

Unleashing the Dynamic Strategies in the Era of Change – A Spotlight on the ISPRS Student Consortium's Global Contributions

Original

Unleashing the Dynamic Strategies in the Era of Change – A Spotlight on the ISPRS Student Consortium's Global Contributions / Yadav, Yogender; Thapa, Laxmi; Pucino, Nicolas; Kushwaha, Sunni Kanta Prasad; Lagahit, Miguel Luis Rivera; Okolie, Chukwuma John. - X-3-2024:(2024), pp. 431-438. (ISPRS TC III Symposium 2024 Symposium on Beyond the Canopy: Technologies and Applications of Remote Sensing Belem, Brazil 2024) [10.5194/isprs-annals-x-3-2024-431-2024].

Availability:

This version is available at: 11583/3002998 since: 2025-09-12T10:41:03Z

Publisher:

Copernicus Publications

Published

DOI:10.5194/isprs-annals-x-3-2024-431-2024

Terms of use:

This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository

Publisher copyright

(Article begins on next page)

Unleashing the Dynamic Strategies in the Era of Change – A Spotlight on the ISPRS Student Consortium's Global Contributions

Yogender Yadav^{1,2}, Laxmi Thapa³, Nicolas Pucino⁴, Sunni Kanta Prasad Kushwaha⁵,
Miguel Luis Rivera Lagahit^{6,7,8}, Chukwuma John Okolie^{9,10}

¹ Inter-university Department of Regional & Urban Studies and Planning (DIST), Politecnico di Torino, Italy,
yogender.yadav@polito.it

² School of Built Environment, University of New South Wales, Sydney, Australia, y.yogender@student.unsw.edu.au

³ Department of Operations and Information Management, Aston University, Birmingham, UK, 230439184@aston.ac.uk,
thapalaxmi278@gmail.com

⁴ The Australian National University, Canberra, Australia, nicolas.pucino@anu.edu.au

⁵ Geomatics Group, Department of Civil Engineering, Indian Institute of Technology Roorkee, Uttarakhand, India,
s.k.p.kushwaha92@gmail.com

⁶ Department of Architecture and Building Engineering, Tokyo Institute of Technology, Japan; lagahit.m.aa@m.titech.ac.jp

⁷ Tokyo Tech Academy for Super Smart Society, Tokyo Institute of Technology, Japan

⁸ Data Platform Research Team, National Institute of Advanced Industrial Science and Technology, Japan

⁹ Department of Surveying & Geoinformatics, University of Lagos, Nigeria; cokolie@unilag.edu.ng, drcjokolie@gmail.com

¹⁰ Centre for Multidisciplinary Research and Innovation (CEMRI), Abuja, Nigeria

Keywords: ISPRS Student Consortium, Young Professionals, Creative Strategies, Networking, Global Outreach.

Abstract:

ISPRS Student Consortium (ISPRS SC) has played a significant role in bringing students and young researchers closer to the field of remote sensing and photogrammetry in the evolving landscape of geospatial sciences. Innovative strategies and events have been employed by the ISPRS SC to address contemporary challenges and harness emerging opportunities in the field of photogrammetry and remote sensing. Through an analysis of the global contributions of ISPRS SC, ranging from research initiatives to the online webinar series, this paper underscores the consortium's commitment to fostering collaboration, innovation, and knowledge exchange among young scholars and professionals worldwide. The paper highlights key thematic areas addressed by ISPRS SC such as advancements in remote sensing technologies, geospatial data analysis, and applications in diverse domains including environmental monitoring, agriculture, urban planning, and disaster management. Moreover, in this paper, we emphasize the role of the consortium in nurturing future leaders in geospatial sciences through ISPRS SC mentorship programs, networking opportunities, and capacity-building initiatives. By highlighting the initiatives led by the ISPRS Student Consortium, this paper underscores the key role of youth-driven innovation for positive change and shaping the future of geospatial sciences on a global scale.

1. Introduction

The International Society for Photogrammetry and Remote Sensing Student Consortium, also known as the ISPRS SC, was established in 2004 during the XX ISPRS Congress in Istanbul, Türkiye (ISPRS Student Consortium, 2024b; Kanjir et al., 2014); It is the official representation of the students and the youth to ISPRS. The ISPRS SC, though previously working under the Technical Commission V (formerly Technical Commission VI), "Education and Outreach", now directly reports to the ISPRS Council via an Advisory Committee (AC) appointed by the Council.

