Word of the President

This Newsletter highlights the activities carried out by the International Association of Geomorphologists and its National Scientific Members during the whole 2017, a topical year for the Association since it foresaw the quadriennial International Conference including the election of the new Executive Committee and the decisions on the venues of the next international and regional conferences. The 9th International Conference was held in New Delhi (India) in November with the participation of about 500 delegates from 46 countries. Thanks to the outstanding efforts of the Indian Institute of Geomorphologists the conference was highly successful and projected the international geomorphological community to new challenges and remarkable opportunities to get together again in occasion of our next official events: the Regional Conferences to be held in Greece (2019) and Iran (2020), and the International Conference planned in Portugal in 2021. In New Delhi, the past Executive Committee passed the torch to the new one. Since the beginning, the new committee has been fully committed in promoting initiatives for Young Geomorphologists and supporting the newly established Working Groups, as well as in trying to provide the Association with a legal status as soon as possible.

Eric Fouache, IAG President 2013-2017
Mauro Soldati, IAG President 2017-2021

Editor’s note

The purpose of a newsletter is to provide specialized information to a targeted audience. IAG Newsletters are about keeping the members of the association up to date with the latest events and developments in geomorphology in institutional and academic global scale. The IAG Newsletters are published on a recurring basis to keep the members in the loop. The newsletter promoting the new approaches in geomorphology, encouraging the young geomorphologists to participate actively and to highlight and advertise its member’s activities (conferences, workshop, summer schools). The success of the IAG Newsletter depends upon the contributions that we receive. On behalf of IAG 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 Publications Officer.
REPORT ON THE 9th INTERNATIONAL CONFERENCE ON GEOMORPHOLOGY
By Sunil Kumar De, Vice President of IAG.

The Conference:
The 9th International Conference on Geomorphology (9th ICG) was held from 6 to 11 November 2017 at Vigyan Bhawan, New Delhi. The ICG is the official conference of the International Association of Geomorphologists (IAG) and is held once in every four years. The last conference (8th ICG) was held in Paris in 2013. This nearly 2½ week event (including pre- and post-conference field trips), was organized by the Indian Institute of Geomorphologists (IGI) and the North-Eastern Hill University (NEHU), Shillong. Professor (Dr.) Sunil Kumar De (the Secretary General of the IAG and now the Vice-President of IAG) and Professor of Geography at NEHU, was the Conference Convener. This was the first international conference on geomorphology held in India and the second ICG in Asia. The 5th ICG was held in Tokyo (Japan) in 2001.

The main objectives of the conference were – (i) to bring together leading and young geomorphologists to exchange and share their research findings on all aspects of geomorphology, (ii) to provide a platform for active researchers to present and discuss trends, innovations, challenges and solutions adopted in various fields of geomorphology, (iii) to advance knowledge related to earth surface processes, extreme events and natural hazards for the benefit of the society, and (iv) to foster capacity building for young researchers.

Conference Participants:
In all, 488 young geomorphologists, research students and distinguished geomorphologists from different parts of the world attended this mega-event. Of the total registered delegates, nearly two-third (314) participants were from other countries, and nearly one-third (174) were from India. Forty six (46) countries were represented, with high numbers (>20) from Brazil, China, France, Italy, Poland and UK. Academicians, scientists and experts from different fields, such as geography, geology, hydrology, geo-archaeology, environmental sciences, social sciences, tourism, disaster management, etc., attended this international conference. The following graph gives the details of the international representation.

Data Source: Pritam Santra, Shehashis Ghosh, Saheli Bhattacharjee and Subhamita Chaudhari
Conference and Session Program:

The opening and closing sessions of the conference were chaired by the President of the IAG (Prof. Eric Fouache and Prof. Mauro Soldati, respectively). Dr. M. R. Bhutiyani (Director, DTRL) and Prof. R. L. Hangloo (VC, Allahabad University) were respectively the Chief Guests during the opening and closing sessions. Prof. Sunil Kumar De (the Conference Convener) and Prof. S. Singh (the President of IGI) welcomed and addressed the gathering during the opening and closing sessions.

The Atlas of Geomorphosites in India, Edited by Prof. Vishwas S. Kale was released during the opening session, along with the Conference Abstract Volume and the Field Guide Books. All the registered delegates received a copy of the Atlas, providing glimpses of India’s rich geodiversity and geoheritage.

On this occasion, the 5th volume of the IGI’s Journal of Indian Geomorphology was also released and distributed to all the participants. This special issue of the IGI journal contains a memoir and an extended article by Prof. Leszek Starkel of the Polish Academy of Sciences. During the opening session, the official website of the IGI was launched. The website (http://indiageomorph.org) was designed and created by the Editor of the IGI’s research journal, Professor Suando Bandyopadhyay of the Calcutta University.

During the IAG General Assembly, on the 2nd day of the conference, three distinguished senior geomorphologists from different parts of the world were honoured by giving felicitation for their lifelong contributions to the field of Geomorphology. A young geomorphologist from Brazil was awarded the Jean Tricart Scholarship.

The focal theme of the conference was "Geomorphology and Society". Eight keynote lectures and 30 lead talks were delivered during the four days of the conference. The following chart gives the conference schedule at a glance.

The conference included 40 sessions covering the majority of geomorphological topics and themes. Six technical sessions were held simultaneously in six conference rooms and halls, with state-of-the-art audio-visual facilities. On all the conference days, poster sessions were held in another hall of the Vigyan Bhawan Complex.

High numbers of research papers were presented (oral and poster) under the following seven technical sessions:

S13: Fluvial Processes and Landforms (64)
S33: Tectonic Geomorphology (48)
S19: Glacial and Peri-glacial Geomorphology (47)
S21: Application of Remote Sensing and GIS in Geomorphology (37)
S11: Hillslope Processes and Mass Movements (35)
S16: Coastal Geomorphology and Management (33)
S17: Arid and Semi-arid Geomorphology (28)
The following chart gives the main themes covered during the conference.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Code</th>
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<tbody>
<tr>
<td>Theoretical Geomorphology</td>
<td>S1</td>
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<tr>
<td>Applied Geomorphology</td>
<td>S2</td>
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<tr>
<td>Geomorphic Processes in coupled human and natural systems (Session of the IGU Commission)</td>
<td>S3</td>
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<td>Geomorphological Resources</td>
<td>S4</td>
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<td>Volcanic Geomorphology</td>
<td>S5</td>
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<tr>
<td>Karst Geomorphology</td>
<td>S6</td>
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<tr>
<td>Anthropocene Geomorphology</td>
<td>S7</td>
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<tr>
<td>Geomorphic Outreach</td>
<td>S8</td>
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<tr>
<td>Bio-geomorphology</td>
<td>S9</td>
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<tr>
<td>Weathering, Soils and Regolith on different time scales</td>
<td>S10</td>
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<tr>
<td>Hillslope Processes and Mass Movements</td>
<td>S11</td>
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<tr>
<td>Palaeohydrology and Fluvial Archives - hydrological extreme and critical events (HEX)</td>
<td>S12</td>
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<tr>
<td>Fluvial processes and landforms</td>
<td>S13</td>
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<tr>
<td>Large Rivers</td>
<td>S14</td>
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<tr>
<td>Integrated River Management</td>
<td>S15</td>
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<tr>
<td>Coastal Geomorphology and Management</td>
<td>S16</td>
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<tr>
<td>Arid and Semi-arid Geomorphology</td>
<td>S17</td>
</tr>
<tr>
<td>Tropical Geomorphology</td>
<td>S18</td>
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<tr>
<td>Glacial and Periglacial Geomorphology</td>
<td>S19</td>
</tr>
<tr>
<td>Mountain Geomorphology</td>
<td>S20</td>
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<tr>
<td>Application of Remote Sensing (RS) and Geographical Information System (GIS) in Geomorphology</td>
<td>S21</td>
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<tr>
<td>Geomorphological Mapping</td>
<td>S23</td>
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<tr>
<td>Geomorphology and Allied Disciplines: Mutual Contributions for the Progress of Integrated Environmental and Disaster Studies</td>
<td>S24</td>
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<tr>
<td>Future Earth: Research for Global Sustainability</td>
<td>S25</td>
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<tr>
<td>Connectivity in Geomorphology</td>
<td>S26</td>
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<tr>
<td>Sediment Budgets (IAG-WG SEDIBUD)</td>
<td>S27</td>
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<tr>
<td>Tropical Rivers (IAG-WG)</td>
<td>S28</td>
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<tr>
<td>Geomorphology of Rocky coasts (IAG-WG)</td>
<td>S29</td>
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<tr>
<td>Submarine Geomorphology</td>
<td>S30</td>
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<tr>
<td>Landform Assessment for Geodiversity: General Geomorphology, Geodiversity, Geoconservation (IAG-WG)</td>
<td>S31</td>
</tr>
<tr>
<td>Planetary Geomorphology</td>
<td>S32</td>
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<tr>
<td>Tectonic Geomorphology (IAG-EGU Joint Session)</td>
<td>S33</td>
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<tr>
<td>Tectonic Geomorphology of Kachchh Basin</td>
<td>S33a</td>
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<tr>
<td>Geoarchaeology (IAG-WG)</td>
<td>S34</td>
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<tr>
<td>Geomorphological Hazards and Risks: risk mitigation trough new techniques under the challenges of environmental changes</td>
<td>S35</td>
</tr>
<tr>
<td>Geomorphosites and Geotourism (IAG-WG)</td>
<td>S36</td>
</tr>
<tr>
<td>Danxia Geomorphology (IAG-WG)</td>
<td>S37</td>
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<tr>
<td>Extreme Events in Geomorphology</td>
<td>S38</td>
</tr>
<tr>
<td>Land Degradation and Hazards in a Changing Environment (Session of the IGU Commissions on Land Degradation and Desertification as well as Hazard and Risk)</td>
<td>S39</td>
</tr>
<tr>
<td>Young Geomorphologists’ Session</td>
<td>S40</td>
</tr>
</tbody>
</table>

