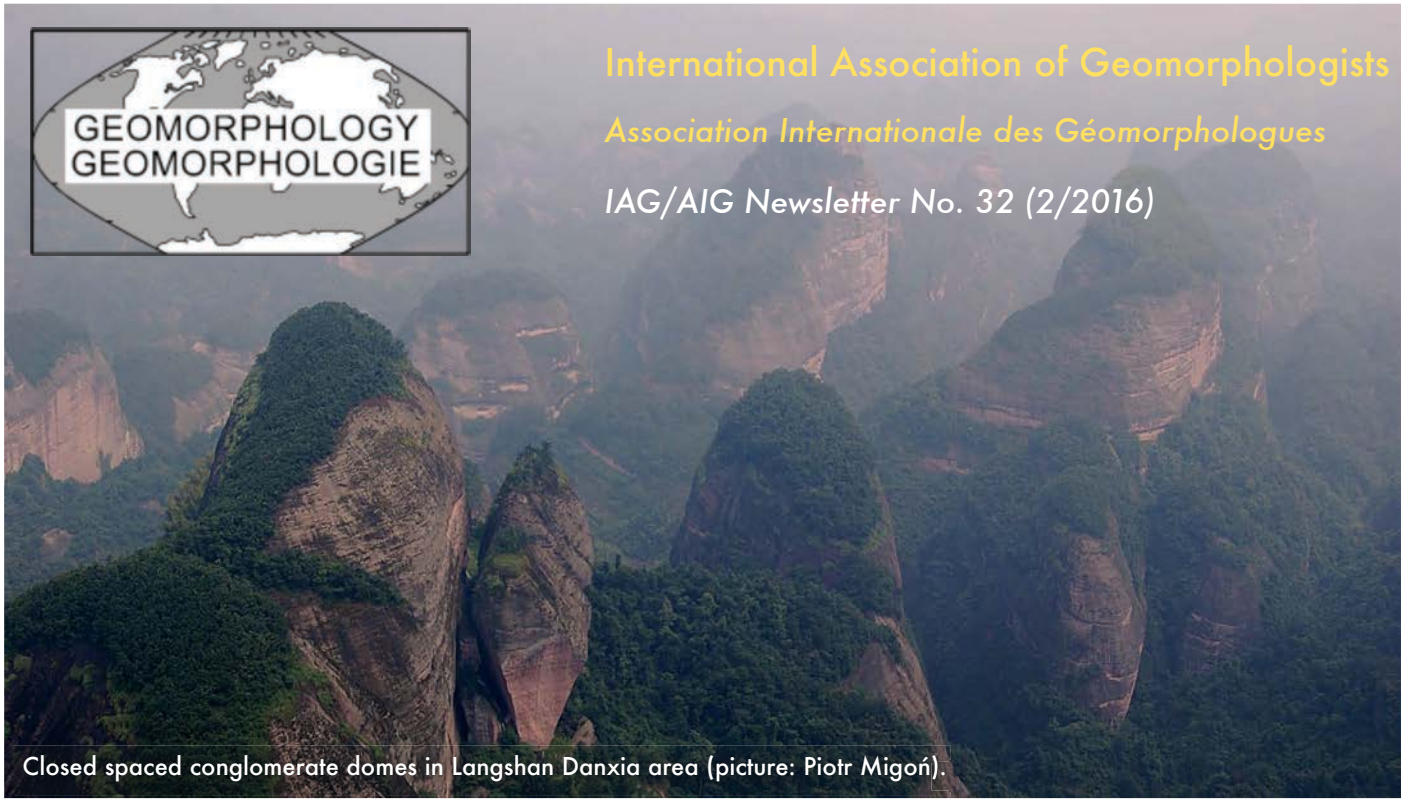
International Association of Geomorphologists

Association Internationale des Géomorphologues

IAG/AIG Newsletter No. 32 (2/2016)



Closed spaced conglomerate domes in Langshan Danxia area (picture: Piotr Migoń).

Editorial

The 30th International Conference of Geography held in Beijing in August 2016 provided an opportunity for IAG to renew closer contacts with the community of Geographers. The IAG (co-)organized four specific sessions devoted to geomorphological topics: *Geomorphological hazards for a sustainable society*, organised by the IGU Commission "Geomorphology and Society" and the IAG Working Group on Natural Hazards; *Geomorphology, geomorphosites and landscape*, organised by the IGU Commission "Geomorphology and Society" and the IAG Working Group on Geomorphosites; *Interactions between geomorphic processes and human activities and geographical aspects in geoarchaeology*, sponsored by IAG; the *Symposium on comparative study of Danxia landform between different countries*, organized by the Red Beds and Danxia Geomorphology Working Group of IAG and the World Heritage Protection Committee of Danxia Landforms. The relations between IAG and IGU have moreover been strengthened by the signature of an agreement between the two organizations.

Emmanuel Reynard, *IAG/AIG Publications Officer*

Word of the President

During the 30th International Conference of Geography organized in Beijing last August, the IAG was represented in several common sessions co-certified IAG/IGU. I would like to thank all the colleagues of the Executive Committee and the geomorphologists of the country members of the IAG who have managed to make this possible. For the IAG, it is essential to enhance the dual institutional attachment to to geography as well as to geology and geosciences. The announcement of the geomorphologist's utility for social sciences and field management is a strong statement. Therefore, the IAG and the IGU have signed an agreement in Beijing to strengthen the links. Common sessions IAG/IGU will be organized in Delhi at the 9th International Conference of Geomorphology.

Looking forward to see many of you there!

Lors de la 30ème Conférence internationale de géographie organisée à Pékin en août dernier, l'AIG a été représentée dans plusieurs sessions communes co-labellisées AIG/UGI. Je tiens à remercier tous les collègues du comité exécutif et les géomorphologues de nos pays adhérents qui ont su rendre cela possible. En tant qu'AIG, il est essentiel de valoriser notre double rattachement institutionnel vers la géologie et les géosciences, comme vers la géographie. La mise en évidence de l'utilité des géomorphologues pour les sciences sociales et la gestion des territoires est une affirmation forte. C'est pourquoi l'AIG et l'UGI ont signé à Pékin une convention pour renforcer nos liens. Des sessions communes AIG/UGI seront ainsi organisées à Delhi lors de notre 9ème Conférence Internationale de Géomorphologie.

Nous espérons vous y voir nombreux!