The members of the organization are students and young professionals/researchers under the age of 35, who share the same interest in photogrammetry, remote sensing, and geospatial information sciences (ISPRS Student Consortium, 2024a) This paper intends to provide an overview of the ISPRS Student Consortium's present configuration, as delineated in the latest statutes ratified by the ISPRS Council in 2022. Additionally, it will elucidate the ongoing initiatives of the Consortium, their progression, and their impact on the organization's advancement. Furthermore, this paper will examine the Consortium's endeavours in fostering collaborative

visions, promoting greater engagement of young professionals in the scientific realm, and enhancing awareness surrounding global and societal concerns.

1.1 Vision and Scope of ISPRS SC

The main purpose of the ISPRS SC is to link students, young researchers, and professionals in different countries, who are interested in photogrammetry, remote sensing, and spatial information sciences (Kivilcim et al., 2012; Malhotra et al., 2010; Miyazaki et al., 2012). The consortium aims to provide a platform for the exchange of information and to organize student-specific events and other activities that integrate students and the youth more effectively into ISPRS activities (ISPRS Student Consortium, 2024a). It primarily focuses on engaging students and young professionals by promoting ISPRS and the profession through various means, including organizing scientific activities, providing financial support through scholarships/grants, and publishing papers and newsletters (Detchev et al., 2016; Kivilcim et al., 2010; Miyazaki et al., 2012; Reyes & Cruz, 2022). It aims to enhance networking opportunities and increase participation in ISPRS events while maintaining a strong online presence through social media and a dedicated website (Kivilcim et al., 2010).

Additionally, it collaborates with other organizations, both at regional and international levels, to foster cooperation and support educational initiatives, workshops, and activities related to photogrammetry, remote sensing, and spatial information sciences.

1.2 ISPRS SC Statutes and Membership

According to the revised statutes, the Consortium delineates membership into three distinct categories: Individual, Organization, and Honorary Member. An Individual Member encompasses students undertaking undergraduate, master's, or doctoral (PhD) studies, as well as young professionals below the age of 35 and engaged in scientific and engineering domains pertinent to imaging and geospatial information. An Organization Member refers to either a student organization or an accredited institution involved in educational and/or research endeavours within the scientific and engineering realms. Honorary Membership pertains to individuals esteemed for their significant professional contributions within the Consortium or affiliated societies.

Until the introduction of the new Statutes in August 2019 (ISPRS SC, 2019) the Consortium was part of the Technical Commission V (formerly Technical Commission VI), "Education and Outreach," and collaborated with the Working Group V, "Promotion of the Profession to Young People." This subsection and subsections 1.3 to 1.4 refer to information from the Statutes. At present, the Consortium directly reports to the ISPRS Council through an Advisory Committee (AC). The Consortium is led by the Board of Directors, who controls and directs the affairs of the organization and aligns its activities and policies with the society. There are six Elective Officers, namely, the President, Vice President, Newsletter Editor-in-Chief, Social Media Coordinator, Website Administrator, and Board Member (ISPRS Student Consortium, 2019). The current team of the ISPRS SC Board of Directors was officially approved during the General Assembly held at the XXIV ISPRS Congress in Nice, France, in June 2022. This newly elected team will serve ISPRS SC for a term spanning from 2022 to 2026, overseeing the strategic direction and initiatives of the ISPRS SC during this term (ISPRS Student Consortium, 2022a)

1.3 ISPRS SC Functioning and Current Practices

The ISPRS SC Board of Directors (BODs) currently meets once a month, to ensure the effective operation of the Consortium and to keep track of its activities throughout the year. Information dissemination and promotions are primarily updated on the ISPRS SC website (<https://sc.isprs.org/>) and strongly supported by social media announcements on X (formerly Twitter), Instagram, and Facebook, and LinkedIn. Even though the major responsibilities of each of the BODs are mentioned in the statutes, BODs are operating flexibly according to an annual work plan prepared at the end of the previous year. The existing BODs have been conducting annual 1-2 days of virtual meetup in December every year, where they not only review their past works and accomplishments, but also identify the challenges encountered and strategies to execute annual plans effectively.

One of the achievements of the Board of Directors of this term is the drafting of documents related to specific activities of the Consortium to serve as guidelines and support the best practices to effectively maintain the operations within the organization. These documents are intended to provide future Board of Directors with the necessary information to transition and continue the activities of the Consortium.

2. Evolution of ISPRS SC over the years

Over the years, the ISPRS Student Consortium has evolved significantly. It has grown in membership and expanded its range of activities. Through continuous development, the ISPRS Student Consortium has adapted to meet the changing needs of students and young professionals in geospatial sciences. The evolution of ISPRS SC over time highlights its commitment to supporting student and youth involvement and advancement in the geospatial field.

