Report of IGU Hazard and Risk Commission 2021

- Membership

The following 10 people are the current steering committee members.

Takashi OGUCHI (Chair)

Center for Spatial Information Science, The University of Tokyo, Japan oguchi@csis.u-tokyo.ac.jp http://researchmap.jp/read0007832/?lang=english

Masumi ZAIKI (Secretary)

Faculty of Economics, Seikei University, Japan mzaiki@econ.seikei.ac.jp
https://researchmap.jp/zaikimasumi?lang=en

Honglin HE

Institute of Geology, China Earthquake Administration, China honglinhe123@vip.sina.com http://en.igl.earthquake.cn/wwwroot/c 00000006/d 0010.html

Jr-Chuan HUANG

Department of Geography, National Taiwan University, Taiwan riverhuang@ntu.edu.tw http://www.geog.ntu.edu.tw/en/people/professors?id=896

Edilia JAQUE Castillo

Departamento de Geografia, University of Concepcion, Chile edjaque@udec.cl https://www.researchgate.net/profile/Edilia Castillo

Veena JOSHI

Department of Geography, University of Pune, India veenaujoshi@gmail.com https://www.researchgate.net/profile/Veena Joshi9

Cary J. MOCK

Department of Geography, University of South Carolina, USA mockcj@sc.edu http://artsandsciences.sc.edu/geog/cary-j-mock Alessandro C. MONDINI

Geomorphology Research Group, Istituto di Ricerca per la Protezione Idrogeologica, Italy Alessandro.Mondini@irpi.cnr.it http://geomorphology.irpi.cnr.it/staff/alex

Marie-Jeanne S. ROYER

School of Anthropology and Conservation, University of Kent, UK

M.S.Royer@kent.ac.uk

https://www.kent.ac.uk/anthropology-conservation/people/991/www.kent.ac.uk/anthropology-conservation/people/991/royer-marie-jeanne

Sergey A. SOKRATOV

Faculty of Geography, Lomonosov Moscow State University, Russia sokratov@geogr.msu.ru

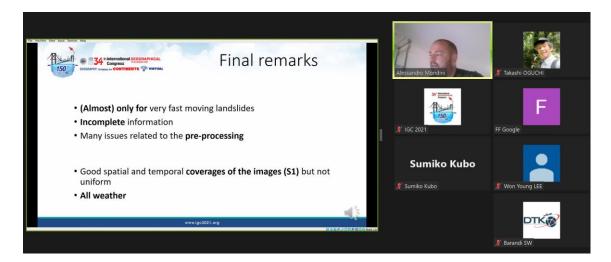
https://www.researchgate.net/profile/Sergey Sokratov

There are other 139 corresponding members who regularly receive information via e-mail. The members are from the following countries (number of people in parentheses): Bangladesh (2), Belize (1), Brazil (1), Cameroon (1), Chile (2), China (37), China (HK) (1), Fiji (1), France (3), Germany (2), Greece (2), India (22), Indonesia (2), Iraq (2), Iraq (1), Israel (1), Italy (3), Japan (16), Kuwait (1), Mexico (1), Myanmar (1), Nepal (1), Oman (1), Philippines (1), Poland (1), Portugal (1), Romania (4), Russia (1), Singapore (2), Slovenia (1), Spain (1), Taiwan (5), Turkey (1), UK (3), USA (12), and Vietnam (1).

- Meetings

1) Organizing a session at the 34th International Geographical Congress, August 16–20, 2021.

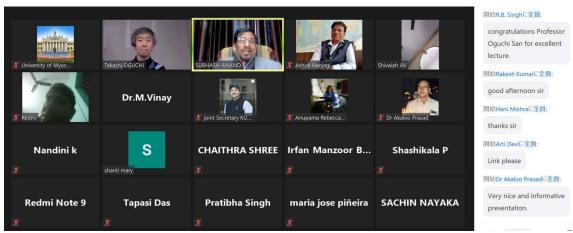
The 34th International Geographical Congress of the IGU was originally scheduled in August 2020 as an onsite meeting in Istanbul, Turkey. It was postponed due to the COVID-19 pandemic and was finally held online in August 2021. Our commission organized Session C17 "Contribution of Geography to Understanding Natural Disasters: Research, Education, and Society" at the congress on August 16. The chair of our commission, Takashi Oguchi was the convener and chairperson of the session. Although more than 30 abstracts were originally submitted to the session, many of them were withdrawn after the congress was postponed and changed into the online format. In the end, we had 11 oral presentations and a few poster presentations. Still, the papers presented at our session covered various aspects of hazard and risk issues, especially the impact and mitigation of natural hazards including earthquakes, fluvial erosion, floods, and landslides. There was also active discussion after each presentation.



Screenshot of the presentation by Alessandro Mondini, a steering committee member of our commission, at the Hazard and Risk session of the 34th IGC.

2) Co-organizing the webinar "Geospatial Technology for Sustainable Development" on February 5–6, 2021.

The Department of Geography, University of Mysore, India, organized this GIS-related webinar in collaboration with three IGU commissions: Hazard and Risk, Gender and Geography, and Urban. The webinar aimed to create awareness about geospatial technology and sustainable development and spread relevant ideas to researchers and other people including citizens. The webinar had four technical sessions: 1) Disaster Risk Reduction and Geospatial Technology, 2) Geospatial Technology for Sustainable Cities and Communities, 3) Geospatial Technology for Clean Water and Sanitation, and 4) Geospatial Technology for Climate Action. Our commission mainly contributed to the 1st session, and the chair of our commission, Takashi Oguchi, gave a keynote talk at the session. There were also the inauguration and valedictory sessions, and the late Prof. R. B. Singh, Secretary-General of IGU at that time, attended the two sessions as a special guest.