Eric Fouache, *IAG/AIG President*

Editor's Note

The success of the IAG/AIG Newsletter depends upon the contributions that we receive. On behalf of IAG/AIG we would ask you to assist us by supplying information related to the forthcoming activities and innovations in geomorphology in your respective countries (commentaries, reviews of regional or national meetings and field trips, summaries of issues pertinent to geomorphology and announcements of future meetings and workshops). Your contributions should be forwarded to the IAG/AIG Publications Officer.

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Deadline for the next issue:

31 January 2017

Argentine Association of Geomorphology and Quaternary Studies

The National Organization which is a full member of IAG is the "Argentine Association of Geomorphology and Quaternary Studies" (AACYG, in Spanish). The President of the Association from 2015 to 2018 is Dr. Jorge Rabassa, CADIC-CONICET, Ushuaia, Tierra del Fuego, jrabassa@gmail.com.

AACYG organized the 6th Argentine Congress on Geomorphology and Quaternary Studies, in Ushuaia, in April 2015. More than 150 researchers and graduate students attended the Congress, mostly from Argentina. More than 100 papers were presented orally or in posters. At least two special volumes of international journals with selected papers were published and a book edited by J. Rabassa, in the Springer Series on Earth System Sciences, will be released soon, also with selected contributions.

AACYG together with the University of San Juan has also organised a field course on Tectonic Geomorphology in October 2016 in the Andean Precordillera. The number of potential participants has largely exceeded the number of available places.

AACYG will organize a Symposium on Geomorphology and Quaternary Studies within the 21st Argentine Geological Congress, in Tucumán, Northern Argentina, in October 2017. Special publications are also expected to be completed then. A field trip to the Northern Argentine Andes is planned. The 7th Argentine Congress on Geomorphology and Quaternary Studies will be held in Puerto Madryn, Peninsula Valdés, Northern Patagonia, in September 2018.

Finally, AACYG is offering scholarships to graduate students that wish to attend Geomorphology and/or Quaternary scientific events, within the framework of our limited funding capabilities.

Jorge Rabassa, *President, Argentine Association of Geomorphology and Quaternary Studies*

Special issue of *Acta geographica Slovenica* in memory of Bojan ERHARTIČ (1979–2013)

Dr. Bojan ERHARTIČ (1979–2013)
(Photo: Aleš Smrekar)

Acta geographica Slovenica published a special issue in memory of Dr. Bojan ERHARTIČ (1979–2013) who was a talented Slovenian young scientist working in the fields of geomorphology, geodiversity, and nature protection. He has done pioneering work in the field of mountain geomorphosites in Julian Alps and was also a recognized photographer.

The special issue brings articles on Bojan's contribution to geography (Smrekar, Zorn & Komac), the Udin Boršt landscape park (Šmid Hribar & Ferk), aspects of geodiversity in the Black Mountains of southern France (Giusti), a methodological basis for landscape interpretation (Smrekar, Šmid Hribar & Tiran), and the importance of mountain geomorphosites for environmental education (Reynard & Coratza).

Two articles are published to which Bojan made contributions: an article on stakeholder conflicts in a protected area (Smrekar, Šmid Hribar, Erhartič), and the article on the beauty of landforms (Smrekar, Polajnar Horvat & Erhartič).

The articles of the special issue can be accessed at http://ojs.zrc-sazu.si/ags/issue/archive.

Dr. Blaž Komac
Editor (http://ags.zrc-sazu.si)

Young Geomorphologists

IAG Grants for BSG Post-Graduate Training Workshop, Windsor, UK, 5-8 December 2016

IAG offered 2 grants of 250 Euros to PhD students in geomorphology from Europe (except UK) who took part in the BSG Post-Graduate Training Workshop (Windsor, UK, 5-8 December 2016). The Workshop was organised by the British Society for Geomorphology (BSG) and recognised by the International Association of Geomorphologists. The course provided PhD students with elements of training for research and with an opportunity to meet others at an early stage of their training when they were wrestling with the problems of research design etc. IAG Grants have been awarded to the following candidates:

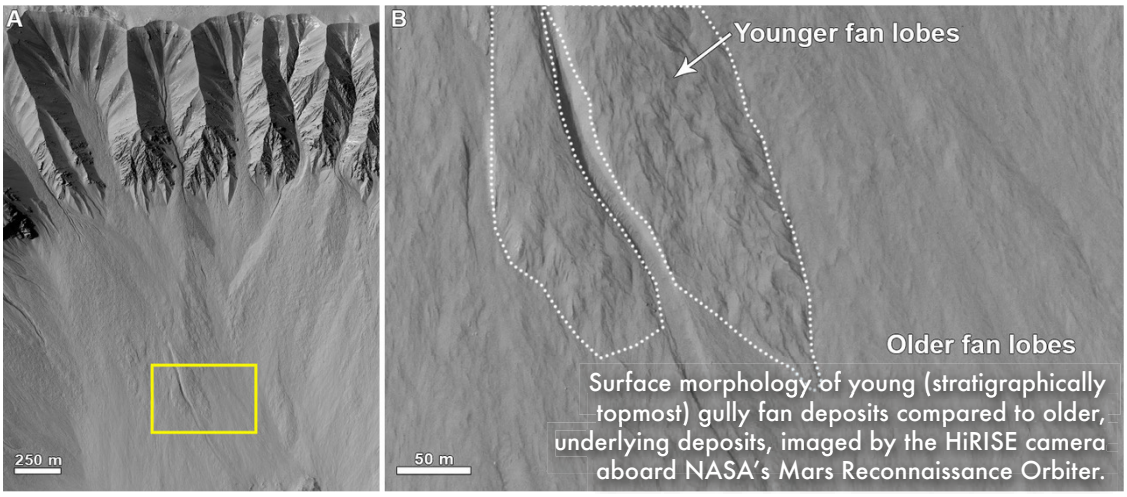
- Gabriele Amato (Italy)
- Vittoria Vandelli (Italy)

Their reports will soon be available on the IAG website.

Mauro Soldati, IAG/AIG Vice-President and Training Officer, Marta Della Seta, IAG/AIG Executive Committee Member and Webmaster

Two reports on the Martian Gullies and their Earth Analogues Workshop, London, UK, 20-21 June 2016

Since their discovery with the Mars Global Surveyor Mars Orbiter Camera (MOC) in 1997, gullies have been of scientific interest based on their apparent geologic youth and morphology suggestive of formation involving water. The subsequent discovery with MOC of present-day gully activity, reported in 2006, fuelled this interest. However, it also created a conundrum: If gullies are still active today, is water involved? This led to the first workshop on martian gullies in 2008. In the near-decade since, the field has evolved significantly. Long-term monitoring efforts with the Mars Reconnaissance Orbiter Context Camera (CTX) and High-Resolution Imaging Science Experiment (HiRISE) revealed even more present-day activity in gullies, but seasonally confined to periods when active defrosting would be expected. Therefore, frost-related processes became a spotlight of focus. If frost is driving gully activity today, did it play a role in gully formation?