2.1 The Beginning of ISPRS SC

Until 1996, there were no specific activities within the International Society of Photogrammetry and Remote Sensing (ISPRS) targeted at students and young researchers. However, during the XIII ISPRS Congress (1996) in Vienna, Austria, the Best Papers by Young Author Awards were established, marking the beginning of recognizing the contributions of young researchers.

In 2002, during the Technical Commission V Mid-Term Symposium in Corfu (Greece), discussions among students mainly from Japan, Greece, and Turkey led to the idea of formalizing student activities within ISPRS. Two years later, in 2004 this idea was warmly embraced by XX ISPRS Congress Director Prof. Orhan Altan (now ISPRS Honorary Member) in Istanbul, Turkey. Professor Orhan Altan recognized the need to acknowledge and involve younger generations more prominently within ISPRS. Consequently, he advocated for the establishment of an independent organization dedicated to students and young scientists, complete with its headquarters. He initiated the inclusion of special activities for students at the Istanbul Congress under the name "Youth Forum". These activities included technical sessions, awards, discussions on setting up a structure for students within ISPRS, and social events. The ISPRS Council responded positively to these initiatives and decided to formally establish the Student Consortium (SC).

2.2 Activities and Events

Since its establishment, the SC has grown in membership, diversity, and activities, organizing its very first summer school in Istanbul, Turkey from the 19th to 26th June 2005. Given their international status, ISPRS SC activities have been organized with a worldwide reach in mind as evident from the geographical coverage of the summer schools over the years, for instance in Italy (2022, 2023), the Czech Republic (2023), Slovenia (2007), Uganda (2019), Sri Lanka (2008, 2016), Myanmar (2014), China (2022, 2023), South Korea (2019), Chile (2017), Brazil (2017, 2019 and several years online) and many more. ISPRS SC also co-organised training programs such as the Making Opportunities to Initiate Valuable Alliance through Experiential Learning (MOTIVATE), which was held from the 6th to 20th August 2017 in Thailand and included a summer school, hackathon, and an 8-day student exchange program.

Also, the online presence of ISPRS SC increased in 2017 with the start of the Webinar Series with the inaugural lecture of Nicholas Wilson titled "An Introduction to Google Earth Engine (Reyes et al., 2020, 2021). Moreover, due to COVID-19 lockdowns and the necessity to go online, "The Virtual Rooms" activities were organized in 2020 which featured five distinct virtual rooms dedicated to knowledge sharing, networking, and

personal development, providing platforms for informal discussions, presentations by esteemed professionals, and interactive sessions with special guests from the field of remote sensing and spatial information science. Additionally, in 2021, GeoMixer was launched in partnership with the Ladies of Landsat, Sisters of SAR, American Society for Photogrammetry and Remote Sensing (ASPRS) Student Advisory Council, Mato Grosso do Sul IEEE-GRSS (MS IEEE-GRSS) Student Branch Chapter, and the Asian Association on Remote Sensing (AARS), establishing a monthly virtual gathering aimed at facilitating networking opportunities for remote sensing scientists worldwide, regardless of career stage.

Within the virtual phase of the Nice ISPRS Congress (2020), ISPRS SC organized a Youth Forum as a joint session with Technical Commission V – Education and Outreach on September 1. The Youth Forum included three presentations, one live talk, and two pre-recorded videos, contributing a total of 12 papers to the ISPRS Annals and Archives for the ISPRS Congress edition. Additionally, in collaboration with the United Nations Environment Programme (UNEP), ISPRS SC hosted a Digital Forum titled "Towards Transformational Change: Potential Contributions of ISPRS and the Role of the Youth in Sustainable Development" during the following phase of Nice ISPRS Congress Digital Edition on July 8, 2021, aimed to promote the Global Environment Outlook 6 for Youth report (GEO6 Youth Report) and facilitate discussions on the intersections between sustainable development and remote sensing, photogrammetry, and spatial information science. The event featured informative presentations on the GEO-6 for Youth Report and the roles of GI technologies in sustainable development, followed by a dynamic panel discussion involving experts from diverse backgrounds and perspectives. Interactive elements, including live polls and mentimeter tools, enhanced participant engagement during the forum. Appreciation was extended to all presenters, panelists, and participants for their valuable contributions, with hopes for future collaborations.

Another important activity was The Google Earth Engine Singapore (EarthEngine@SG) virtual meetup, which occurred on September 13, 2021, within the framework of the Singapore Geospatial Festival 2021. Co-organized by Nanyang Technological University Singapore – Asian School of the Environment, ISPRS SC, National University of Singapore – Centre for Nature-Based Climate Solutions, Imperial College London, Earth Observatory of Singapore, and Sabrina Szeto Consulting.

