



Annual Report

C20.13 Geographical
Information Science

Jun Xu

C20.13 Geographical Information Science

Report 2021

1. Membership

The GIScience commission had a steering committee of 11 members. This year, the commission recruited 3 members. Currently, the commission has 19 members from 15 countries.

Co-chair

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The following list provides the members' names, institutional affiliations and countries.

Daniel Sui	Division of Social, Behavioral and Economic Sciences, National Science Foundation	USA
Fenzhen Su	Institute of Geography and Natural Resources Research, Chinese Academy of Sciences	China

Jun Xu	Institute of Geography and Natural Resources Research, Chinese Academy of Sciences	China
Francis Harvey	Leibniz Institute for Regional Geography	Germany
Andrej Medvedeff	Institute for Geographie der Russian Academy of Science	Russia
Evelyn Uemaa	University of Tartu	Estonia
Shoaib Khalid	Government College University Faisalabad	Islamic Republic of Pakistan
Lars Brabyn	University of Waikato	New Zealand
Stan Geertman	Utrecht University	The Netherlands
Shawn Laffan	University of New South Wales	Australia
Itzhak Benenson	Tel-Aviv University	Israel
Miguel Padeiro	Institute of Geography and Spatial Planning of the University of Lisbon	Portugal
Damen P. Dume	Brown University	USA
Felix Kwabena Donkor	University of the Witwaterstrand, Johannesburg-South Africa	South Africa
Mohammad Abu Syem	University of Chittagong	Bangladesh
Motti Zohar	University of Haifa	Israel
Mehmet Fatih Döker	Sakarya University	Turkey
Masoud Minaei	Ferdowsi University of Mashhad (FUM)	Iran
Serafeim Alvanide	Gesis Leibniz Institute for the Social Sciences, Cologne	Germany
Amit Birenboim	Tel-Aviv University	Israel
Dharmaveer Singh	Symbiosis International (Deemed University)	India
Docent Juri Roosaare	University of Tartu	Estonia
Varun Dutta Gupta	World Wide Fund for Nature, India (IGCMC Division) , Information Officer / GIS Analyst	India
Jyoti Dahiya	Haryana, India	India
Han Xiao	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences	China
Levi Whitley	Unity College	USA
R. S. Ajin	Kerala State Disaster Management Authority	India
Masimalai Palaniyandi	Department of Health Research, Government of India	India

2. Meetings

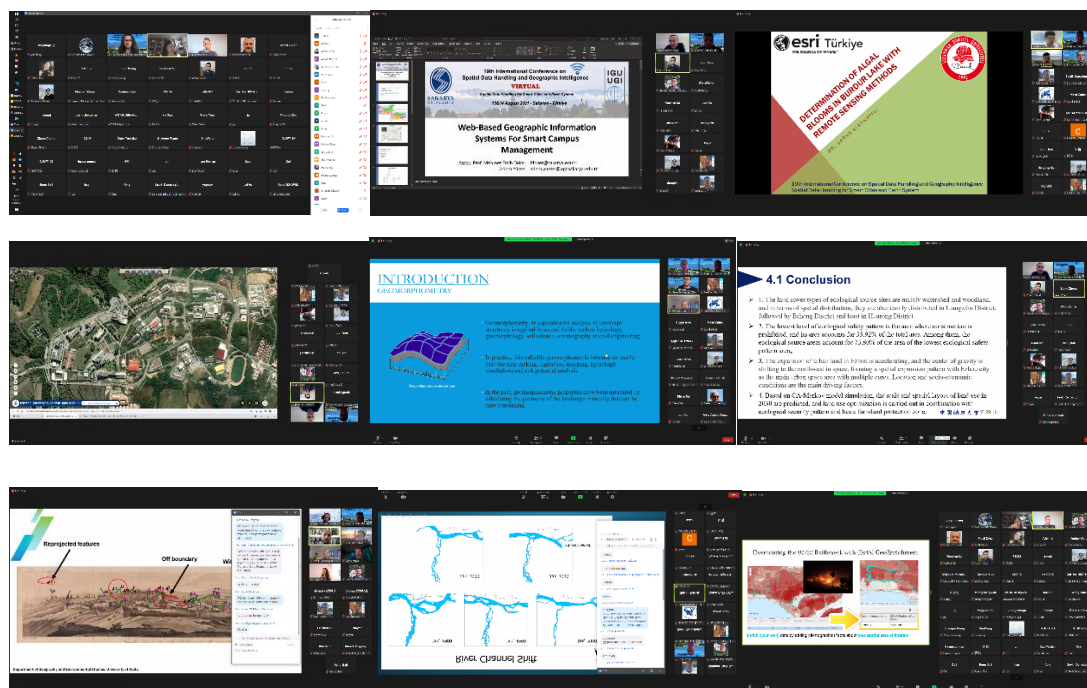
2.1 SDH&GI2021 (Sakarya, August 13-14)