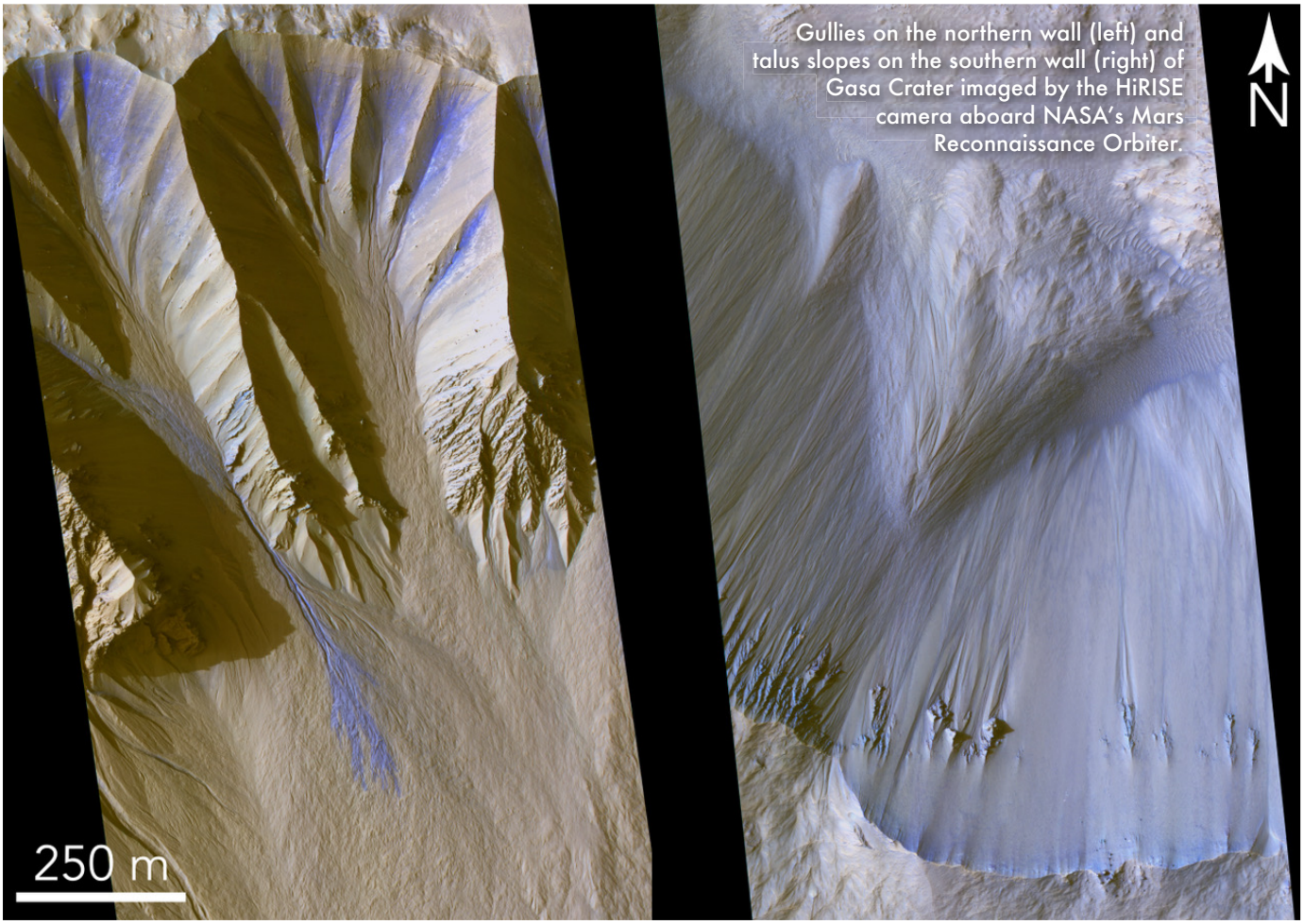


Surface morphology of young (stratigraphically topmost) gully fan deposits compared to older, underlying deposits, imaged by the HiRISE camera aboard NASA's Mars Reconnaissance Orbiter.

The Martian Gullies and their Earth Analogues workshop brought together the martian gullies community with their terrestrial counterparts. This included geomorphologists, climate modellers, and experimental lab work. With the layout of the workshop including many breaks for discussion amongst the participants, having such a diverse background all under one roof led to many productive conversations. At the end of each day, a group discussion was held. The Day 1 discussion session focused on defining the term "gully," as in the martian literature many things seem to be getting classified as "gullies" but perhaps inappropriately. On day 2, the discussion focused on frost-induced (CO_2-gas-lubricated) processes, and whether they are capable of forming gullies on Mars, having terrestrial geologists in the room, particularly William Dietrich, one of the biggest names in terrestrial landslide and channel initiation work. While the room was in apparent agreement that these frost-related processes could mobilize loose fine-grained material within a pre-existing gully system, the question as to whether this process could mobilize large grains and/or incise channels into rock was raised. The take-home point that I attempted to emphasize during this session in my comments was that gullies are dynamic systems—likely evolving through multiple mechanisms, and how they formed initially is not necessarily related to the present-day activity within them.

As my Ph.D. research focuses on martian gullies, attending this conference was incredibly valuable from many standpoints. Having the opportunity to present my work in person to all of the key players in the gully community, getting the chance to have conversations with them one-on-one during the tea breaks, and being able to give input during the discussion sessions were all incredibly beneficial experiences career-wise. Of any conference I have attended during my Ph.D., this was undoubtedly the most useful and productive for my research.

IAG Grant holder Tanya Harrison
University of Western Ontario, USA



Gullies on the northern wall (left) and talus slopes on the southern wall (right) of Gasa Crater imaged by the HiRISE camera aboard NASA's Mars Reconnaissance Orbiter.

I am extremely thankful to the International Association of Geomorphologists for supplying me with a travel grant that allowed me to attend the Martian Gullies Workshop in London on 20-21 June, 2016 at The Geological Society in Burlington House. This workshop was critically important to anyone who studies gullies on Mars, as it was a unique confluence of experts in many related fields, including terrestrial geologists, geomorphologists, and glaciologists, as well as experts in martian geology, climate, and gully monitoring.