The diagram given below shows the distribution of scientific papers and posters presented under different topics.

[Diagram showing distribution of presentations]
One keynote lecture and seven plenary lectures were arranged in the spacious Plenary Hall of the Vigyan Bhawan. Eminent geomorphologists such as Prof. Mike Crozier (New Zealand), Prof. Gerald Nanson (Australia), Prof. Takashi Oguchi (Japan), Prof. Morgan De Dapper (Belgium), Prof. Francisco Gutierrez (Spain), Prof. Savindra Singh (India), Prof. Avijit Gupta (Australia), and Prof. Irasema Alcantara Ayala (Mexico), delivered the one-hr lectures on topics ranging from theoretical geomorphology to applied geomorphology. The keynote address by Prof. Mike Crozier was on “Geomorphology and Society”, the focal theme of the conference.

<table>
<thead>
<tr>
<th>Plenary 1</th>
<th>Prof. Takashi Oguchi</th>
<th>Applications of geospatial technology in geomorphology: historical review and future perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plenary 2 (S. R. Basu Memorial Lecture)</td>
<td>Prof. Morgan De Dapper</td>
<td>Geomorphology: My way</td>
</tr>
<tr>
<td>Plenary 3</td>
<td>Prof. Francisco Gutierrez</td>
<td>Applied geomorphological investigations using the trenching technique. Sinkholes, faults, landslides, floods</td>
</tr>
<tr>
<td>Plenary 4</td>
<td>Prof. Gerald Nanson</td>
<td>Equilibrium theory, evolution and least action principle; factors determining self-adjustment in Geomorphology and Earth’s fluvial stratigraphic record</td>
</tr>
<tr>
<td>Plenary 5</td>
<td>Prof. Savindra Singh</td>
<td>Indian Geomorphology: Past, Present and Future</td>
</tr>
<tr>
<td>Plenary 6</td>
<td>Prof. Avijit Gupta</td>
<td>Rivers in the Humid Tropics</td>
</tr>
<tr>
<td>Plenary 7</td>
<td>Prof. Irasema Alcantara Ayala</td>
<td>Geomorphology, disaster risk reduction &amp; policy making: on the road to Sendai</td>
</tr>
</tbody>
</table>

In addition, 30 lead talks were organized at the beginning of all the key technical sessions. The 30-minute lead lectures were delivered by the following distinguished geomorphologists from different countries (some experts delivered 2 lead talks).

1. S. Lane, Switzerland
2. M-L. Byre, Canada
3. O. Slaymaker, Canada
4. M. S. Guettouche, Algeria
5. G. Mastronuzzi, Italy
6. C. Augustin, Brazil
7. M. Fort, France
8. F. Faccini, Italy
9. N. Mangold, France
10. J. Ramirez, Switzerland
11. A. C. Narayana, India
12. A. Micallef, Malta
13. T. Panek, Czech Republic
14. R. Wasson, Singapore
15. P. Carling, UK
16. V. Vasconcelos, Brazil
17. P. Migon, Poland
18. A Van Der Beek, France
19. David S. G. Thomas, UK
20. P. D’Odorico, USA
21. K. Rowntree, South Africa
22. M. Williams, Australia
23. A. Mather, UK
24. I. Rutherfur, Australia
25. L. Pawlik, Poland
26. E. Fouache, UAE
Pre-Mid- and Post-Conference Field Trips:

Two pre-conference and five post-conference field excursions in different parts of India were organized. From north to south, these excursions included parts of – Kashmir (Drs. S. Bhat and B. Ahmad), Darjeeling (Drs. S. Sarkar and S. Bhattacharyya), Nepal (Drs. B. R. Adhikhari, Monique Fort and N. R. Khanal), Rajasthan (Dr. P. C. Moharana), Gujarat (Drs. L. S. Chamyal and D. M. Maurya), Maharashtra (Dr. V. U. Joshi) and Kerala (Dr. S. Chattopadhyay). Printed field guide books prepared by the field coordinators, giving details of the geosites/stop, were provided to all the participants of the field trips. Dr. Amal Kar and Prof. M. N. Koul were the Editors of the field guide books. A Mid-conference field trip on the Geomorphology of Delhi and its surroundings was organized by Dr. M. C. Sharma.

In addition to these field trips, a post-conference Intensive Course for Young Geomorphologists was conducted from 13-16 November 2017 at Dehradun. Resource Persons included four geomorphologists from India and four experts from abroad. The field visits to the Siwalik Hills and Lesser Himalaya were coordinated by scientists from the Indian Institute of Remote Sensing - IIRS (Dr. P. K. Champati Ray) and the Wadia Institute of Himalayan Geology (Dr. George Phillip). The 4-day field workshop was attended by 25 young geomorphologists from Europe, South America, Africa and Asia (including 5 from India).

Social Events and Exhibition:

Social events were also organized during the conference. These included a grand reception after the Opening Session, followed by a 2-hr Indian classical and folk dance program on 6th November, and a Gala Evening on 10th November. In addition, two mid-conference trips were also organized for the overseas participants on 9th November, one to Agra Fort and Taj Mahal, and another to Neemrana Fort Palace, Rajasthan.

The exhibitors included– BETA Analytic of USA, the Geological Survey of India (GSI), 36th International Geological Congress (IGC), The Geographical Society of China, Cambridge University Press and Springer Germany.

Sponsors:

The 9th ICG in New Delhi was jointly organized by the Indian Institute of Geomorphologists (IGI), Allahabad and the North-Eastern Hill University (NEHU), Shillong.

The conference was financially supported by the Ministry of Earth Sciences (MoES), the Geological Survey of India (GSI), the Science and Engineering Research Board, India (SERB), the Defence Research and Development Organization, India (DRDO), the Council of Scientific and Industrial Research, India (CSIR), and the Indian Space Research Organization (ISRO).