2.3 ISPRS SC Summer Schools

One of the major activities of the ISPRS SC is the organization of summer schools, which aims to provide an opportunity for students and young researchers to participate in a series of lectures, practical sessions, technical tours, and social events at a minimum cost as well as to provide an avenue for the participants, lecturers, and host countries to establish and widen their professional networks. Table 1 below gives the overview of ISPRS SC Summer Schools since 2021.

Summer School Name	Date and Location
2021 Virtual Summer School on Smart City	19-23 July & Online
SUNRISE Summer School 2022 (Balletti et al., 2023)	3-9, September & Italy
BUCEA Summer School on Resilient City 2022	25-29, July & Online

IEEE GRSS Young Professionals (YP) & ISPRS Student Consortium (SC) Summer School (SS), 2022-2023	Various dates throughout the year & Hybrid-Brazil
BUCEA Summer School on Smart Cities 2023	3-9, July & China
ISPRS SC Summer School 2023	3-8, November & Taiwan

Table 1: ISPRS SC Summer schools since 2021.

Figure 2 below is the group picture of the participants at ISPRS ACRS Summer School 2023 organised in Taiwan, focused on Remote Sensing with the theme: Remote Sensing for Sustainable Environment: From Land to Water.



Figure 1: ISPRS SC ACRS Summer School 2023.

2.4 ISPRS SC Newsletter

ISPRS Student Consortium began publishing the ISPRS SC Newsletter *SPECTRUM* in collaboration with students and young professionals aiming to disseminate the ISPRS SC activities and share interesting articles and interviews related to the organization since 2011. The Newsletter continues to fulfil the needs of the organization's continuously growing community and raise awareness about ISPRS and the ISPRS SC. The Newsletter is the main publication of the ISPRS SC, with all issues available online, and printed copies are made available at certain events. The Newsletter features reports about past student activities and the organization's events, interviews with experts and practitioners in the fields of remote sensing, photogrammetry, spatial information sciences, technical papers, upcoming events, and opportunities. The theme of the recently published newsletter is 'Applications of Underwater Remote Sensing'. Figure 1 represents the snapshot of the cover page of *SPECTRUM* Volume 16 from the year 2023.

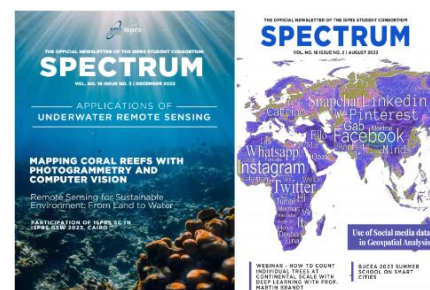


Figure 2: ISPRS SC Newsletter 'SPECTRUM' from the year 2023.

2.5 ISPRS SC Board of Directors Elections

The call for a New Board of Directors was announced publicly in the month of January 2022 and applications were invited from the candidates with a deadline on 31st January 2022. After screening the applications, the successful candidates for the elections of the ISPRS SC Board of Directors were announced publicly on 15th February 2022, followed by a virtual meetup on 18th February 2022 with ISPRS SC individual members where successful candidates represented their nominations. ISPRS SC BOD elections were organised online and announced on 1st March 2022 with a voting period of one week until 8th March 2022. The summary of the ISPRS SC BOD elections in 2022 has been summarised in Table 2 below.

Candidate	Position applied for	Votes received (%)
Laxmi Thapa	President	97
Nicolas Pucino	Vice-President	95
S.K.P. Kushwaha	Newsletter Editor-In-Chief	91
Miguel Luis Lagahit	Social Media Coordinator	50
Saicharan Vasala	Social Media Coordinator	45
Yogender Yadav	Website Administrator	93
Chukwuma Okolie	Board Member	94

Table 2: Summary of ISPRS SC BOD elections 2022.

The complete election results can be found [here](#) (ISPRS Student Consortium, 2022b).

2.6 Newly Elected ISPRS SC Board of Directors and Global Representation

The current Board of Directors of the ISPRS SC was approved during the General Assembly in the XXIV ISPRS Congress in Nice, France, in June 2022. The Board of Directors will serve for the term 2022-2026. Current ISPRS SC Board of Directors is represented by Ms. Laxmi Thapa (President) from Nepal, Mr. Nicolas Pucino (Vice-President) from Italy, Mr. S.K.P. Kushwaha (Newsletter Editor-in-Chief) from India, Mr. Yogender Yadav (Website Administrator) from India, Mr. Miguel Luis R. Lagahit (Social Media Coordinator) from Philippines, and Mr. Chukwuma John Okolie (Board Member) from Nigeria. Figure 3 below represents the team ISPRS SC BOD elected for the term 2022-26.