In addition, the last such conference was held in 2008, and the current models of gully formation and modification have been significantly updated over the past eight years. This workshop strove to present the current thinking on the nature and diversity of martian gullies, as well as the driving forces behind gully formation and modification.

The distinct but related backgrounds of the various members allowed for in-depth and rigorous discussions about all aspects of the martian gully system which would otherwise not have been possible with a less academically diverse audience.

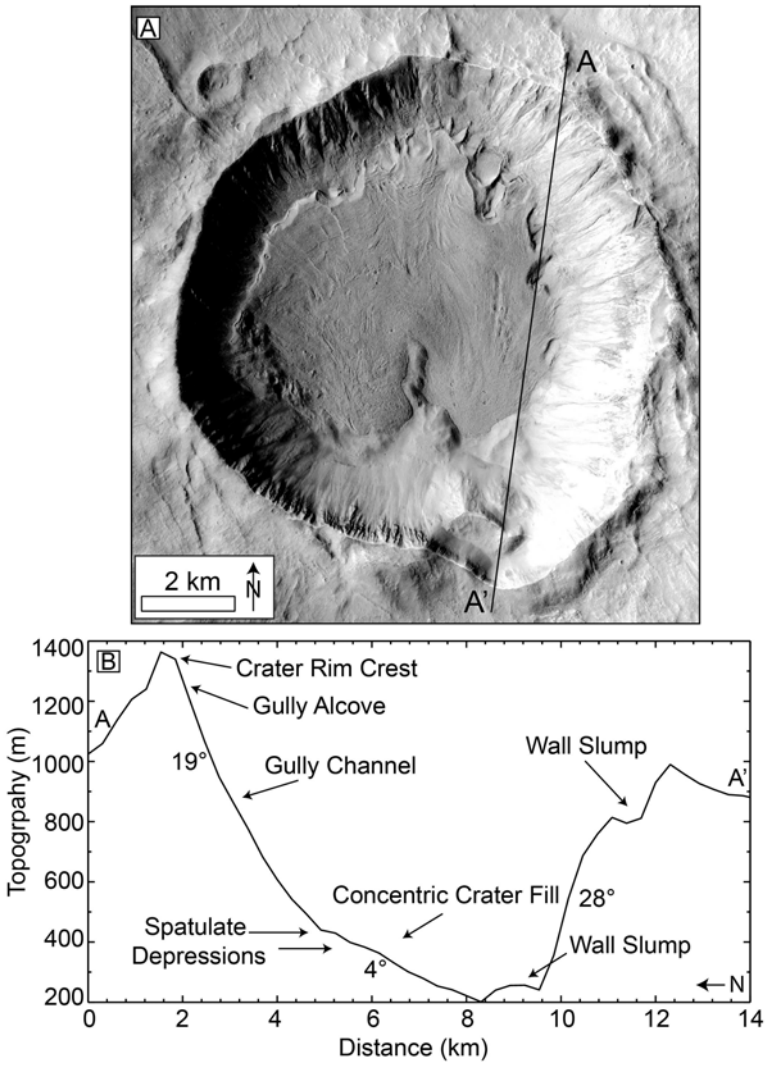


Fig. 1 – Paraglaciated crater in the mid-latitudes of Mars. (A) This crater has been glaciated, as can be seen from the concentric crater fill (CCF) in the crater interior. Paraglacial features (features that form in response to deglaciation) can be seen forming in the crater walls (e.g. gullies) and at the base of the crater wall (spatulate depressions). (B) Topographic profile of the crater illustrating how glaciation and paraglaciation have affected the crater interior.

While the workshop was only two days, the various sessions included discussions about water-related processes, CO2-related processes, laboratory and field experiments, computational models, and Earth analogues, among others. In addition there were scheduled discussion periods each day, where the topics of discussion covered such diverse issues as the formal definition of a martian gully, given the observed diversity in gully morphology on Mars; the possibility of CO2 as a major erosive agent in gully systems; and whether Earth analogue studies are still useful. Given the various viewpoints of the workshop attendees these discussions were both fruitful and educational, and which I found important as a young scientist.

This workshop was particularly interesting for me to attend as an American, as it was the first scientific conference I have attended in Europe. As the field of planetary science becomes increasingly globalized and international cooperation and collaboration is increasingly facilitated, it is crucial to become better acquainted with the major scientists in Europe, as well as the young scientists and fellow graduate students who have expertise in similar fields. Creating and maintaining professional relationships with a diverse field of scientists is crucial to becoming a successful professional and ensures that the best possible science is being performed. By attending this workshop I was able to meet and develop relationships with several experts from across Europe in a variety of fields, many whom I had never met.

The opportunity to present my research at this workshop allowed me to showcase my work to those who do not frequent American conferences, and likewise I was able to learn about research being performed outside of the United States. The most valuable experience one can have as a graduate student is the opportunity to present one's own work and discuss it on an advanced level with other experts in the field. This workshop allowed me to do just this in an environment with which I was formerly unfamiliar. With the help of the IAG travel grant I now have established contacts with top scientists throughout Europe, and I have a much deeper understanding of the nuance and diversity of martian gullies. In addition, I am more confident in my ability to present my research and represent my university on an international scale.

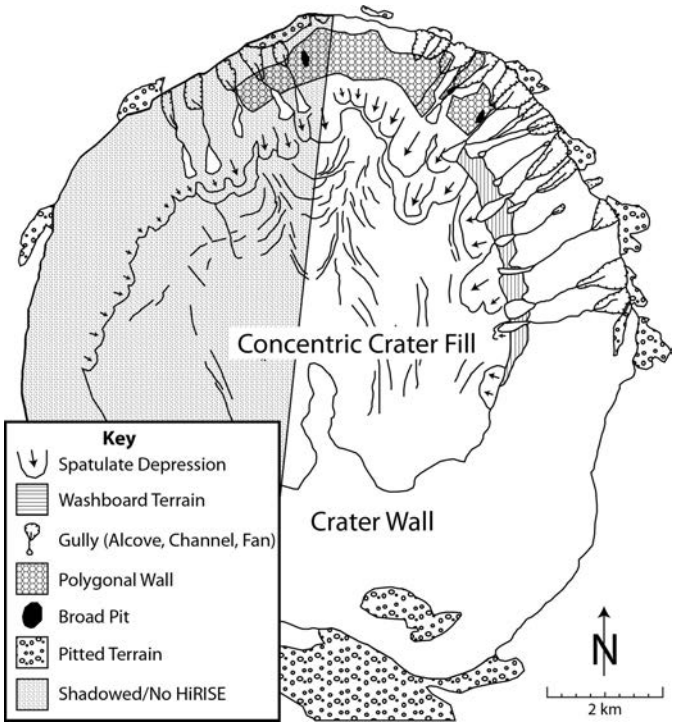


Fig. 2 – Sketch map of a paraglaciated crater (from Figure 1) showing the location and extent of paraglacial features. The majority of paraglacial activity has occurred on the northern portion of the crater, in the same location as the regions of major snow and ice accumulation.