All the selected Young Geomorphologists attending the conference and the post-conference workshop were financially supported by the International Association of Geomorphologists (IAG/AIG), European Geosciences Union (EGU), the International Permafrost Association (IPA) and the Italian Association of Physical Geography and Geomorphology (AlGeo).

Key Recommendations:

Based on presentations and discussions at various technical sessions of this international conference, the following six key recommendations were made:

1) Need for greater focus on developing applied geomorphology research for the benefit of society, especially in developing nations facing multiple and diverse challenges.

2) Improving the scientific understanding of the changes brought about in the landforms and earth surface processes due to human activities and enhanced climate activity in the Anthropocene; evolving strategies for geo-hazard mitigation, environmental protection, nature conservation and sustainable development. This requires collaboration between experts from multiple disciplines and involvement of different agencies (public enterprises, policy makers, private companies and non-government organizations).
3) Developing better quantitative models for predicting landform changes and impacts of human-induced climate changes on shorter and longer timescales. This requires a multi-disciplinary, multi-institutional and multi-national approach.

4) Need to promote geoheritage conservation as a priority in countries that have yet to recognize the importance of conservation of the geomorphologically and geologically important heritage sites. Convincing concerned authorities to include geoheritage conservation as an integral part of the environmental and sustainable development programs.

5) Provide opportunities for interaction and collaborations among young scientists and established research workers in different sub-disciplines of geomorphology and allied fields, as well as promote exchange of information, data and technology, and the dissemination of geomorphological knowledge.

6) Need for organizing training programs and workshops on capacity building of young researchers in the field of geomorphology, to enable them to - (a) undertake scientific research necessary for proper management of human activities that affect landforms, processes and the environment, and (b) provide advice to governments (local to federal) on issues of regional, national and global concern.

Photographs of the opening and closing sessions of the 9th ICG
Professor Sunil Kumar De (the Conference Convenor) and Prof. S. Singh (IGI President) along with the Executive Committee members of the IAG on the stage during the Closing Session of the 9th ICG

9th ICG participants at the Grand Reception after the Opening Session on 6th November
Young Geomorphologists from Europe, South America, Africa and Asia selected to attend the 9th ICG as well as to participate in the post-conference 4-day workshop at Dehradun, along with the President of IAG and the Conference Convener. The financial support to these young geomorphologists was provided by the IAG, EGU, GFG, IPA, and the Commission on Land Degradation and Desertification.

**Conference Publications**

Printed booklet giving session-wise detailed scientific program of the 9th ICG

Printed Abstract Volume distributed to all the registered delegates

Field guide book on Kashmir Himalaya. Similar guide books were printed for field trips to Darjeeling, Nepal, Rajasthan, Gujarat, Maharashtra and Kerala.
MINUTES OF THE IAG EXECUTIVE COMMITTEE MEETING, OF THE NOVEMBER 11th 2017, VIGYAN BHAWAN, NEW DELHI
By Mihai Micu, General Secretary of IAG

On Saturday, November 11, 2017, during the last day of the 9th International Conference on Geomorphology held in New Delhi, India, the first meeting of the newly elected Executive Committee of the International Association of Geomorphologists (IAG) was organized, as proposed by its new President, Mauro Soldati.

The newly elected members of the IAG EC who attended the meeting were: Mauro Soldati (President, Italy), Susan Conway (Vice-President, UK), Sunil Kumar De (Vice-President, India), Francisco Gutiérrez (Vice-President, Spain), Kosmas Pavliopoulos (Publications Officer, Greece), Mihai Micu (Secretary General, Romania). Due to medical reasons, Emmanuel Reynard (Treasurer, Switzerland) was unable to attend the meeting.

Following the welcome message, the President provided information concerning voting at the Council Meeting held on November 10th to which 31 National Scientific Members were admitted (1 more than during 8th ICG, Paris, 2013).
Voting results:
* President: 18 votes for M. Soldati, 13 votes for X. Yang (with M. Soldati declared New President);
* Vice-Presidents: 28 votes for F. Gutierréz, 26 votes for S. Conway, 25 votes for S.K. De;
* Secretary General: 31 votes for M. Micu;
* Treasurer: 31 votes for E. Reynard;
* Publication Officer: 29 votes for K. Pavlopoulos.

**International Conference:** Portugal 2021 (International Conference; contact person: Prof. Lucio Cunha, Univ. Coimbra).

**Regional Conferences:** Greece 2019 (contact person: Konstantinos Vouvalidis, Univ. of Thessaloniki) and Iran 2020 (contact person: Adel Sepehr, University of Mashhad).

The EC agreed that a successful organization of conferences depends on a strong involvement of IAG EC with local organizers, negotiated and reasonable registration fees (possibly not exceeding 500 EUR), convenient organization infrastructures through the choice of Universities or City Halls as venues, good timing in relation with the activities conducted throughout other continents. With reference to the next Regional and International Conferences, the EC agreed that they will represent good opportunities to open IAG towards Central and South America as well as Asia and Africa. They will also represent suitable occasions to have EC meetings.

With this point of the agenda being concluded, the focus has been switched towards the proposal (and validation) of Co-opted members (CM). In accordance with the IAG Constitution, a number of maximum 6 Co-opted members has been proposed by M. Soldati, as well as a number of 3 Special portfolio members (SPM; taking part in the EC, but without voting rights). The criteria used for the nominations were the acknowledged commitment during previous (and, in perspective, potential) involvement in IAG-related activities, geographical breakdown and gender. The following geomorphologists were proposed and validated:
* Marta Della Seta, Italy (CM; Training Officer);
* Piotr Migon, Poland (CM; roots and history of IAG);
* Takashi Oguchi, Japan (CM; contacts with Asian and Pacific countries);
* Ghislain Zangmo Tefogoum, Cameroon (CM; contacts with African countries);
* Lucio Cunha, Portugal (SPM; 2021 International Conference);
* Konstantinos Vouvalidis, Greece (SPM; 2019 Regional Conference);
* Adel Sepehr, Iran (SPM; 2020 Regional Conference).

As for the two remaining positions of Co-opted members, it was agreed to take a decision not later than the EC Meeting in Vienna (potential candidates to be seek for from USA, Latina America and the Pacific’s). The President mentioned that a proposal came from the UAE. The EC agreed that also a candidature from Canada would be suitable, but it was pointed out that Canada did not pay the IAG fee for the last 5 years, which imposes as well a discussion with their representative aimed at finding a solution.
The following point on the agenda was the discussion and validation of President’s proposals towards the priorities of the IAG for the period 2017-2021 and EC members in charge:

**1. National Scientific Members**
- Reinforce or re-establish contacts with National Delegates;
- Establish new membership, especially from less favoured countries;
- Provide incentives to National Delegates for their crucial service to the IAG;
- Recall anytime the ‘Value of Membership’ (see statement by Michael Crozier on the IAG website homepage);

**EC member in charge:** Vice-President Francisco Gutiérrez with support from Secretary General Mihai Micu and relevant Co-opted members. The EC agreed that the list of National Scientific Members and related delegates has to be kept constantly updated.

**2. Communication, co-operation and outreach**
- Management and enrichment of the IAG website;
- Use social media to spread information about IAG initiatives and events;
- Follow-up of interaction with international bodies, such as EGU, IGU, INQUA, IPA, IUCN etc.;
- Establish new co-operations with international bodies, in America and Australasia;
- Geomorphology outreach to public institutions.

**EC member in charge:** Vice-President Susan Conway with support from Publication Officer Kosmas Pavlopoulos. The EC agreed that national representatives should be constantly questioned for materials for the IAG Newsletter and website concerning meetings, reports, future activities, training, diverse announcements, obituaries etc).