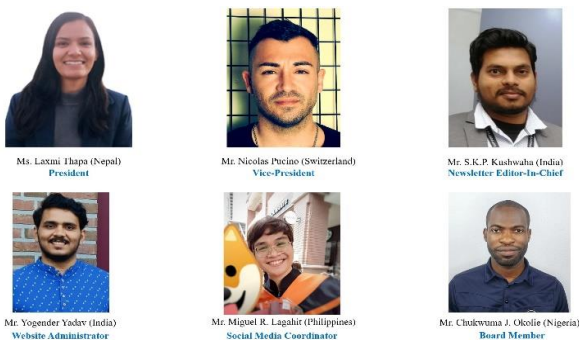


Figure 3: ISPRS SC Board of Directors for the term 2022-26.

The ISPRS SC BOD showcases global diversity through its team members coming from various parts of the world, ensuring a rich representation in ISPRS SC. Symbolizing inclusivity, the

ISPRS SC BOD represents a diverse group of perspectives, fostering collaborations and understandings across borders.

3. Central Role of ISPRS SC to Connect Geospatial Community

The ISPRS SC plays a vital role in connecting the geospatial community worldwide to ISPRS. It serves as a central platform for collaboration and exchange of ideas among researchers, professionals, and enthusiasts. Through its activities and initiatives, the ISPRS SC fosters networking and knowledge-sharing, offering volunteering opportunities and contributing to advancements in the field of geospatial science. Its inclusive approach ensures that voices from diverse backgrounds are heard, enriching the global geospatial discourse.

3.1 Volunteering Opportunities at ISPRS SC

At ISPRS SC, we deeply value volunteering as it embodies our commitment to the geospatial community. We firmly believe that through volunteering, students and young professionals could contribute their time, skills, and passion towards advocating and advancing photogrammetry, remote sensing, and spatial sciences. By doing so, they not only foster personal growth but also enact positive changes in society. ISPRS SC currently has four volunteers who joined us in 2023 and have been continuously assisting us in our various activities (Figure 2).

Efthymios Spyridon Georgiou provides support in proofreading our newsletter's contents before publication. Asunbiaro Charles and Daryl Ann B. Cabuyadao are contributing to creating design-related content for our newsletters and promotional materials. Saicharan Vasala diligently assists in disseminating emails containing news and content relevant to our organization and its network. Figure 4 below showcases the volunteers at the ISPRS SC for the year 2023-24.



Figure 4: ISPRS Student Consortium Volunteering Team (year 2023-24).

Team ISPRS SC is also dedicated to keeping our community engaged and informed about the latest news, activities, and developments in ISPRS, ISPRS SC, and the fields of photogrammetry, remote sensing, and spatial sciences. To achieve this, we leverage the power of social media platforms to disseminate relevant information and highlight updates from our ongoing events and activities. Follow us on our various social media platforms, including X (@ISPRS_SC), Facebook (/isprssc), Instagram (@isprssc), and LinkedIn (/isprs-student-

consortium), to stay up to date with our latest endeavours. Join us on social media today and become a part of our dynamic community! Don't forget to like, share, and retweet our posts to spread the word and help us reach even more students and young professionals. We eagerly anticipate connecting with you online!

3.2 ISPRS SC Website: Transition

Until January 2022, the ISPRS SC website was hosted on the Contao platform with limited functionalities and not-so-modern visual representations. Upon direct support of the ISPRS Webmaster and ISPRS SC Website administrator, ISPRS SC has successfully updated its layout and released a new website built on the Umbraco platform. Moreover, the newly added features also include the addition of automation in the process of member registration and certificate generation. Figure 5 below represents the snapshot from the homepage of the ISPRS SC website (<https://sc.isprs.org/home/>) with updated news and events as the first glimpse to visitors on the website.



Figure 5: Snapshot from the homepage of ISPRS SC upgraded website (<https://sc.isprs.org/home/>).

3.3 ISPRS SC Individual Membership Process: Update

With the transition from the new ISPRS SC website to the Umbraco platform, the registration process for the individual membership has been also automated. Before 2022, the ISPRS SC website administrator had to download the list of registered members regularly and then manually generate the certificates by Python script. This was followed by another tedious task of e-mailing the certificates to the registered members individually. In March 2022, all these processes were automated on the updated ISPRS SC website. As soon as the member registers on the ISPRS SC website, the ISPRS SC Website Administrator and President receive an email to verify the registration details.