IAG Grant holder Erica Jawin
Brown University, USA

Report of the 11th International Conference on Permafrost (ICOP2016) and the Young Researchers Workshop, Potsdam, Germany, 20-24 June 2016

Prior to the conference the two days Young Researchers Workshop was organized on best suited topics for early career scientists. The most useful lectures and breakout sessions for me were "How to get published in scientific journals", "How to prepare for and present at conference", Perspectives on careers in academia and also working outside academia.

A view of the Young Researchers Workshop (Photo: Raul David Șerban)

During these sessions we gained knowledge and suggestions how to organize and prepare every step for disseminating our work both at conferences and also for publishing. We received tips how to simplify and clearly write our papers with real examples about what is and isn't good in articles. Also now I have a clear idea of how the peer-reviewed journals works and all the steps that your paper follows until it get published.

A „junior" and a „senior" professor explained all the "obstacles" that you have to pass in a scientific career giving us their own experience, and explained us the key aspects to succeed in this field. Also we got an example from a young scientist how to switch from academia to public sector and reverse, keeping your research interests. Another interesting and very technical session was the one about "Permafrost modeling" were we got a broad overview of all the models used and an update of the newest approaches.

The 11th ICOP2016 proofed to be an inspired environment for me with a lot of high quality research. This conference offered me a general outlook on the global view of permafrost and periglacial processes, giving me the opportunity to see the newest approaches about this topic. I found interesting to see how many studies are assigned to permafrost carbon cycle, permafrost modeling and permafrost engineering. Also the periglacial geomorphology session gathered the largest number of scientific works. This was the session on which I presented my work during the poster session. Presenting my thesis results to a worldwide community of experts which are studying the same topic as me provided a consistent and useful feedback that helped me to understand more clearly my data and to improve the interpretations. Presenting my work in the framework of an international conference increased my visibility also through the appreciations for my short video presentation about my research (FrostByte), which has been chosen as the second best FrostByte.

Attending to the local excursion "Natural & Cultural Heritage of Potsdam by Bike" gave me the opportunity to see the glacial, periglacial and postglacial landforms and deposits in a different environment than the alpine one on which I am more familiar. Participating to this conferences was the best circumstance to meet again some outstanding professors and researchers that I knew before and to extend my network with new contacts. I met also a lot of PhD students from all around the world and with different research approaches related to permafrost studies, which led to interesting and fruitful discussions.

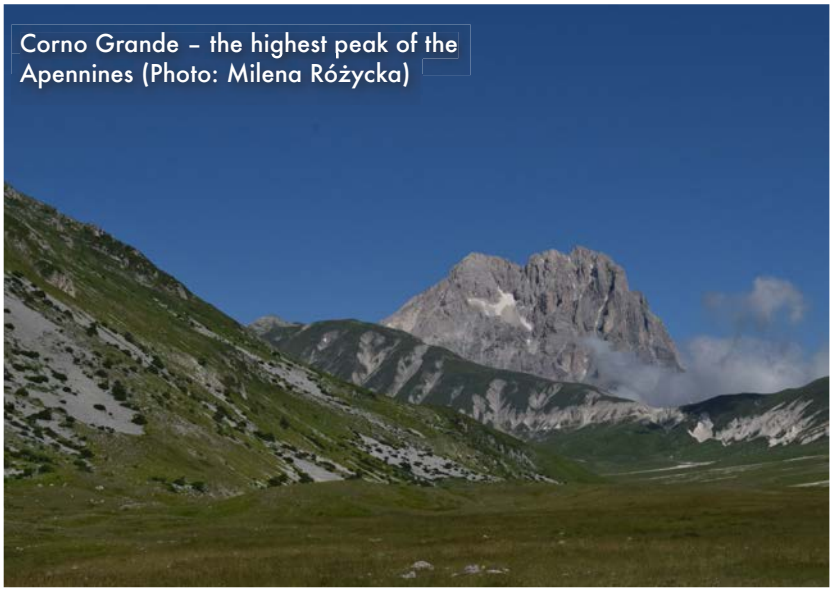
Excursion "Natural & Cultural Heritage of Potsdam by Bike" (Photo: Raul David Șerban)

All the experience during the conference and workshop contributed to my personal development and to my perception about these processes, gave me new ideas and improved my knowledge on these topics. For making this happen I would like to give my gratitude to the International Association of Geomorphologists for the travel support.

IAG-IPA Grant holder Raul David Șerban
PhD student at the Department of Geography, West University of Timișoara, Romania

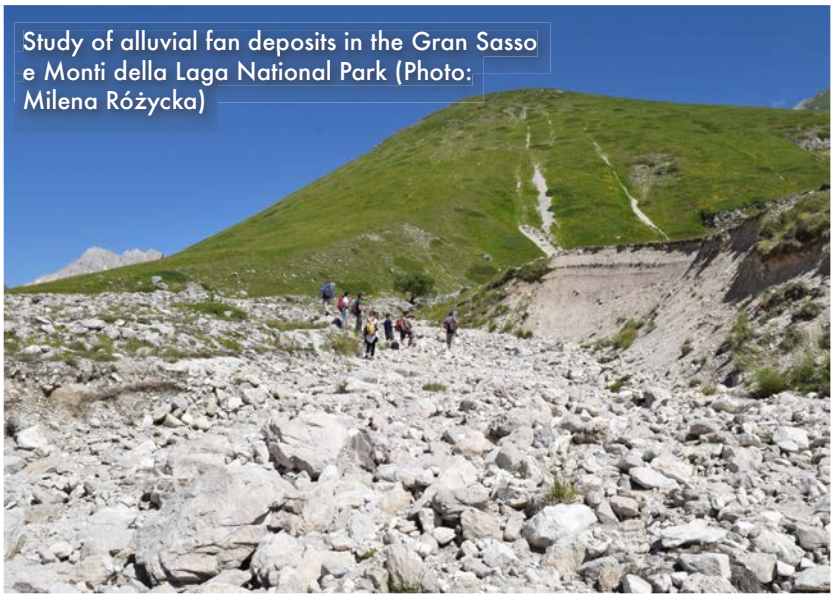
Cryoturbation structures observed during the excursion (Photo: Raul David Șerban)