**3. Working Groups**
- Continue and possibly strengthen the successful activity of IAG WGs promoting new WGs on topical geomorphological issues (also in co-operation with other scientific bodies);
- Maintain constant communication between EC Members and WGs’ Chairs;
- Deliver regularly information on WGs’ activities through the IAG Newsletter, IAG website and social media;
- Support WGs’ activities through the IAG Training Programme.

**EC member in charge:** Vice-President Sunil Kumar De with support from Publication Officer, Training Officer and Webmaster. The EC recalled that the yearly budget that a new WG is entitled to receive – 500 EUR - should be based on annual activity reports, to be validated by the IAG EC).
4. Reappraisal of IAG roots and history
- Rediscover the IAG roots and make them known to the present IAG community, and especially to Young Geomorphologists;
- Reconstruct the history of the IAG and provide material to be published and posted on the IAG website;
- Explore an idea of ‘IAG Virtual Museum’;
- Involve IAG Past-Presidents and EC Members, as well as Honorary Fellows (being conscious that our magnificent past is the key for a promising future for the IAG);
- Promote a dedicated event in occasion of the 30th anniversary of the IAG (2019).

**EC member in charge:** Co-opted Member Piotr Migon with support of relevant EC members. The EC agreed that co-operation should be searched for from IAG Past-Presidents, Honorary Fellows etc.

5. Training Programme
- Continue and strengthen the IAG Training activities through the traditional IAG-Grant programme;
- Stimulate the birth/growth of Young Geomorphologists’ national groups worldwide;
- Foster interaction between Young Geomorphologists’ national groups and promote networking among them;
- Support the IAG WGs through the awarding of grants for selected events.

**EC member in charge:** Co-opted Member Marta Della Seta (Training Officer) with support of relevant EC members. The EC, as immediate action, agreed to offer a budget of 600 EUR intended to favor the participation of two PhD students from Europe (except UK) in the BSG Post-Graduate Training Workshop in Windsor, UK.

Additional goals were also brought into discussion by the President and validated as follows.

1. Legal status
Explore the possibility of providing the IAG with a legal status as non-profit organization. EC members in charge: President Mauro Soldati and Treasurer Emmanuel Reynard. The EC agreed that there is a need to find the best way to manage the financial resources, which could be a matter of international legal and financial analysis.

2. Constitution
Review the IAG Constitution and assess whether any amendments have to be proposed to ICSU (via IGU and IUGS). EC members in charge: Vice-Presidents Susan Conway, Sunil Kumar De, Francisco Gutiérrez. The President acknowledged the quality of the IAG Constitution, inviting nevertheless the EC members to review it in depth to see whether any amendments are necessary. It was resolved to complete this review before the next EC meeting and discuss its outputs in Vienna in April 2018.

3. IAG Alumni
Establish an IAG Alumni list, initially including the 170 Young Geomorphologists granted since 2002, so that they can become Ambassadors of the IAG. EC members in charge: Training Officer Marta Della Seta and President Mauro Soldati, as former Training Officer.

4. Actions for senior geomorphologists
Favor at any time the participation of IAG Honorary Fellows and Retired Geomorphologists in the IAG events. EC members in charge: All members.
5. Support to the organization of IAG Conferences

Establish and maintain links with the Convenors and Organizers of Regional and International IAG Conferences. EC members in charge: Special portfolio members Lucio Cunha, Adel Sepher, Konstantinos Vouvalidis.

The last part of the meeting was devoted to any other discussions; it has been emphasized that the EC members can vote via e-mail concerning the requests of new National Members (4 applications were approved by the Council Meeting: Iran, Nepal, Cameroon, Turkey; Iran and Turkey are subject to a fee of 250 EUR, while Nepal and Cameroon are accepted based on an scientific report).

POST-CONFERENCE IAG-EGU INTENSIVE COURSE FOR YOUNG GEOMORPHOLOGISTS


By Marta Della Seta, IAG Training Officer

As part of the programme of the 9th International Conference on Geomorphology, the post-conference IAG-EGU Intensive Course for Young Geomorphologists has been organized during 5-16 November 2017, with an itinerary in the Lesser Himalaya Region (visit http://www.icg2017.com/fpyg.php for organization details). The event was part of the IAG Training Programme, which encourages and promotes Early Career Geomorphologists worldwide by offering grants (allocation of 18,000 €) and bringing them to interact with renowned Geomorphologists and Geoscientists regarding their research activities. The event was for the first time organized in collaboration with the EGU Geomorphology Division, based on a Memorandum of Understanding recently signed between the aforementioned and the IAG. EGU co-financed the initiative with 3,000 €, which have been allocated to cover part of the course expenses for 23 Early Career Geomorphologists from Brazil, Cameroon, China, Costa Rica, Ethiopia, India, Indonesia, Iran, Iraq and Mexico.

The Intensive Course was intended to be an occasion to: i) increase their knowledge and experience in geomorphological research; ii) discuss their learning and research experience with young colleagues from different countries; iii) meet experienced scientists and early career researchers in an informal setting, which favours scientific discussion. The Intensive Course has been focused on pioneering techniques, innovative and multidisciplinary approaches to the geomorphology field work in tectonically active regions and included:

- 8 lectures by members of the Programme Committee (1 day): Prof. Peter van der Beek (University Grenoble Alpes, France), Prof. P. K. Champati Ray (Indian Institute of Remote Sensing, India), Prof. Mauro Soldati (University of Modena and Reggio Emilia, Italy), Prof. Deepak Chandra Srivastava (Indian Institute of Technology Roorkee, India), Prof. Giuseppe Mastronuzzi (University of Bari, Italy), Prof. Irasema Alcantara Ayala (Universidad Nacional Autónoma de México), Prof. V. S. Kale (University of Pune, India), Dr. George Philip (Wadia Institute of Himalayan Geology, India)

- field activities (2 days) in the Lesser Himalaya region.
The lectures covered topics related to the geomorphic response to active tectonic deformations and climate at different space and time scales. In particular, they encompassed: i) geomorphic and chronological methods for calculating deformation rates from the orogen scale (thermochronology, dynamic topography) to the single structure scale (detecting, sampling and dating of geomorphic markers); ii) field and geomorphometric analyses of transient landscapes, with focus on the interactions among tectonics, climate, drainage network dynamics, landslides and sea-level change.

The two-day field-trip was chaired by Prof. Champati Ray who organized a route crossing the Main Boundary Thrust, one of the most important active fault of the Himalayan mountain belt (Figure 1).

The participants in the Intensive Course sent positive feedbacks about their experience (http://www.geomorph.org/2017/02/iag-grants-9th-international-conference-geomorphology-new-delhi-india-6-11-november-2017/), outlining how young geomorphologists from various part of the world gelled together very well with the opportunity of establishing collaborative relationships. All of them appreciated the scientific inputs coming from the renown lecturers and filed leaders, as well as the financial support by IAG and EGU.
The surface signature of such a regional fault has been observed along with the geological contact between the Krol Group (part of a Neoproterozoic and Lower Cambrian 12 km-thick succession of quartzite, sandstone, argillite, carbonate rocks, and minor mafic volcanic rocks, in the lower part, and of diamictite, siltstone, and sandstone of glacial and glacial-marine origin, in the upper part) and Tal Formation (Cambrian succession including purple grey siltstone and channel sandstone, orthoquartzite of fluvio-deltaic and marine shelf facies at the top). The route continued crossing some great tributaries of the Yamuna river and the Yamuna river itself (Figure 2). The Main Boundary Thrust was crossed again and minor fault crossing young fluvial terraces observed in the region of Sataun (Figures 2 and 3).
REPORT OF THE 11th INTERNATIONAL YOUNG GEOMORPHOLOGISTS WORKSHOP, AMMERSEE, MAY 19-21, 2017

By Christian Halla, Anna Schoch and Julia Meister

The German Young Geomorphologists successfully organized the 11th Young Geomorphologists’ workshop at the Ammersee, south of Munich. In the same spot the German Young Geomorphologist were found and the first meeting was held ten years ago. Since then, meetings and the group of young geomorphology enthusiasts have steadily grown. This meeting has brought together 57 German and international participants including undergraduate, graduate, PhD students, and postdocs from 21 different Institutions and Universities and five countries (Austria, Germany, Italy, Poland, and Switzerland). The program during the Young Geomorphologists’ workshop included oral presentations, late night shorts & extensive poster sessions, a keynote held by Dr. Wolfgang Schwanghardt, a field trip to the surrounding with Prof. Michael Krautblatter, both founders and former speakers of the Young Geomorphologists, and an open discussion round. The workshop was once again characterized by an open-minded forum with open and problem-oriented discussions, scientific exchange and networking between the early career geomorphologists. The next meeting will be held in Hildesheim, May 25-27, 2017.