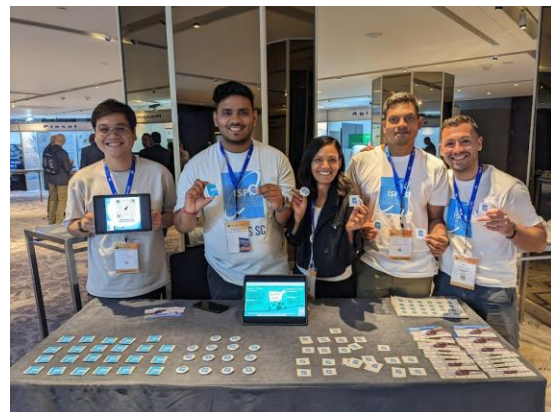
After checking the registration inputs, the website administrator approves the registration, and the member receives the ISPRS SC membership certificate within seconds of the approval. At the beginning of every year, all the members receive an email from ISPRS SC to renew their membership. ISPRS SC membership certificate is issued every year after membership renewal. ISPRS SC individual membership is complementary and can be obtained by filling up the details at the ISPRS SC website (<https://sc.isprs.org/members/register/>). There are 774 registered members for the year 2024 as of 26th April 2024.

3.4 ISPRS SC: Participation in ISPRS Events

Participation in ISPRS events provides the ISPRS Student Consortium with valuable learning and networking opportunities to share the aims and objectives of ISPRS SC. The interactions with participants and ISPRS council members in the ISPRS events foster collaboration and knowledge sharing within the geospatial community. Engaging with ISPRS events has been very beneficial for the Student Consortium with the significant engagement with young researchers and students working in the field of remote sensing and photogrammetry. Figure 6 below represents the interactions of ISPRS SC at ISPRS Geospatial Week 2023 in Cairo, Egypt.



(a)



(b)



(c)

Figure 6: Participation of ISPRS SC at Geospatial Week, Cairo, Egypt (a) ISPRS TC IV VP Prof. Brovelli at ISPRS SC booth with ISPRS SC BODs (b) ISPRS SC BODs at ISPRS SC booth with promotional material at GSW 2023 (c) Youth Forum organized by ISPRS SC at GSW 2023.

As an example of our ongoing efforts in connecting with the geospatial community, during the ISPRS Geospatial Week 2023 in Cairo, Egypt, the ISPRS SC maintained a vibrant presence, courtesy of the booth generously provided by the local organizing committee. Our booth attracted numerous visitors, resulting in nearly 40 new student member sign-ups and fruitful discussions on potential collaborations.

Furthermore, we solidified connections with influential figures like Dr. Abdalla Alobeid and Dr. Andre Nonguierma, demonstrating our commitment to expanding student activities in the Arab and African regions, respectively. Additionally, a meeting with Prof. Maria Antonia Brovelli introduced us to the 'AI for Good' event, aligning our future endeavours with its objectives. The topic of student chapters also gained traction, with several students expressing interest in establishing local chapters. Concurrently, ISPRS SC hosted a youth presentation forum, providing students with a platform to share their research and explore engagements with ISPRS SC. Moreover, our President and Vice-President actively participated in the ISPRS council meeting, to highlight the consortium's activities, and achievements and lay out plans for future funding and organizational strategies. We extend our sincere gratitude to the ISPRS Foundation and TIF for their unwavering support; our presence at GSW 2023 greatly enabled us to strengthen connections and showcase our dedication to serving the student community. *(The information in this text was taken from the content provided in our recent newsletter.)*

4. Discussions, Challenges and Future Action Plans

4.1 ISPRS SC Challenges and Solutions

The ISPRS SC has a very wide geographical area of responsibility (i.e. global) with limited local presence, and this limits opportunities for in-person networking and engagement with student members across globe. Thus, providing a full experience to members has been a challenge, and over the years, membership has been variable (i.e. seasonal increases or decreases in membership strength).

Some other student societies of sister professional bodies (e.g., IEEE, ASPRS) have several local chapters, and their membership usually involves payment of a fee. However, the ISPRS SC is entirely volunteer driven. Members of ISPRS SC do not pay any dues, and membership is entirely free. This aligns with the individual membership policy of the ISPRS. Thus, the ISPRS SC is fully reliant on ISPRS for funding.

It is envisaged that the newly introduced ISPRS SC student chapters will reduce the challenges with member retention, enhance the experience of student members, and provide more grassroots mobilisation and outreach across the globe. Also, with student chapters, events and activities can be coordinated more easily at the local level.