The International Symposium on Spatial Data Handling (SDH) is the premier long-running forum in geographical information science. The 19th SDH was planned in 2020 but was postponed to 2021 because of COVID-19. This year, we changed the title of the symposium to “International Symposium on Spatial Data Handling and Geographic Intelligence (SDH&GI)” to keep pace with the development in GIScience field.

Due to the ongoing epidemic conditions, the SDH&GI 2021 had been organized the online at Sakarya University between 13-14 August 2021. It was co-organized by the Commission on Geographic Information Science and the Commission on Modelling Geographical Systems (C20.34).

Symposium was aimed to bring together all Geographical Information Systems users and researchers to share their experiences in GIS research. The theme that our meeting will focus on this year will be under the heading of "Smart Cities and the World System". In the symposium program there were 5 keynote Speeches, 9 Sessions and 43 oral presentations.

Sessions titled: Historical GIS, Climate Change, Urban Growth, Geographical Knowledge Graph and GeoAI, Remote sensing and GIS Applications in Human Science, Fluvial Geomorphology and Natural Risks, Ecosystems, Tourism and Statistic and GIS.



In opening ceremony: Prof. Dr. Mike Meadows - President of International Geographical Union, Prof. Dr. Barbaros GÖNENÇGİL - Vice President of International Geographical Union, Prof. Dr. Zerrin KARAKUZULU - Sakarya University Head of Geography Department, Prof. Dr. Fenzhen Su - Chair of IGU GIS Commission, Assoc. Prof. Mehmet Fatih DÖKER - Conference Local Chair made their speech.

In the following, Keynote speakers; Prof. Dr. Fenzhen Su (Co-Chair of IGU GIS Commission), Prof. Dr. Tahsin Yomralioğlu (İstanbul Technical University), Barış Uz (Esri Turkey CEO), Dr. Akın Kısa (Ministry of Environment and Urban Planning General Directorate of GIS), Prof. Dr. Mei-Po Kwan (The Chinese University of Hong Kong) made their presentations.

The symposium successfully finished after oral presentations and Prof. Dr. Fenzhen Su made the closing speech by thanking everyone.

2.2 International conference of GIScience (Mashhad, December 12)

Professor Masoud Minaei from Ferdowsi University of Mashhad, one of the steer committee members of our commission, helped organize the International conference of GIScience: Basis and Trans/Interdisciplinary Applications". The conference was held on December 20th 2021 in cooperation with Iranian GIS and Remote Sensing Association, which provided platform for researchers, academics, students, innovators, scientists, and industry practitioners to get familiar with current research and developments.

دومین همایش بین المللی
علم اطلاعات جغرافیایی
بنیادها و کاربردهای بین رشته ای
International Conference of
GIScience: Basis and Trans/
Interdisciplinary Applications
12 December 2021
دانشگاه فردوسی مشهد
Ferdowsi University
of Mashhad