For more information about the German Young Geomorphologists, please visit our webpage:

https://www.inst.uni-giessen.de/akgeom/?page_id=858&lang=en
The 11th Workshop of the IAG SEDIBUD (Sediment Budgets in Cold Environments) Working Group "Relationships between climate change, vegetation cover and sediment fluxes in high latitude/high altitude cold environments" was held on September 5 – 8, 2017 at the Research Station of the Babeş-Bolyai University, Baru (Hunedoara County, Romania) and was organised jointly by researchers from Babeş-Bolyai University, Faculty of Geography, Laboratory of Dendrochronology in Cluj-Napoca and West University of Timisoara, Department of Geography in Timisoara. A total number of 28 participants originating from eight countries (10 universities and research institutes) attended the SEDIBUD 2017 workshop at its last edition. Two grants of 250 euros have been awarded by the International Association of Geomorphologists (I.A.G./A.I.G.) to the young geomorphologists Sonya Stoyanova (Bulgaria) and David Krause (Czech Republic), who took part in the workshop. In Day 1 (September 6th, 2017), two sessions with oral presentations followed by one session with poster presentations have been organised, during which the debates concerned the past and present-day sediment transfer and deposition in various cold environments of the high-mountains and high-latitude areas worldwide, as well as the effectiveness of geomorphic processes operating under the influence of environmental factors (climate, vegetation, anthropogenic activity etc.). A field trip was organized next day in alpine areas of Mija glacial valley, Parâng Mountains (Southern Carpathians), during which the participants had the opportunity to be introduced within the morphoclimatic context of the alpine areas of the Southern Carpathian Range. The hiking trail followed the main crest, slope and valley floor to the Mija cirque lake, crossing several sites with various examples of landforms and deposits shaped by the past and present-day geomorphic process activity (debris flows, snow-avalanches, rock avalanches, rock glaciers etc.).

Photo 1. Mija glacial valley, view towards the NE from Cârja Peak (2405 m a.s.l.) (photo by Olimpiu Pop).

Photo 2. The alpine area of Parang Mountains, Southern Carpathians, view towards the Mija glacial valley, cirque and lake (photo by Flaviu Mesesan).
After the 9th International Conference on Geomorphology, 28 geomorphologists from 12 nationalities had the great pleasure to participate in a wonderful field trip in Nepal: Geomorphology of the Nepal Himalayas: A transect across the Annapurna Range (12-19 November, 2017) (Fig. 1).

The trip was magnificently organized and led by Prof. Monique Fort (Paris Diderot University), with the support of Dr. Basanta Raj Adhikari (Tribhuvan University, Nepal) and Prof. Narendra Raj Khanal (Tribhuvan University, Nepal). We also had the extremely kind assistance of the guide Babulal Lal Lama Tamang (Tribeni Trek) and three helpers, as well as the skill of seven drivers that made possible the impossible. Monique started her investigations in Nepal in the 1970s, when the only way to get access to her study areas was by hiking with porters during weeks. She transmitted to us, not only her profound knowledge on the geomorphology of the Nepal Himalayas, but also her devotion to the Nepali people for their kindness, hospitality and loyalty. The trip was conceived as a traverse across the entire High Himalayan system, travelling from Kathmandu to Pokhara and then along the Kali Gandaki River up to the Thakkhola Graben, and passing between the Annapurna-Nilgiri Range (8,091 m) and the Dhaulagiri (8,167 m); a dream for every geomorphologists.

FIELD TRIP IN THE NEPAL HIMALAYAS: POST-CONFERENCE FIELD TRIP OF THE 9th ICG.

By Francisco Gutiérrez, Vice President IAG, Zaragoza University, Spain and Mike Crozier, Wellington University, New Zealand

Photo 3. Group of participants near the Mija glacial lake (photo by Flaviu Mesesan).
The field trip was largely focused on various aspects related to hazardous geomorphological processes associated with an extreme mountain environment: (1) local reliefs higher than 4 km and rapid tectonic uplift; (2) glaciated mountains with peaks above 8,000 m (Fig. 2); (3) frequent large earthquakes (e.g., 7.8 Mw 2015 Nepal earthquake); (4) severe and contrasting monsoonal precipitation; and (5) unregulated rivers. We traversed three major tectonic domains with distinctive geomorphological features, from south to north: Lesser Himalayan Zone, Higher Himalayan Zone and Tibetan Tethys Zone, bounded by the south-verging Main Central Thrust and the South Tibetan Detachment, respectively.

One of the main highlights of the field trip was the examination of giant pre-historic rock avalanches that created large landslide dams and long-standing lakes (e.g., Talbagar avalanche, Dhampu-Choya avalanche, Thini-Syang-Jomosom rock avalanche). These presumably earthquake-triggered catastrophic events, together the drainage of the landslide-dam lakes, incorporated sharp changes in the longitudinal profile, sediment availability and behaviour of the fluvial systems. For instance, the Dhampu-Choya rock avalanche accumulated a pile 450 m thick of chaotic breccias in the valley floor damming the river and creating the 23 km long Marpha Lake, recorded by lacustrine sediments more than 200 m thick that penetrate into the tributary drainages (Fig. 3).

![Fig. 1. Participants of the Nepal Himalayas field trip.](image)

We also had the chance to examine smaller historical rock avalanches that temporarily blocked major rivers and caused social and economic losses: (1) the Baisari rock avalanche, triggered by the 2015 seismic series, which buried a small village, fortunately evacuated before the occurrence main slope failure; and (2) the 1988 Tatopani rock avalanche, which caused flood damage at Tatopani village.
Landslides in the steep mountain catchments may also induce debris flows by rapidly incorporating sediment to the torrents (e.g., Beg Khola), or flash floods by the burst of short-lasting landslide dams. For instance, the 5 May 2012 Seti River flood, which caused 32 known fatalities and 40 missing persons in Kharapani hot springs area.

Fig. 2. The Annapurnas showing hogbacks developed on N-dipping strata.

Fig. 3. Fine-grained Sediments of the Marpha Lake at Marpha (behind the village), formed upstream of the natural dam created by the Dhampu-Choya rock avalanche.
The program included other interesting geomorphic features such as terraces underlain by float-breccias more than 100 m thick (Kali Gandaki River at Kusma), waterfalls from hanging tributary valleys, the Thakkhola Mio-Pliocene Half-graben related to recent extension in the Tibetan Plateau, cave dwellings and impressive badlands in indurated terrace deposits (Kagbeni area) (Fig. 4), a large active earthflow at Khingar, horns (Macchapuchare Peak or Fish Tail) and perched glaciers, sequences of thick fill terraces (Seti Khola River), a fracture-controlled cave developed in cemented calcareous Quaternary alluvium and a swallow hole (Gupteshwor Cave and Davi’s Fall, Pokhara), knick points associated with a sharp change from broad alluvial rivers to incised bedrock channels with impressive potholes and flutes (Seti River at Dhulegaunda). At the end of the trip there was a common “mantra”; we want to come back!

