrea Junge for guiding the great excursion. Finally, we are much obliged to Christian Halla (University of Bonn) and Julia Meister (University of Würzburg) for their commitment, effort and excellent work during the last two/four years as chairpersons of the YG.

Feedback

Overall, the feedback for the meeting was very positive (Fig. 2), however participants would like to have more time for scientific presentations and discussions in general (spotlights, posters, and excursion).

One key point learnt from the feedback discussion is that 60 participants represent the capacity limit of such a meeting. The new board will develop strategies how to cope with potentially more than 60 registrations in the future. There was a lively discussion about spotlights and how to improve their outcome for the young scientists opting for this presentation format. While the mixed spotlight and oral sessions received very positive feedback, new formats of small-group discussions were put on the table. Parallel sessions with small-group or "fish-bowl" discussions were debated with participants also emphasizing the danger of losing partly the interdisciplinary character of this meeting by temporally splitting the group. One option to avoid splitting the group might be spotlight-related additional discussions that are announced during spotlights and that take place during leisure time for interested persons. In addition, there should be one session dedicated to non-scientific but work-related issues in order to thrive on the challenging work environment for early-career scientists.

Concerning the field trip, the group suggested to have more guided discussions related to specific topics. Furthermore, the group identified the demand for a workshop on e.g. graphic design or dendrogeomorphology. Finally, the participants highlighted the importance of getting to know each other and thus recommended more introductory games at the beginning of the meeting.

The poster session was carried out on two evenings with no change in terms of content. The posters stay on the boards the whole meeting. The advantage is a time-independent opportunity to read and to discuss the presented topics.

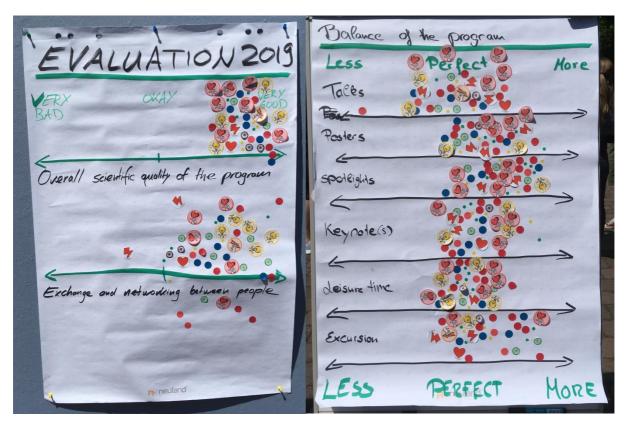


Figure 2: Feedback of the YG-meeting 2019

Kind regards,

Johannes Buckel, Stefan Haselberger, Mario Kirchhoff, Simon Meyer-Heintze, Jörn Profe, Anna Schoch, Stefanie Tofelde, Julian Trappe, Renee van Dongen, Janek Walk

PROGRAM

Friday, 17th May 2019

16:00 Arrival

17:00 Get to know the program and the group

Let's learn some names and share a drink.

18:00 Dinner

19:00 Keynote talk by Prof. Dr. Todd Ehlers on: "Latitudinal Effects of Vegetation and Climate on Catchment Denudation" – Convener: Anne Voigtländer

20:00 Short break

Refresh your drinks.

20:15 Information on the upcoming elections (Sunday) of the board and advisory board of the Young Geomorphologists

20:30 "30 second madness" and open end poster session – Convener: Tilmann Wolpert

You have 30 SECONDS to present your topic on one slide. After the short introductions we will continue discussing the posters with some cool drinks.

Hannah Derkum (University of Salzburg): The relevance of diffusion processes for desert pavement dynamics - an experimental study.

Anika Donner (University of Würzburg): Periglacial landforms in Jotunheimen, Norway: Distribution and causal links to permafrost and other factors.

Josh Wolstenholme (University of Hull): The geomorphological impacts of Natural Flood Management René Kapannusch (GFZ-Potsdam): Glacial influence on late Pleistocene paleo-erosion rates in the north-western Himalaya, India.

Julian Krause (University of Würzburg): BigData@Geo: Monitoring und Modellierung des Bodenwasserhaushalts in Unterfranken.

Jana Krautz (TU Dresden): Provenance Of Eolian Components Of Cover Beds, West USA.

Julius Kunz (University of Würzburg): Multimethodological investigation of permafrost related landforms in the Northwest Territories, Canada.

André Mollenhauer (Universität Hildesheim):

Samah Moustafa (Damietta University): Geoarcheology of Phoenicus (Greek harbour), NW coast of Egypt.

Konstantin Nebel (John Moores University Liverpool):

Stephan Pötter (RWTH Aachen): Stable isotopes in loess.

Patricia Rauh (Friedrich-Schiller-University Jena): 10Be exposure dating on moraines in the Sayan Mountains, Siberia.

Kamila Ryzner (University of Wroclaw):

Christian Schäfer (University of Würzburg): Modelling of soil moisture for Lower Franconia.

Lisa Schramm (KU Eichstätt-Ingolstadt): Hypsometric Analysis of Glacier on Svalbard.