Conference Axes

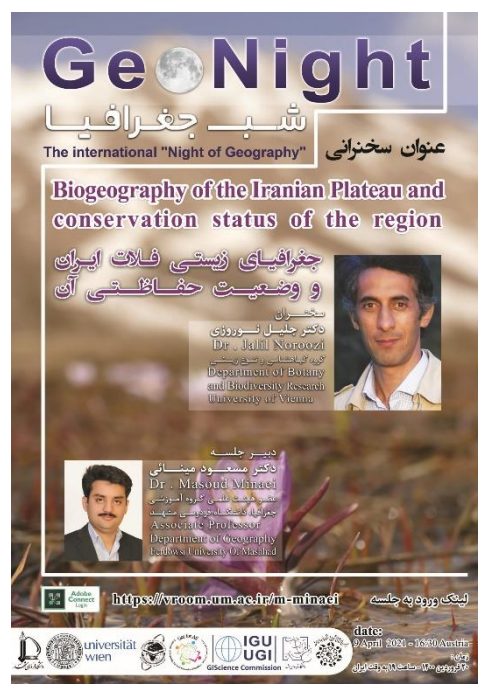
1. GIScience of the Internet of Things
2. GeoSemantic Web
3. GIScience in mobility, including autonomous vehicles
4. Advances in GeoSimulation and Cartography
5. GIScience and location privacy
6. Spatial Big Data and Global Datasets
7. Deep/Machine Learning, Data mining, Soft Computing
8. ISOs, Standards and Regulations
9. GIScience Education/Teaching
10. Open Source: Software, data and ...
11. GDI: Geographic Data Infrastructure, SDI: Spatial Data Infrastructure, Meta Data
12. Topology
13. Augmented Reality and Virtual Reality
14. UAVs, satellites and space industries
15. GEOBIA: Geographic Object Based Image Analysis
16. VGI: Volunteered Geographic Information, CSOD: Crowd sourced Geographic Data
17. Biodiversity, Biogeography and Ecology
18. Land Use Planning: Regional, Urban and Rural
19. Ecosystem Services and Environment
20. Passive Defense, Security, GeoFence, Border Management and Crime studies
21. Human and Social Studies
22. Health and hygiene
23. Hazards, Climatic and Geomorphological Studies
24. Industries, Mining and Energy
25. Sustainable Development Goals 17
26. Crisis Management, Safety and Emergency
27. Agriculture and Natural Resources
28. Networks: National and international laboratories and associations
29. Emerging businesses, Startups and Knowledge-Based companies
30. Point clouds: Lidar, Structure From Motion, Photogrammetry, ...
31. Tourism, Business and Real State
32. GDI: Geographic Data Infrastructure, SDI: Spatial Data Infrastructure, Meta Data
33. Remote sensing applications and ...

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6th
FUM_GISDay
GIS
روز جهانی GIS
و ششمین
بزرگداشت
2021

2.3 International "Night of Geography"

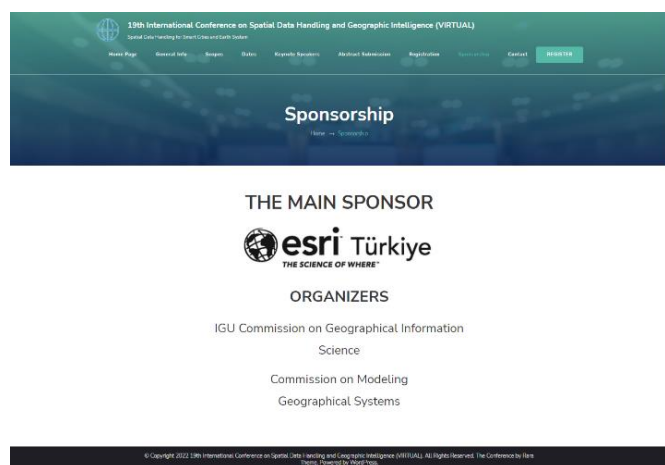
We joined the activity of international "Night of Geography" promoted by EUGEO and IGU. Professor Masoud Minaei organized the GeoNight in Iran. The topic of the GeoNight is "GIS and Biogeography applications in southwest Asia species and endemics conservation". The objective is to introduce geography applications and benefits to societies, e.g., high school teachers and students, university students and other audiences. During the one-hour activity, Talks and presentations introducing FUM Geography department, GeoNight and Department of Botany and Biodiversity Research, University of Vienna were given. Dr Jalil Nowruzi gave speech about biogeography of southwest Asia flora.



2.4 Forthcoming meetings

We planned to continue the International Symposium on Spatial Data Handling (SDH) series and Geographic Intelligence in 2022.

3. Networking



It is the tradition that we have long cooperation with the IGU commission on Modelling Geographical Systems (C20.34) and Commission II of the International Society of Photogrammetry and Remote Sensing (ISPRS). Again, the commissions C20.13 and C20.16 organized the SDH&GI symposium together this year.

In 2021, the commission also cooperated with Iranian GIS and Remote Sensing Association in the International conference of GIScience: Basis and Trans/Interdisciplinary Applications.

4. Publication

4.1 Website

The website of the commission is <http://igugis.lreis.ac.cn/>. News about the commission is published on Google group. A frame of google group was embedded in the webpage of the commission, which is located at <http://igugis.lreis.ac.cn/igu6.html>.

The website of SDH&GI: <https://sdh2021.sakarya.edu.tr/>

The website of Iran GeoNight: [GIS and Biogeography applications in southwest Asia species and endemics conservation – GeoNight](#)

5. Archival Contributions

During the period in question, no archival contributions have been made. We hope we can post events on IGU website in the future.