Fig. 4. Peculiar badlands developed on indurated gravel terrace deposits in Kagbeni area.
EXPERT REPORTS FOR THE INTERNATIONAL COURT OF JUSTICE: “MARITIME DELIMITATION IN THE CARIBBEAN SEA AND THE PACIFIC OCEAN (COSTA RICA V. NICARAGUA)”

By
Professor Eric Fouache
Professor Francisco Gutiérrez

Expert geomorphological opinion was submitted to the International Court of Justice by Prof. Eric Fouache (former IAG President) and Prof. Francisco Gutiérrez (current IAG Vice-President) on the case “Maritime delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicaragua)” on 30th April 2017. The Court delivered its Judgment on the case on 2 February 2018.

The story in brief:
On 25 February 2014, the Republic of Costa Rica (hereinafter “Costa Rica”) filed an Application with the International Court of Justice (hereinafter “the Court”) against the Republic of Nicaragua (hereinafter “Nicaragua”), requesting the Court “to determine the complete course of a single maritime boundary between all the maritime areas appertaining, respectively, to Costa Rica and to Nicaragua in the Caribbean Sea and in the Pacific Ocean, on the basis of international law”. Costa Rica “further request the Court to determine the precise geographical co-ordinates of the single maritime boundaries in the Caribbean Sea and in the Pacific Ocean”.

In the Memorial, Costa Rica claims that the starting-point of the maritime delimitation between the Parties on the Caribbean side is “on the right bank of the San Juan River at its mouth” (para. 4.13). In the Counter-Memorial, Nicaragua contends that the starting-point is situated at the extremity of Punta de Castilla, near the north-eastern corner of Harbor Head Lagoon (para. 3.48), 3.59 km east of that suggested by Costa Rica.

The Court, considering that there were certain factual matters relating to the state of the coast between the point suggested by Costa Rica and the point suggested by Nicaragua in their pleadings as the starting-point of the maritime boundary in the Caribbean Sea, which might be relevant for the purpose of settling the dispute submitted to it, and that, with regard to such matters, it would benefit from an expert opinion, decided, in an Order dated 31 May 2016, that “[a]n expert opinion shall be obtained, which will be entrusted to two independent experts appointed by Order of the President of the Court after hearing the Parties”.

In its Order of 31 May 2016, the Court also decided that: “(2) The experts referred ... above shall visit the site. They shall advise the Court regarding the state of the coast between the point suggested by Costa Rica and the point suggested by Nicaragua in their pleadings as the starting-point of the maritime boundary in the Caribbean Sea, and in particular answer the following questions:
(a) What are the geographical co-ordinates of the point at which the right bank of the San Juan River meets the sea at the low-water line?
(b) What are the geographical co-ordinates of the land point which most closely approximates to that identified by the first Alexander Award as the starting-point of the land boundary?
(c) Is there a bank of sand or any maritime feature between the points referred to in subparagraphs (a) and (b) above? If so, what are their physical characteristics? In particular, are these features, or some of them, permanently above water, even at high tide? Is Los Portillos/ Harbor Head Lagoon separated from the sea?
(d) To what extent is it possible, or probable, that the area concerned will undergo major physical changes in the short and long term?”

The experts of the present Report were appointed by an Order of the President of the Court dated 16 June 2016.

The report is accessible at: http://www.icj-cij.org/files/case-related/157/157-20170430-WRI-01-00-EN.pdf, and in the official web page of IAG.
Delegations from Nicaragua and Costa Rica, personnel of the Registry of the International Court of Justice, Eric Fouache (further right) and Francisco Gutiérrez (bottom right). Image taken in the second mission carried out in March 2017.
UPCOMING EVENTS

19th Joint Geomorphological Meeting (Italy-Romania-France-Belgium-Greece) & 34th Romanian National Symposium on Geomorphology.

On May 16-20, 2018, the Romanian Association of Geomorphologists, the Institute of Geography of the Romanian Academy and Bucharest University, Faculty of Geography are organizing the 19th Joint Geomorphological Meeting (Italy-Romania-France-Belgium-Greece) together with the 34th Romanian National Symposium on Geomorphology, will take place at Buzau, in Romanian. The main title of the conference is “From field mapping and landform analysis to multi-risk assessment: Challenges, uncertainties and trans-disciplinarily”. Two field trips will be organized at Buzau Carpathians at May 18th and one in Buzau Subcarpathians at May 20th. For more details at this link: http://sng.geomorfologie.ro/.

OBITUARIES

Peng Hua (January 2, 1956 – January 8, 2018)
By Pan Zhixin, Hainan University, China

On January 8, 2018, the international geomorphic community lost an outstanding scientist-Professor Peng Hua, who was the Chairman of the IAG Red Beds and Danxia Geomorphology Working Group, and also a beloved teacher at Sun Yat-sen University, China.
Peng Hua was born in Dangshan, Anhui Province, China on January 2, 1956. After finishing his study of physical geography at Anhui Normal University in 1982, he began his career as a teacher in a local college and held that post for the next ten years. Then, in 1992, he moved to Mt. Danxiashan, the place where the name of Danxia landform was from, to work as a science consultant. During his stay at Mt. Danxiashan, Peng Hua started his lifelong study of Danxia landform, an erosional landscape developed on horizontally bedded sandstones and conglomerates and featured by steep cliffs. In 1995, he was transferred to work in the School of Geography and Planning at Sun Yat-sen University, Guangdong Province, and kept his deep passion for Danxia research.
Peng Hua was the principal researcher in numerous projects, including three major NSFC (Natural Science Foundation of China) funded national projects, which focused on the development mechanisms of Danxia landform and soil degradation processes in red bed areas of southern China. In addition, he worked as a coordinator of an international project focused on landslide hazards in Danxia landform sites with colleagues from Slovakia. During his research and teaching life, Peng Hua published more than 100 scientific publications, including papers in Chinese and international journals, books, and proceedings, which aroused great interest from many peers and encouraged them to join Danxia research.
Peng Hua was also very successful in building connections with colleagues in and outside China. During the past ten years, he initiated and organized three international conferences and at least five national meetings on Danxia landform research. With joint efforts from him and international colleagues, the Danxia Geomorphology Working Group was established under the IAG umbrella in 2009 and it has been active since. He has consistently demonstrated his leadership by impressive activities and achievements made by this working group. Furthermore, Peng Hua was very kind to young geomorphologists. He provided many opportunities for his students and foreign students to participate in conferences in China and abroad, supporting them to do the first international comparative study of Danxia landform in China and similar landscapes in the USA.
Apart from excellent research, Peng Hua showed great interest in the UNESCO World Heritage application of Danxia landform. Thanks to his work, six sites with the most spectacular Danxia landscapes in China were jointly awarded as the World Natural Heritage “China Danxia” in August, 2010. Since then, he spent a lot of time on popularization of geoscientific knowledge about Danxia landform by giving lectures at schools and universities every year, making Danxia landform a well-known term in Chinese society. As one of leading Chinese geomorphologists, the premature departure of Peng Hua is a great loss for the geoscientific community. We believe the best obituary for him is to continue Danxia landform research and disseminate our findings to the world and future generations. His spirit will be with us and his contribution will never be forgotten.

Rest in peace, Peng Hua!

Peng Hua is survived by his loving wife and life partner, Feng Xiurong, his beautiful daughter, Peng Xiaofeng, and his very promising granddaughter Zhang Pengyue.

Obituary for Eiju Yatsu (1920 – December, 2016)
By Olav Slaymaker, Professor Emeritus, University of British Columbia

I have been informed by Professor Suzuki of the passing on December 15, 2016 of Professor Eiju Yatsu at the age of 96. The world of geomorphology mourns his passing. I count myself fortunate in having got to know him as a friend. Canadians of my generation benefitted from the fact that he chose to work in Canada for a decade at Guelph University.