Paul Strobel (Friedrich-Schiller-University Jena): A 8.5 kyr high-resolution multi-proxy paleoclimate record from lake Vo.Ivlei, Southern Cape, South Africa.

Julian Struck (Friedrich-Schiller-University Jena): Paleoclimate reconstructions in Mongolia using biomarker.

Magdy Torab (Damanhour University): Geomorphology of large boulders deposites on Ras El Hekma Beach, NW Coast, Egypt.

Janek Walk (RWTH Aachen): Alluvial fan morphodynamics along the coastal Atacama Desert – geomorphometric, geologic, and climatic perspectives.

Katharina Wetterauer (GFZ-Potsdam): Alpine headwall erosion rates based on 10Be concentrations in supraglacial debris cover.

Martina Wilde (University of Würzburg): Landslides in Veracruz, Mexico.

Saturday, 18th May 2019

8:30 Breakfast

9:30 Session I: Sediment dynamics in fluvial systems – Convener: Raphael Steup

You have 20 minutes for your topic, so make your talk short (12-15 minutes) and have enough time for discussion!

- 9:30 *Steffi Tofelde* (University of Potsdam): Fill-terrace formation and sediment-signal disruption in response to environmental perturbations.
- 9:50 Renee van Dongen (GFZ-Potsdam): Discharge variability and the implications for river incision a study along a climate gradient in Chile.
- 10:10 David Puhl (FU Berlin/GFZ-Potsdam): Earthquake induced sediment supply in Himalayan rivers.

10:30 Coffee break

11:00 Session II: Methods in geomorphology – Convener: Simon Meyer-Heintze

- 11:00 *Matthias Konzett* (University of Vienna): Suitability of phytoliths as a quantitative process tracer in the Spanish Pyrenees.
- 11:20 Anna Iglseder (University of Vienna): Use of remote sensing in monitoring of soil erosion across scales.
- 11:40 *Nina Marlovits* (Austria): Fall or Flow? Optimizing the choice, parameterization and combination of landslide models.

12:00 Lunch

13:15 Field trip to the surroundings: Dr. Johanna Lomax & Andrea Junge

The field trip starts in front of building 4. Please bring sturdy shoes and your swimwear if the weather is suitable for swimming in the Lahn river.

18:00 **Dinner**

19:00 Session III: Spotlights - Convener: Julia Meister

You have 15 minutes for your topic, your spotlight talk is limited to 5 minutes. Bring your research topic or problem to the point and have plenty of time for discussion and problem solving!

- 19:00 Anne Voigtländer (GFZ-Potsdam): Stress controls in Geomorphology.
- 19:15 *Andrea Junge* (Justus-Liebig-University Gießen): Crowdfinding: the search for the perfect proxy.
- 19:30 *Dorothee Post*: Geosciences and Design.

19:45 Poster session

21:00 Get together

Sunday, 19th May 2019

8:30 Breakfast

10:00 Geoarchaeology - Convener: Christian Halla

10:00 Julian Trappe (University of Würzburg): The sacred canals of Bubastis.

10:20 Session IV: Tectonics, erosion and climate in high mountainous areas – Convener: Christian Halla

- 10:20 *Donovan Dennis* (GFZ-Potsdam): Temperature sensitivity physical weathering in alpine glacial landscapes.
- 10:40 *Stefan Haselberger* (University of Vienna): Quantification of feedbacks between small scale erosion and ecological succession on slopes in a high-mountain environment.

11:00 Coffee break

11:20 Continuation session IV

- 11:20 *Kai Deng* (GFZ-Potsdam): Denudation rate changes along a fast-eroding mountainous river with slate headwaters in Taiwan from meteoric 10Be/9Be ratios.
- 11:40 Neelratan Singh (Jawaharlal Nehru University (JNU) of New Delhi): Climate and Tectonic controls on evolution of landscapes in Sutlej Valley, N-W Himalaya.

12:00 Election of the board and advisory board of the Young Geomorphologists

12:30 Lunch

13:30 Give us what we deserve!

We need your opinion in what you liked and disliked!