Report on the Summer School 2016 on „Alps vs Apennines: Tectonic Geomorphology of Mountains", organised by the IAG Tectonic Geomorphology Working Group, Western Alps (Peveragno, CN) – Central Apennines (Assergi, AQ), Italy, 2–9 July 2016



Corno Grande – the highest peak of the Apennines (Photo: Milena Różycka)

Geomorphological mapping exercise was carried out in the Gran Sasso area (Photo: Milena Różycka)



Study of alluvial fan deposits in the Gran Sasso e Monti della Laga National Park (Photo: Milena Różycka)

The development in the field of tectonic geomorphology related to both the availability of new data sets and the appearance of innovative tools and techniques enhanced the multidisciplinary character of this branch of science. Recent advances help, on the one hand, to improve our understanding of the nature of tectonic processes and their morphological imprint, but sometimes make it also difficult to keep up with all the novelties.

The participation in the Summer School on „Alps vs Apennines: Tectonic Geomorphology of Mountains" organized by the International Association of Geomorphologists Working Group on Tectonic Geomorphology was a good opportunity to become familiar with the progress in this field.

Meeting the world-class researchers who presented and discussed the state-of-the-art in morphotectonics and related fields (such as structural geology, geodesy, paleoseismology, geomorphometry etc.) was undoubtedly of great personal benefit to me. I find it really important for students and early beginners involved in tectonic geomorphology studies that they can take advantage of discussion with experienced scientists. And the latter appeared to be really supportive and helpful! Meeting other early career researchers was also a very attractive aspect of the course since it allowed us to talk about our mutual interests and share the experience.

The attendance in the training school gave me the possibility to enrich my knowledge not only in the long-term morphotectonic evolution of the orogens but also in the sudden geomorphological changes related to recent seismic activity. The most interesting experience to me, as to a person who lives in a seismically stable area, was L'Aquila urban trip during which the damages on architectural elements caused by an earthquake in 2009 were illustrated.

A diversification of the form of activity ensured by organizers (i.e. lectures, practical exercises, computer laboratory, field activities) made the Summer School especially attractive to attendees working on different topics and using different methodological approaches.

Having in mind all the aforementioned I have to admit that the participation in this event was an immense experience to me. Here I would like to thank the organizers for their effort as well as for the financial support they offer to young researchers.

IAG Grant holder Milena Różycka
University of Wrocław, Poland

Participants of Summer School at the Gelasian palaeoshoreline, Fara in Sabina (Photo: Organizing Committee)

Report on the EGU/CERG FORM-OSE Post-graduate Training School 2016, São Miguel Island, Azores (Portugal), 4-9 July 2016

I am a Spanish PhD student in the third year of his doctoral period. My research project aims at forecasting the occurrence of rainfall-triggered landslides in the North of Spain. Last July, I was privileged enough to participate in the EGU/CoE FORM-OSE Post-graduate Training School 2016, celebrated in the beautiful setting of São Miguel Island, in the Azores (Portugal). For a PhD student, to be selected to participate in such event constitutes an incredible opportunity.

First of all, the attendance in the training course resulted very attractive to me not only for the thematic related to landslide hazards, but also for the participation of some of the most renowned experts in the field worldwide. I must confess that, at the beginning, I was quite concerned about having to present my research in front of a group of first-rate international experts. However, I was pleasantly surprised by the relaxed atmosphere and the interest and enthusiasm of all the lecturers in advising us and discussing our work in a constructive way. This was undoubtedly one of the real strengths of this course.

Another attractive aspect of the course was the two field trips. It is sometimes difficult to achieve the practical realisation of our research. However, Azores constitutes a natural laboratory where is absolutely necessary the practical implementation of the scientific knowledge to keep the population safety. It was very interesting for me to visit the main elements of the monitoring network existing in São Miguel Island and to fully understand the effective functioning of a warning system not only for landsliding but also for other natural hazards, such as active volcanism, earthquakes or degassing processes. And of course, I really enjoyed visiting the volcanoes and the fumarolic fields, without forgetting a spontaneous dip with other students in Caldeiras da Ribera Grande.

Finally, the opportunity to meet other young researchers like me was without doubt one of the best points of the training course. It was incredibly rewarding for me to chat with them about our common interests and issues and to exchange experiences and pieces of advice.

For all the aforementioned, I would like to take this opportunity to thank all the people involved in the organization of the training course for their efforts and for giving me the opportunity to participate. I should also like to express my gratitude to the International Association of Geomorphologists for awarding me a grant to favour my participation in the course.

All that remains for me to do, finally, is to encourage all the young researchers specialized in natural hazards to apply for the next EGU/CoE FORM-OSE Post-graduate Training School.

IAG Grant holder Pablo Valenzuela Mendizábal
Departamento de Geología, Universidad de Oviedo, Spain

Danxia Landform Research at the International Geographical Congress

In August 21st to 25th, 2016, the 33rd International Geographical Congress (IGC) was held at the National Convention Center in Beijing. Prof. Peng Hua, chairman of the Red Beds and Danxia Landform Working Group of IAG, director of the Red Beds and Danxia Landform Research Working Group of Chinese Geographical Society, together with his research team participated in the congress.

It was for the first time that the session of "Comparative study of Danxia Landforms between different countries" was set up at the IGC. More than 40 scholars from China, Poland, Russia, Serbia, USA, India, and other countries participated in the session and exchanged their ideas. Thirteen participants gave oral presentions. Moreover, eight of them introduced their research by poster presentations. Prof. Peng Hua, Prof. Piotr Migoń (former vice-president of IAG), and Dr. Ren Fang (secretary of the Red Beds and Danxia Landform Working Group) co-chaired the meeting. In this session, most of the scholars have maintained the traditional research direction of Danxia landforms, but innovative research has also been presented. New methods and techniques were introduced to reveal the development mechanism of Danxia landforms. Meanwhile, the comprehensive study on the red beds lanforms and issues of red beds have been newly spotlighted.