Eiju Yatsu was born in Mito City, Ibaraki Prefecture, Japan in 1920. In 1940, he entered the Tokyo Higher Normal School and studied literature and geography but then changed his interests to science. He graduated from the Tokyo University of Literature and Science in 1945 with a BSc, having studied physical geography, geology and geophysics. He then went on to do a wide range of postgraduate studies and was awarded a DSc from Tokyo University of Education in 1957. From 1954 to 1966, he was assistant and then full professor at Chuo University (Tokyo), teaching earth sciences and engineering geology. He was visiting professor at Louisiana State University in 1965–66 and the University of Ottawa in 1966–69, and then became associate and then full professor at the University of Guelph. In 1976, he left Canada to return to Japan and became professor at the Institute of Geosciences, University of Tsukuba, where he taught geomorphology and rock mechanics. From 1980 to 1986, he was professor at Joetsu University of Education teaching environmental science.

Eiju was an original thinker who made classic contributions to fluvial geomorphology (Yatsu, 1955), rock control in geomorphology, both micro and macro scale (Yatsu, 1966), the nature of weathering (Yatsu, 1988) and the philosophy of geoscience (Yatsu, 2002). He was unconventional in his thinking, fearless in defence of his ideas and left us with many brilliant memories.

Geomorphology has had too few people of the caliber of Eiju Yatsu: fearlessly honest, original and unafraid of criticism. In my view, he was usually right and his philosophical thinking was way ahead of most of his contemporaries in geoscience.

I shall always regret his unwillingness to accept the Senior Fellowship of IAG. He had his reasons and we must respect his decision. We shall treasure his memory.
OBITUARIES

Remembering Emeritus Professor Michael John Selby (January 1936–January 2018)
By Cam Nelson, Hainan University, China

It is with great sadness that we learnt of the passing of Prof. Michael Selby, an outstanding scientist and geomorphologist and author of the key geomorphology work “Hillslope Materials and Processes”. We reproduce below the full eulogy given by Cam Nelson, one of his close colleagues, at his funeral.

Emeritus Professor Michael John Selby ONZM BA(Hons) MA DipEd DSc Oxf DPhil Waik.

Family and friends of Michael Selby, good morning to you all. My name is Cam Nelson and I was a staff member in Earth Sciences at the University of Waikato in Hamilton, New Zealand for 41 years from 1971 until my retirement in 2012. I was a close colleague of Michael during those years and today, on behalf of all his university colleagues, friends and past students, I want to share with you some aspects of the very influential role made by Michael to the University of Waikato and beyond during his working life there for 37 years, from 1965 to his retirement in 2002. This task deserves several hours to tell, but please allow me here about 15 minutes to outline some of the highlights of his working life.

Michael was born in Luton, Bedfordshire, England in 1936. Following high school education at Dunstable Grammar School in Bedfordshire he was accepted into Oxford University at the age of only 17, but this academic intention was interrupted by a two-year stint of compulsory military service in the British Army where he trained as an officer and served in the military police as a second lieutenant based in Berlin, Germany. However, by age 19 Oxford beckoned again and, after briefly flirting with an English degree, Michael found his niche in physical geography—the study of landscapes—and went on to receive BA(1st Class Hons) and MA in Geography, along with a PGDip with Distinction in Education at Oxford. These degrees set him up ideally for a future teaching career involving physical geography. Michael’s relaxation time during those university days was often spent on outdoor tramping, climbing and mountaineering excursions, especially in the European Alps.

*Michael Selby atop Derrick Peak in the Britannia Range, Antarctica, 11 December, 1978. The high peak in the background at right is Mt Selby. Photo source with permission: David Lowe.*
Michael’s passion for understanding landforms and landscape evolution through physical geography, combined with his passion for outdoor tramping activities, came together when he emigrated to New Zealand to take on a teaching job from 1960-1963 in Geography at Christ’s College in Christchurch, where he also established and ran an Outdoor Pursuits Centre for the school at Lake Coleridge.

In 1964 Michael was appointed a Junior Lecturer in Geography at the University of Auckland, but was stationed in Hamilton at a Hamilton Branch of University of Auckland. The launch of the brand new University of Waikato in Hamilton at about this time attracted Michael’s attention and future aspirations, and so he shifted across to it in 1965 as a full Lecturer and immediately became involved in building up a Department of Geography at this new university.

Of course, Geography has two main subdisciplines, human or social geography, and physical geography. As a physical geographer Michael looked off into the future and prophetically envisaged possible links with a School of Science at Waikato, which was not yet even on the drawing board. To the irritation of some, Michael instigated a campaign to encourage the financially constrained Library to subscribe to many standard scientific journals and text books that would be needed should a School of Science eventuate. On reflection, what foresight and courage this took!

On the recommendation of a Committee set up in 1968 to plan a School of Science at the University of Waikato it was agreed that a new subject, called Earth Sciences, would be one of the sciences taught in the new School. It was to integrate into one subject parts of traditional geology with soil science, hydrology, climatology and oceanography. The intention was to provide an academic programme about the physical Earth that would especially cater for the practical needs of New Zealand and New Zealanders.

In 1969 Michael transferred out of Geography into Earth Sciences, which was to begin teaching in 1970, leaving Geography as it is today as a 100% social geography department. Michael played an absolutely crucial role in the setting up and design of the new Department of Earth Sciences, and in bringing to fruition the vision of the Foundation Professor of Earth Sciences, John McCraw. Importantly, Michael made up for some of the deficiencies in university experience that John had, he not having had anything to do with Universities since his student days 25 years before. Undeniably, the establishment of a viable Earth Sciences department in 1970 was due to the energy and forward thinking of John McCraw and Michael Selby.

During those establishment years two particular academic matters stand out for Michael. First, so early in his career, he wrote a two-volume text book titled Surface of the Earth, Vol 1 published in 1967 and Vol 2 in 1971. The instant success of these physical geography text books, widely adopted by schools and universities both in New Zealand and overseas, was invaluable in immediately raising the academic profile of the new Earth Sciences Department. Second, in 1972 Michael completed the first doctoral degree of the University of Waikato with a PhD thesis about the erosion of pumice lands in central North Island. Conversion of bushland to pasture had resulted in serious gully erosion and Michael determined the factors that caused the erosion and methods by which it could be prevented.

Following from his erosion studies in pumice lands, Michael went on to study landslides and other mass movement phenomena in the hills around the Hamilton Basin and elsewhere. But Michael was an extremely adventurous field man and in the ten years between 1969 and 1979 he had three summer season expeditions to the dry valleys of Antarctica, two of which he led. Here he began to expand his research interests beyond the erosion characteristics and landslides associated with soft deposits like pumice and soils into studying the nature and causes of erosion of steep hard rock slopes such as those bounding the valley walls of the Antarctic arid valleys. He then expanded upon these studies with field excursions in Africa, studying in particular the nature and origins of rock slopes in the Sahara and Namib deserts, and later in the Andes and the Himalayas.
A significant outcome of Michael’s work on rock slopes was his realisation of the importance that rock strength played in controlling the diverse slope characteristics associated with different rock types in different environments. He came to see considerable merit in linking the ideas and concepts in descriptive geomorphology to more quantitative measurements in engineering geology. He developed simple portable equipment to assess the mass strength of rocks and, from this and a number of other easily assessed parameters, he established a Rock Mass Strength Index which has been adopted internationally not only by geologists and geomorphologists, but also by engineers. From a practical viewpoint, this allows simple tests to be used to estimate the likelihood of slopes, such as road batters, failing.

This work led to consultancies for UNESCO in Indonesia and for mining companies in Kalgoorlie, Western Australia. It also led to the setting up of laboratories in the Earth Sciences Department for teaching Rock and Soil Mechanics, the first such in the country.