14:00 Goodbye and final remarks

Participants

Nr	Name	First name	Affiliation	E-mail
1	Binder	Christoph	University of Würzburg	chris_binder@gmx.de
2	Deng	Kai	GFZ Potsdam	kdeng@gfz-potsdam.de
3	Dennis	Donovan	GFZ-Potsdam	dennis@gfz-potsdam.de
4	Derkum	Hannah	University of Salzburg	hannahderkum@gmail.com
5	Dietze	Elisabeth	AWI Potsdam	edietze@awi.de
6	Donner	Anika	University of Würzburg	anika.donner@stud-mail.uni-wuerzburg.de
7	Fiedler	Sarah	University of Hildesheim	fiedlers@uni-hildesheim.de
8	Griesang	Nicolas	University of Bonn	nicolas.griesang@uni-bonn.de
9	Grothues	Jonas	University of Hildesheim	grothues@uni-hildesheim.de
10	Halla	Christian	University of Bonn	chris.halla@uni-bonn.de
11	Haselberger	Stefan	University of Vienna	stefan.haselberger@univie.ac.at
12	Herche	Julian	Justus-Liebig-University Gießen	julian.herche@geogr.uni-giessen.de
13	Iglseder	Anna	University of Vienna	anna.iglseder@univie.ac.at
14	Jakob	Kim	University of Trier	kimjakob93@aol.com
15	Wolstenholme	Josh	University of Hull	j.wolstenholme-2018@hull.ac.uk
16	Junge	Andrea	Justus-Liebig-University Gießen	andrea.junge@geogr.uni-giessen.de
17	Kapannusch	René	GFZ-Potsdam	rene.kapannusch@gfz-potsdam.de
18	Karges	Nils	University of Würzburg	nils.karges@stud-mail.uni-wuerzburg.de
19	Kirchhoff	Mario	University of Trier	kirchhoff@uni-trier.de
20	Konzett	Matthias	University of Vienna	m.e.konzett@gmail.com
21	Krause	Julian	University of Würzburg	julian.krause@uni-wuerzburg.de
22	Krauß	Lydia	TU München	lydia.krauss@tum.de

23	Krautz	Jana	TU Dresden	jana.krautz@tu-dresden.de
24	Kunz	Julius	University of Würzburg	julius.kunz@uni-wuerzburg.de
25	Lahmer	Timo	University of Hildesheim	lahmer@uni-hildesheim.de
26	Löber	Christoph	University of Trier	s6chloeb@uni-trier.de
27	Marlovits	Nina	Austria	nina.marlovits@univie.ac.at
28	Mattner	Tobias	University of Hildesheim	mattner@uni-hildesheim.de
29	Meister	Julia	University of Würzburg	julia.meister@uni-wuerzburg.de
30	Menges	Stefanie	Justus-Liebig-University Gießen	Stefanie.Menges@geogr.uni-giessen.de
31	Meyer-Heintze	Simon	University of Würzburg	simon.meyer-heintze@uni-wuerzburg.de
32	Mollenhauer	André	University of Hildesheim	mollen@uni-hildesheim.de
33	Moustafa	Samah	Damietta University, Egypt	Samahmoustaf86@yahoo.com
34	Nebel	Konstantin	John Moores University Liverpool	K.Nebel@2018.ljmu.ac.uk
35	Nowacki	Dirk	Goethe-University of Frankfurt/Main	nowacki@em.uni-frankfurt.de
36	Oehler	Salome	Justus-Liebig-University Gießen	salome.oehler@geogr.uni-giessen.de
37	Post	Dorothee		dorothee.post@t-online.de
38	Pötter	Stephan	RWTH Aachen	stephan.poetter@geo.rwth-aachen.de
39	Profe	Jörn	Justus-Liebig-University Gießen	Joern.Profe@geogr.uni-giessen.de
40	Puhl	David	FU Berlin/GFZ-Potsdam	davidpuhl@gmx.de
41	Rauh	Patricia	Friedrich-Schiller-University Jena	patricia.rauh@uni-jena.de
42	Ryzner	Kamila	University of Wroclaw	kamila.ryzner@uwr.edu.pl
43	Sander-Beuermann	Wera	University of Hildesheim	Sanderbe@uni-hildesheim.de
44	Schäfer	Christian	University of Würzburg	christian.d.schaefer@uni-wuerzburg.de
45	Schramm	Lisa	KU Eichstätt-Ingolstadt	lisaschramm@web.de
46	Singh	Neelratan	Jawaharlal Nehru University (JNU) of New Delhi	neelratan.geology@gmail.com
47	Stadtmann	Robin	LBEG Niedersachsen	robin.stadtmann@lbeg.niedersachsen.de
48	Steup	Raphael	Justus-Liebig-University Gießen	Raphael.Steup@geogr.uni-giessen.de
49	Strobel	Paul	Friedrich-Schiller-University Jena	paul.strobel@uni-jena.de
50	Struck	Julian	Friedrich-Schiller-University Jena	julian.struck@uni-jena.de
51	Terweh	Simon	BfG Bundesanstalt f. Gewässerkunde /Uni Bonn	sterweh@uni-bonn.de
52	Tofelde	Steffi	University of Potsdam	tofelde@uni-potsdam.de
53	Torab	Magdy	Damanhour University, Egypt	magdytorab@hotmail.com
54	Trappe	Julian	University of Würzburg	julian.trappe@uni-wuerzburg.de
55	van Dongen	Renee	GFZ-Potsdam	dongen@gfz-potsdam.de
56	Voigtländer	Anne	GFZ-Potsdam	avoigt@gfz-potsdam.de
57	Walk	Janek	RWTH Aachen	janek.walk@geo.rwth-aachen.de
58	Wetterauer	Katharina	GFZ-Potsdam	katharina.wetterauer@gfz-potsdam.de
59	Wilde	Martina	University of Würzburg	martina.wilde@uni-wuerzburg.de
60	Wolpert	Tilmann	Justus-Liebig-University Gießen	urs.t.wolpert@geogr.uni-giessen.de
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