A snapshot of the session

Prof. Peng Hua chaired the session and delivered a presentation

Prof. Piotr Migoń chaired the session and delivered a presentation

International comparative study on Danxia landform was the thematic topic of this session. This is also the first thematic international comparative discussion. Prof. Piotr Migoń, who has long been engaged in the study of sandstone landforms in Europe, discussed various mechanisms of escarpment, characteristics for sedimentary tablelands, including Danxia terrains. Dr. Pan Zhixin, Faculty of Hainan University, analyzed the characteristics of red bed landforms of the Zion National Park in the United States, and conducted systematic comparative analysis with Chinese Danxia landforms. Dr. Cao Qiuxiang, from the East China Institute of Technology, compared the tectonic units and lithology of the Cretaceous strata in China and Russia. Russian geologists, Elena Morozova and Irina Stina, respectively discussed the formation mechanism and controlling factors of Danxia landform of Longhushan, Jiangxi, China. Besides, they compared red beds landform in Russia and Danxia Landform in China. They expressed their future interests in the issues of red beds in southern Russia.

With respect to the application of new technologies and methods, Dr. Ren Fang, from Chinese Academy of Geological Sciences, quantified morphological characteristics of Danxia landform in Longhushan by extracting mathematically landscape elements. Dr. Yan Luobin, from Sun Yat-sen University, for the first time, simulated the stress changes during the collapsing process of Danxia Pillar of Langshan using three-dimensional finite element method based on lithology experimental data. Dr. Chen Liuqin, from the East China Institute of Technology, discussed topics on Danxia landform classification, sedimentary facies, and landform development.

Besides, he proposed that the future research of Danxia landform should strengthen the combination of geology and geomorphology, and apply in-depth study of Danxia landform through theory and methods of geology. In addition, Prof. Zhang Renshun, from Nanjing Normal University, who has been long engaged in Danxia culture study, presented unique aesthetic cultures in Danxia landform areas, including religious culture, academy culture, and grotto art. He pointed out the interdependence of culture and landform.

activities, which may provide a good link with international research on badlands.

At this meeting, Prof. Milica Kasanin-Grubin from Serbia, who has been long engaged in the study of badlands, gave a clear response to land degradation and desertification problems in red beds area of China and expressed her intention in further cooperation.

The International Geographical Congress for the first time scheduled the session for Danxia landform study, which manifests the emphasis of the international

Part of the presenters at the meeting room

On-site questions and remarks

Part of the participants taking a group photo after the meeting

In recent years, with the Danxia landform appearing on the stage of international academic circles, the studies on Danxia landform have also gradually expanded to comprehensive study on red beds and its related issues. In 2011, the Geographical Society of China approved the establishment of the "Red Beds and Danxia Landform Research Working Group". Moreover, in 2013, International Association of Geomorphologists approved to change the "Danxia landform Working Group" into the "Red Beds and Danxia Landform Working Group", which symbolizes the attention on red beds study by academic circles. Professor Peng Hua, in his presentation "The significance of the extension on the research from study individual landform Red beds issues in China", reviewed progress in domestic and international Danxia landform study in recent years and other related issues on red beds, as well as introduced new topics and research achievements on geological hazard, soil erosion, land degradation and desertification in the red bed areas. He pointed out that the comprehensive study of red bed problem needs to use a multidisciplinary approach to conduct an integrated study on red beds and landform development – land degradation – human impact – relationship between human and comprehensive geographical environment in order to seek land renovation for red beds and environmental optimization countermeasures. The essential problem of red bed desertification is land degradation phenomena related to special lithological characteristics of red beds and human

geographic society on the red beds and Danxia landform research and also the increased influence of the Red Beds and Danxia Landform Working Group. It is of great significance for further international exchanges and cooperation.

Yan Luobin, Qi Deli, Ren Fang
Red Beds and Danxia Landform Research Working Group of Chinese Geographical Society

Report of the 10th SEDIBUD workshop "Monitoring of the geomorphological processes in cold environments under climate change", Bansko, Bulgaria, 7–10 September 2016

From September 7 to 10, 2016, 19 participants met during a workshop held at the ski resort Bansko, at the foot of the Pirin Mountains, Bulgaria. The workshop was organised by Ahinora Baltakova (University of Sofia). It was composed of paper and poster sessions covering a wide range of different cold climate environments as well as extended working group discussions. During a one-day field excursion the Banderitsa valley and the double cirque Kazanite were presented and fossil glacial, nival, slope, fluvial and karst processes and their sediment dynamics were discussed.

Group picture of SEDIBUD-participants in the background of Vihren Peak (2914 m) and Kazana cirques. Photo: Ahinora Baltakova.

Workshop participants joined from 7 countries and 8 research institutes, both from Europe (Norway, France, Poland, Romania, Bulgaria) and outside Europe (South Africa, Canada). During the workshop the SEDIBUD Working Group addressed central SEDIBUD issues and discussed recent research progress reports from SEDIBUD members.

Key issues and actions until 2017

Conference Sessions

Session at the European Geosciences Union (EGU) General Assembly, Vienna, Austria, 23-28 April 2017

As in the previous years, a conference session at the European Geosciences Union General Assembly 2017 (EGU2017) on Chemical and mechanical denudation, source-to-sink fluxes and sedimentary budgets under changing climate and other perturbations, convened by Achim A. Beylich, Katja Laute, Luca Mao and David Morche, is proposed.

Session at the 9th International Conference on Geomorphology, New Delhi, India, 6-11 November 2017

As at the previous ICGs, a conference session on Sediment Budgets will be organized. The scientific session will be convened by A.A. Beylich and F. Lavigne.

Publications

The SEDIBUD synthesis book is now published: Beylich, A.A., Dixon, J.C and Z. Zwolinski (Eds.) (2016). Source-to-Sink Fluxes in Undisturbed Cold Environments. Cambridge University Press, Cambridge. 408pp.

SEDIBUD synthesis paper: A multi-authored SEDIBUD key synthesis paper (by Beylich et al.) is currently in preparation and shall be submitted to a leading international journal in 2017. This synthesis paper shall integrate comparable data sets on solute and sedimentary fluxes from a range of different cold climate catchment systems with the key goal to analyze quantitative rates and environmental drivers of these fluxes.

SEDIBUD special issues: A special issue (Morche, D., Krautblatter, M. and A.A. Beylich (Eds.). Sediment cascades in cold climate geosystems) to the journal Geomorphology, arising from the 8th SEDIBUD workshop at Zugspitze (Germany) in 2014 and the 9th SEDIBUD workshop in Kaunertal (Austria) in 2015 is very close to publication.

A special issue to an international journal arising from the 10th SEDIBUD workshop in Bansko (Bulgaria) is planned. A call for paper contributions to this planned SEDIBUD special issue was sent out by Ahinora Baltakova on 13 September 2016.

Discussions on cryodynamics and fossil glacial forms in the background of the Banderitsa U-shape valley. Photo: Katja Laute.