Leaving aside book reviews, reports and conference abstracts, Michael published during his career about 85 peer-reviewed scientific papers in leading geomorphological, geological and hydrological international journals. But most impressively, and very rare for the vast majority of academics worldwide, he also published 7 substantive books, each a few 100 to several 100 pages long and fully illustrated:

I have already mentioned his two early career books (Surface of the Earth) published in 1967 and 1971. A decade later these were followed by two books in 1982 (Hillslope Materials and Processes; Landforms of New Zealand), another in 1985 (Earth’s Changing Surface), a further in 1992 (Landforms of New Zealand, 2nd ed), and finally in 1993 a substantially updated and greatly expanded (451 pp.) second edition of his earlier 1982 book on Hillslope Materials and Processes, 2nd ed.

This last book is widely regarded as Michael’s major scientific work. In 2005, over ten years after publication and three years after Michael’s retirement, it was named as one of the ten “classic” books of geomorphology and its author, Michael Selby, as one of the 20 most cited geomorphologists in the English language, highlighting that Michael’s reputation extended well beyond NZ’s shores. A line in the citation for the book states “It is unique in bringing together material from many branches of the earth sciences — geology, soil science, hydrology, geomorphology and rock and soil mechanics”. Significantly, this embraces exactly the concept of Earth sciences that John McCraw and Michael Selby envisaged some 35 years previously when setting up the Department of Earth Sciences.

Michael was a superb lecturer and teacher to literally thousands of students, his major contributions being in 1st year, 3rd year and Masters level classes. His refined English accent, his clearly projected voice to the back of the lecture room, his strong belief in the use of visual aids (especially 35 mm projector slides), his enlightenment with personal travel and research experiences, and his ability to ad lib without the use of notes, all gave his lectures an interest and spontaneity that students really appreciated. At the senior research level, Michael supervised the Masters or Doctoral theses of about 50 students, many of whom went on to gain livelihoods in the engineering geology and related fields.

Michael was always available for public lectures as well as conference presentations. He gave on average seven public lectures a year over much of his career. These were to groups such as Probus, Rotary, 50 plus and Continuing Education, on such topics as Antarctica and the Landforms and History of the Waikato Basin, the latter typically involving him leading a follow up one-day field trip. Over and above this he regularly addressed conferences of the NZ Geographical Society, the NZ Geological Society and the NZ Institute of Engineers.
Michael’s extensive knowledge and skills concerning ‘all matters that make a University tick’ became well known across the university during the 1970s and 80s. In 1986 the then Vice-Chancellor, Professor Wilf Malcolm, persuaded Michael to leave full-time duties in Earth Sciences and to join the senior administration team of the university, where he became the Deputy Vice-Chancellor. Michael continued in this role when Professor Bryan Gould took over as Vice-Chancellor in 1994, and so he held the Deputy Vice-Chancellorship reins for a grand total of 15 years through to his retirement in 2002. Fortunately for Earth Sciences, throughout this time Michael generously continued to provide a reduced load of lecturing in a couple of the undergraduate Earth Sciences courses.

Michael’s duties as Deputy Vice-Chancellor were extremely diverse, far too many to list here. However, a special responsibility was for the University’s research portfolio in which he guided the University’s research efforts with considerable success and distinction, building significant new research strengths across a wide range of disciplines and at the same time increasing the University’s research revenue by a large and valuable margin. He built excellent relationships with the relevant funding agencies, like the Foundation for Research, Science and Technology (FRST) and the Ministry of Research, Science and Technology (MoRST), and with professional scientific and other bodies, like the Crown Research Institutes (CRIs). The University’s current high reputation as a research institution owes a great deal to Michael’s efforts.

In the Senior Management Team Michael brought all his experience and good sense to bear – as a guide and mentor to more junior staff, as a role model to those seeking their own academic excellence, and as a source of wise advice to the two Vice-Chancellors he served.

In the course of his working life at Waikato Michael received many accolades. Let me end by mentioning six of these:

(1) In 1980 Michael was awarded a well-deserved Personal Professorial Chair in Earth Sciences, and was thereafter titled Professor Michael Selby.

(2) Also in 1980, the naming after him of Mount Selby in the Britannia Ranges of Antarctica recognises the important contributions he made to understanding geomorphological processes in the Dry Valley regions of Antarctica.

(3) In 1984 he was awarded the premier degree of Doctor of Science (DSc) by the University of Oxford for his book and journal publications to that date on rock strength. A letter of congratulations from his College (Keble) says: “This is a great honour for the College. You are its first higher doctorate in Geography and I think you are the first Geography DSc”.

(4) In 1995, while Deputy Vice-Chancellor, Michael received a University of Waikato Staff Merit Award “in recognition of dedicated and expert work in conducting complex and arduous negotiations with the Crown and Tainui in respect of the University’s interests in the Tainui settlement and our lease of the campus land”.

(5) Following his retirement in 2002 Michael was awarded the title of Emeritus Professor of the University of Waikato.

(6) In 2005, three years after retiring, Michael’s major working-life scientific and administrative contributions to education were recognised in the New Zealand Honours List when he was made an Officer of the New Zealand Order of Merit (ONZM).
Concluding, many words or phrases spring to mind in summing up Michael Selby – adventurous, inspiring, eloquent, compassionate, thoughtful, loyal, courteous, authoritative, committed, diligent, professional, and scientifically excellent. Michael, your fine legacy will live on in the many students,

**OBITUARIES**

**Professor RNDr. Jaromíra Demek, DrSc. 14th August 1930 – 5th February 2017**

By, Petra Štěpančíková, Czech Academy of Sciences

Professor Jaromír Demek was a lead Czech physical geographer whose work has been recognized also internationally. His frontal results in geomorphology have influenced the development of the whole European geomorphology.

Jaromír Demek participated substantially on the development of Czechoslovakian and Czech geography from the 1960s. He was one of the founders of the Institute of Geography of the Czechoslovak Academy of Sciences in Brno and in 1963 he became its first director. The Institute of Geography under his leadership participated on editing of important publications such as Atlas of the Czechoslovakian Socialist Republic, Czechoslovak Military Atlas, Set of physical, social and economic geography maps and environmental maps of the Czech Socialist Republic. As a president of the International Commission on Geomorphological Survey and Mapping of the IGU (International Geographical Union) (1968-1990), he promoted geomorphological mapping. Under his guidance manuals for geomorphological mapping, a monography on geomorphology of Europe and a few map sheets of geomorphological map of Europe were published. During that time, professor Demek made valuable contacts with leaders in European geomorphology from various countries (e.g. Poland, Slovakia, Austria, Germany, Hungary, Romania, Soviet Union), which he kept until recently. In 1978, professor Demek left Institute of Geography and became a university teacher, working at geographical workplaces of Masaryk University in Brno and University of Palacky in Olomouc. After he got retired in 1995, he still taught at the universities until 2012, when he started to work at The Silva Tarouca Research Institute for Landscape and Ornamental Gardening in Brno. During more than 50 years he has educated many master and PhD students who have succeeded in Czechoslovak and Czech geography as experts and university teachers.

His main contribution in study of landforms was research of slope and slope processes evolution under various climatic and structural conditions. He contributed a lot to the study of planated surfaces formation under cold climate and in the Outer Western Carpathians, as well as etchplain formation by stripping off the weathering mantle in the Bohemian Massif. Professor Demek participated significantly on regionalization and typifying of relief of the Czech Republic and their cartographic elaboration.

Professor Demek was an editor, author and co-author of several principle geographic and geomorphological monographies, university textbooks, wide range of papers and maps with international acceptance.

Jaromír Demek became an honorary member of both Czech and international scientific societies, as well as he was awarded prizes from them. He was also elected as a regular member of academy LEOPOLDINA – German National Academy (Federal Republic of Germany).

Czech and European geomorphology and geography lost an internationally recognized expert, teacher and respected colleague.
Executive Committee of International Association of Geomorphologists (IAG)

Full list of the Executive Committee members:

http://www.geomorph.org/executive-committee/