4.2 ISPRS SC: Action Plan for Future Events

ISPRS SC has been organising different activities, that majorly include events like summer schools, webinars, and youth forums that are primarily organized as global capacity-building initiatives to enhance the skills of students and young professionals in the field of photogrammetry, remote sensing, and geospatial technologies. These events have received positive feedback and the number of applications has been increasing every year. Therefore, ISPRS SC will continue organising these events in the year 2024 too. So far, two

summer schools: summer school entitled CLImbing for CLImate GEOspatial School (CLIGEOS) and ISPRS SC Summer School post the ACRS conference, are already confirmed in Asia, one summer school is in review, and we are discussing the possibilities of organising two more summer schools this year in different parts of the world.

ISPRS SC has been continuously publishing *SPECTRUM*, its official newsletter since 2011 and is currently preparing to release Volume 16 Issue 4. In addition to sharing the news about events, we have been featuring research articles related to a particular theme that *SPECTRUM* focuses on for that issue as the Spotlight. Likewise, the IFOV features the experience of the scholars working on the same theme, which can inspire the younger generation.

ISPRS SC has been rethinking our approach to providing interactive opportunities between the subject experts and youths. For this, we have considered including the concepts of trading cards regularly. The trading cards will include basic information about the featured professional together with their field of expertise and contact email so that interested students and young professionals can contact them directly. Likewise, we have launched Discord too. Still in its infancy, it has different channels based on different subjects and we would like to grow it into a bigger platform where anyone can ask subject-specific questions and those having the expertise can respond to them. Such a dedicated platform would bridge the existing interactivity gap between the student community and ISPRS experts.

4.3 ISPRS SC Student Chapters

The concept of the ISPRS SC student chapter was started to bring in the presence of local communities globally and to provide them with the resources and expertise the ISPRS and ISPRS SC have. Considering the preparations at the final stage now, we will have student chapters already launched by the time this paper is published. We have started receiving interest from different universities to establish the chapters locally.

In addition to hosting virtual meetups among the student chapters and ISPRS community, we are planning for collaborations with different technical commissions of ISPRS and with the geo-related industry and community to enhance capacity building by offering tutorial sessions and mentorship activities. These ISPRS SC chapters are not limited to university students or a university but offer establishment among local groups of young professionals and within multiple universities too. Therefore, we hope these chapters will promote collaborations among the universities and young professionals in addition to increasing local events in the community.

4.4 Representation of ISPRS SC at International Events

4.4.1 Within ISPRS

To overcome the less physical presence felt after the COVID-19 pandemic, we have coordinated with ISPRS to participate in most of the international ISPRS events whenever possible. For the year 2024, at least a representative from ISPRS SC will be attending each of the ISPRS mid-term symposia. We are further collaborating to have stalls so that we can interact with more youths and share our experience of being affiliated with volunteering opportunities in a non-profit organization like ISPRS SC. We hope to induce interest among the next

generations to get involved in serving opportunities while promoting the activities of ISPRS in such international events.

4.4.2 International Collaborations of ISPRS SC

ISPRS SC has been collaborating with many like-minded organizations in the past to jointly organise events and promote youths' involvement in scientific activities. We have partnered with organizations like FIG Young Surveyors Network (FIG YSN), the Space Generation Advisory Council (SGAC), the United Nations Environment Programme (UNEP) called UN GEO-6 for Youth, Asian Association on Remote Sensing (AARS) to organise various activities. Likewise, our partnership established with the GRSS Young Professionals (IEEE-GRSS YP) in 2015 to organise summer schools is still going in the form of physical events and virtual workshops.

The long-term collaboration established with the AARS to organize summer school as the pre/post-event of the Asian Conference on Remote Sensing (ACRS) since 2010 is happening this year too. We have partnered with the Institute of Surveying and Mapping, Sri Lanka as the local organiser hosting summer school this year on 22–26 November as the post-ACRS event. Likewise, we have been partnering with BUCEA to organize summer schools. Recently, we have collaborated with Working Group 2 of GeoAI formed by the International Telecommunication Union to get engaged in their activities to promote the curriculum on GeoAI they have developed to standardize the study on the application of AI in the geospatial field. In this context, we will be participating in the AI for Good Summit happening on 30–31 May 2024 in Geneva.

Be it in the form of promoting events through our social media or delivering information about different research to our members, we have been collaborating with different organizations outside ISPRS. We will continue our partnership to provide more information access, conduct research activities, and transfer knowledge to the student and young professional community in the coming future too.