Meetings

The 11th SEDIBUD workshop will take place in early September 2017 in Romania and will be organized by Olimpiu Pop with colleagues. We will make use of the confirmed opportunity to apply for I.A.G./A.I.G. financial support for this workshop through travel grants for young geomorphologists. The First Circular was sent out in early December 2016 by Olimpiu Pop.

Ahinora Baltakova, *University of Sofia "St. Kliment Ohridski", Sofia, Bulgaria*
Achim A. Beylich, *Geological Survey of Norway, Trondheim, Norway*

Workshop on Urban Geomorphological Heritage Rome, Italy, October 27-29, 2016

The Workshop on Urban Geomorphological Heritage was held in Rome, Italy, 27–29 October 2016 under the auspices of the International Association of Geomorphologists – IAG and the Geomorphosites Working Group, and the Italian Association of Physical Geography and Geomorphology (AIGEO) and its partners (ProGEO, G&T associations).

Fieldtrip at the first stop at Circus Maximus and the explanation on valley morphology transformation by Prof. M. Del Monte (Photo B. Mihai).

It was an exploratory scientific event, with an innovative theme, organized by the geomorphologists from the University of Rome – La Sapienza, the host institution, represented by Dr. Alessia Pica, in collaboration with the University of Modena and Reggio Emilia (Italy) – represented by Dr. Paola Coratza, together with the University of Lausanne (Switzerland), Institute of Geography and Sustainability, whose director, Professor Emmanuel Reynard had the idea of the workshop.

The topics of the conference were: the geomorphological analysis in urban environment, the methodologies for the assessment and mapping of urban geomorphosites, the urban geotourism, the interpretation and the popularization of urban geomorphosites, the relationship between cultural and geomorphological heritage in cities, the conservation of geoheritage and the urban growth, the geoheritage and the urban planning.

The programme included three different activities. The first day was focused on an intensive course in urban heritage mapping and analysis (Methods for urban geomorphic mapping and geoheritage analysis). The second day was the scientific session, while the third one was the fieldtrip in Rome historical core, focused on urban geoheritage.

The scientific session gathered together about one hundred researchers from Europe (Italy, France, Switzerland, Portugal, Poland, Czech Republic, Poland, Slovenia) and Northern Africa (Morocco), specialized in geomorphology and other sciences like geology, archeology, history and urban planning. After the opening ceremony (speeches from G. Scarascia Mugnozza, M. Soldati, P. Coratza and P. Fredi) there were 30 oral presentations and posters, organized in four topics: a plenary session focused on the achievements in this research topic (presentations by E. Reynard, D. Spizzichino, C. Giusti, M. Del Monte and P. Migoń), anthropic geomorphological evolution (P. Brandolini, B. Mihai, C. Guerra, P. Mozzi and B. Commentale), urban geomorphosites (C. Portal, F. Badiali, J. Tiĉar, L. Melelli and Z. Zwolinski) and urban geotourism (L. Grangier, M. Górska-Zabielska, M.L. Rodrigues and L. Kubalíkova). There were also displayed 12 posters with the above mentioned topics.

Fieldtrip was focused on the geomorphological heritage of the city of Rome and was coordinated and guided by Prof. M. Del Monte and Dr. Alessia Pica, from the host University of La Sapienza Roma 1. It was a real experience to discover the old urban sites of the seven hills of Rome (Septimontium). Four of them were visited, from Circus Maximus (close to Palatino Hill) to the Aventino hill and Tiberine Island on Tiber River. The excellent walking tour used a documented geomorphic map and other representations in order to understand the closer relationship between the antique and the newer urban structure of the city with the geological and geomorphological background. A new mobile application on the geoheritage of Rome was also introduced by the colleagues.

In conclusion, the first edition of the Workshop on Urban Geomorphological Heritage, was a challenging scientific meeting that opens a new research field at the border between geomorphology and other sciences, with potential output in basic scientific approaches like geoarcheology or urban history and in applied directions like urban planning and geoheritage conservation for geotourism development.

Bogdan Mihai, *Faculty of Geography*
University of Bucharest, Romania

Upcoming Events

Note:
This calendar proposes a list of events organized by IAG, IAG working groups, and large international conferences concerning geomorphology. It is based on information transmitted by IAG members. For more information see also the IAG website: www.geomorph.org

New Zealand
17th ANZGG Conference "Integrated Geomorphology", Wairarapa, New Zealand, 5–10 February 2017. Website: https://www.ivvy.com/event/ANZGG/

USA
16th Annual River Restoration Symposium, Stevenson, Washington, USA, 7–9 February 2017. Website: http://www.rrnw.org/

Germany
International Symposium on "The effects of global change on floods, fluvial geomorphology and related hazards in mountainous rivers", Potsdam, Germany, 6–8 March 2017. Information: jalopez@uni-potsdam.de

USA
Association of American Geographers (AAG) Annual Meeting, Boston, MS, USA, 5–9 April 2017. Website: http://www.aag.org/annualmeeting. Deadline for poster submission: 23 February 2017.

Austria
European Geosciences Union (EGU) General Assembly, Vienna, Austria, 23–28 April 2017. Website: http://www.egu2017.eu/

Portugal
International Conference "Managing Mediterranean Mountain Geoheritage", 6–7 May 2017, Manteigas, Serra da Estrela, Portugal. Website: http://www.geoparkestrela.pt/3mg/
Deadline for abstract submission: 31 January 2017.

Germany
Galileo International Workshop "From process to signal – Advancing environmental seismology", Ohlstadt, Germany, 6–9 June 2017. Information: turowski@gfz-potsdam.de

Italy
10th Symposium on River, Coastal and Estuarine Morphodynamics (RCEM2017), Trento-Padova, Italy, 14–21 September 2017. Website: http://events.unitn.it/en/rcem17
Deadline for abstract submission: 31 January 2017.

Taiwan
Communicating Geoparks: How local involvement makes a better tomorrow possible?, Taipei, Taiwan, 29 September – 3 October 2017. Information: jclin@ntu.edu.tw
Deadline for abstract submission: 17 February 2017.

India
9th International Conference on Geomorphology, New Delhi, India, 6–11 November 2017. Website: http://www.icg2017.com
Deadline for abstract submission: 30 April 2017.

Glacier Laden mountain peak at Sonmarg, Kashmir Himalaya (picture: Sunil Kumar De).

Red rock cliffs and densely vegetated valleys are a characteristic landmark of subtropical Danxia landscapes in southern China (picture: Piotr Migoń).

International Association of Geomorphologists (IAG / AIG)