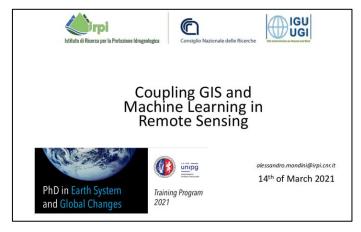
Screenshot of the webinar "Geospatial Technology for Sustainable Development"



Part of the brochure of the webinar "Geospatial Technology for Sustainable Development"

3) Co-organizing the graduate school course "Coupling GIS and Machine Learning in Remote Sensing" on March 12–14, 2021.

The above course was organized by the Department of Physics and Geology, University of Perugia, Italy, in collaboration with our commission. The 15-hour course was part of the program "Earth System and Global Changes". The course aimed to provide PhD students with the skill of interdisciplinary spatial analysis. The course had three 5-hour sessions: 1) GIS analysis for spatial data, 2) introduction to Machine Learning, and 3) Machine and Deep Learning for classification and semantic segmentation of remotely sensed imagery. Our commission took care of the last topic.



Poster of the course "Coupling GIS and Machine Learning in Remote Sensing"

4) Supporting the ICEO & SI Conference in Miaoli, Taiwan, on August 23–24, 2021

The ICEO & SI (International Conference on Earth Observations and Societal Impacts) is an annual conference organized mainly by the TGEO (Taiwan Group on Earth Observations). Our commission became a co-organizer of its 2019 conference and had a special session. Our commission was also supposed to be a co-organizer of the 2020 conference, but the conference was canceled due to the COVID-19 pandemic. The 2021 conference was held in a hybrid format — Taiwanese researchers fathered at the conference site, i.e., National United University in Miaoli, Taiwan; whereas, foreign researchers attended the conference online. The conference had 19 oral sessions and one general poster session. Our commission supported the organization of two sessions related to GIS and geographical problems such as hazards and risks. These sessions included 12 papers, and our commission chair, Takashi Oguchi, was a session convener along with Taiwanese colleagues.

5) Official partner/sponsor of the Geomorphometry 2021 Conference in Perugia, Italy, on September 13–17, 2021

The Geomorphometry Conference, focusing on quantitative land-surface analysis, is usually held every one or two years. The 2021 conference was held in Perugia, Italy, by the Research Institute for Geo-Hydrological Protection of the Italian National Research Council (CNR IRPI) and the Department of Physics and Geology of the University of Perugia. Our commission is an official partner of the conference. Alessandro Mondini, a steering committee member of our commission, has been working for the CNR-IRPI and helped the organization of the conference as a representative of our commission. The conference was in hybrid format, and most attendees used remote connections. It was successful with 44 oral presentations.

6) Co-organizing the online workshop "International Workshop on Geography and Sustainability 2021", November 23–24, 2021.

This online workshop, focusing on the contribution of Geography to sustainability issues and disaster risk reduction, was organized by a series of groups and organizations. The two main organizers were the Faculty of Geographical Science, Beijing Normal University, and the Geographical Society of China. The nine co-organizers include eight IGU Commissions (Agricultural Geography and Land Engineering, Geography for Future Earth, Geoheritage, Hazard and Risk, Land Degradation and Desertification, Land Use and Land Cover Change, Water Sustainability, and Modeling Geographical Systems), and the IGU Young and Early Career Geographers Working Group on Geography and Sustainability. The workshop consisted of 12 keynote speeches and 83 research presentations in 10 sessions. One of the sessions, entitled "Disaster Risk Reduction for Sustainable Development", was supported by our commission, and Takashi Oguchi, the commission chair, was the session convener. The nine presentations at the session were from Bangladesh, China, Italy, Japan, Lithuania, and Nigeria, and dealt with various aspects of hazards and risks related to floods, landslides, soil erosion, vegetation restoration, education, and governmental policies.

The following future events are currently planned:

1) Organizing the session "Contribution of Geography to Understand Natural Hazards and Risks" at the UGI-IGU Paris 2022 Congress, on July 18–22, 2022.

The centennial congress of the IGU will be held in Paris in July 2022, and various onsite and online sessions have been proposed. Our commission proposed an onsite session entitled "Contribution of Geography to Understand Natural Hazards and Risks", and the session conveners from our steering committee are Takashi Oguchi and Alessandro Mondini. The proposal has been accepted by the local organizing committee of the congress. At the congress, we also plan to have an onsite business meeting of our commission, although the realization of the meeting and the onsite session depends on the situation of COVID-19.

2) Co-organizing the IGU Thematic Conference "Sustainability, Future Earth and Humanities: Opportunities and Challenges" on November 24–25th, 2022

The above conference, to be held at the Central University of Haryana, Mahendergarh, India, has been approved by the IGU executive committee. Our commission will be one of the co-organizers and has been communicating with the conference organizers at the Central University of Haryana.

3) Co-organizing the virtual conference "Challenges to Disaster Risk Reduction and Resilient Habitat" on April 5–6, 2022

The above conference is being prepared by the Centre for Disaster Management Studies, Shaheed Bhagat Singh College, University of Delhi, India. Professor Poonam Sharma, Director of the center, Dr. Pankaj Kumar, IGU Assistant Secretary-General, and Takashi Oguchi, our commission chair, have been discussing via e-mail about this conference and have agreed that our commission will be a coorganizer of the event.

4) Co-organizing the ICEO & SI Conference in 2022

As noted, our commission has been collaborating with TGEO (Taiwan Group on Earth Observations) and supporting the ICEO & SI conference series. The conference has been held annually in most recent years, and our commission is likely to be a co-organizer or an official supporter of the 2022 conference.

- Publications

URL of the website of commission:

http://oguchaylab.csis.u-tokyo.ac.jp/IGU Hazard/index.html