5. Conclusion

The youth are the engine of growth and development. They provide fresh perspectives and energy to help drive technological innovation and sustainable development. For close to two decades, the ISPRS Student Consortium has continued to represent the interests of young students and professionals within the ISPRS community. Since its inception, the consortium has facilitated several scientific activities, supported the organisation of summer schools, provided financial support through scholarships/grants, and published numerous papers and newsletters. The student consortium places a high value on volunteering by young students and professionals as a tool for advocacy and advancement of photogrammetry, remote sensing, and spatial information sciences. The consortium is also driving an initiative to establish local student chapters, and this is expected to gain traction in the years to come. In conclusion, joining the ISPRS SC is strongly recommended for young students and professionals in the fields of photogrammetry, remote sensing, and spatial information sciences. The consortium provides a vehicle for professional growth and positions the youth for impactful contributions to the parent body (ISPRS) and the world at large.

References

- Balletti, C., Capra, A., Calantropio, A., Chiabrando, F., Colucci, E., Furfaro, G., Guastella, A., Guerra, F., Lingua, A., Matrone, F., Menna, F., Nocerino, E., Teppati Losè, L., Vernier, P., & Visintini, D. (2023). The SUNRISE summer school: An innovative learning-by-doing experience for the documentation of archaeological heritage. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 48(M-2–2023), 147–154. <https://doi.org/10.5194/isprs-Archives-XLVIII-M-2-2023-147-2023>
- Detchev, I., Kanjir, U., Reyes, S. R., Miyazaki, H., & Aktas, A. F. (2016). Latest developments of the ISPRS Student Consortium. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 41, 79–85. <https://doi.org/10.5194/isprsarchives-XLI-B6-79-2016>
- ISPRS Student Consortium. (2019). *ISPRS SC Statutes*. Retrieved from <https://Sc.Isprs.Org/about/Statutes/>.
- ISPRS Student Consortium. (2022a). *ISPRS SC Board of Directors*. Retrieved from <https://Sc.Isprs.Org/about/Board/>.
- ISPRS SC Board of Directors Online Elections*. Retrieved from <https://Vote.Electionrunner.Com/Election/WQR0J/Results>.
- ISPRS Student Consortium. (2024a). *ISPRS SC General Activities*. Retrieved from <https://Sc.Isprs.Org/about/General-Activities/>.
- ISPRS Student Consortium (2024b). *ISPRS Student Consortium*. Retrieved from https://Sc.Isprs.Org/about/Isprs_sc/.
- Kanjir, U., Detchev, I., Reyes, S. R., Akkartal Aktas, A., Lo, C. Y., & Miyazaki, H. (2014). The ISPRS student consortium: From launch to Tenth Anniversary. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 40(6), 43–48. <https://doi.org/10.5194/isprsarchives-XL-6-43-2014>
- Kivilcim, C. Ö., Pakdil, E., & Sengül, A. (2010). Role of Internet as a communication platform and ISPRS Student Consortium Web Site. *Symposium on Cross-Border Education for Global Geo-Information of ISPRS-Mid-Term-Commission-VI, Enschede, Netherlands*, 38–41.
- Kivilcim, C. O., Sterenczak, K., Kanjir, U., Sengul, A., Stavbar, G., Pakdil, M. E., Lobo, E., & Oo, K. S. (2012). ISPRS Student Consortium: the network of youth in geoinformation society. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XXXIX-B6, 59–67. <https://doi.org/10.5194/isprsarchives-XXXIX-B6-59-2012>
- Malhotra, R., Vlahovic, G., Madden, M., Tilley, K., & Renslow, M. (2010). The role of geospatial associations in promoting the profession to young people. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 38, 24–27.
- Miyazaki, H., Lo, C.-Y., & Cho, K. (2012). Activities of Asian students and young scientists on photogrammetry and remote sensing. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XXXIX-B6,

79–82. <https://doi.org/10.5194/isprsarchives-XXXIX-B6-79-2012>

Reyes, S. R. C., & Cruz, C. A. (2022). Forging ahead and adapting to change: A review of the initiatives of the ISPRS Student Consortium. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 43(B5-2022), 37–43. <https://doi.org/10.5194/isprs-Archives-XLIII-B5-2022-37-2022>

Reyes, S. R., Cruz, C., Üstüner, M., Jjuuko, C., & Guliyeva, S. (2021). Creative strategies in navigating the new normal: Advancing the contributions of the ISPRS Student Consortium as an international organization. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 5(5), 23–30. <https://doi.org/10.5194/isprs-annals-V-5-2021-23-2021>

Reyes, S. R., Jaojoco, A. K. M., Cruz, C., Jjuuko, C., Üstüner, M., Chow, J. C. K., & Guliyeva, S. (2020). The ISPRS Student Consortium: Sustaining relevance and creating shared visions for the youth. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 5(5), 39–46. <https://doi.org/10.5194/isprs-annals-V-5-2020-39-2020>