Insights and Reflections from ISPRS Geospatial Week 2025 in Dubai

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The ISPRS Geospatial Week (GSW) 2025 in Dubai was a dynamic and intellectually stimulating experience. With numerous parallel sessions, workshops, and poster presentations happening across several days, the event truly lived up to its theme: "Photogrammetry and Remote Sensing for a Better Tomorrow." It brought together experts and young researchers from all over the world, showcasing the latest developments in geospatial science and its applications for societal benefit.

The keynote and plenary presentations were among the highlights of the conference. I was particularly inspired by Prof. Deren Li's plenary talk on "Spatio-temporal Intelligence for SDG." He demonstrated how modern satellite systems are now capable of real-time monitoring of major events, such as war damage in Gaza and Syria, and earthquake impacts in Turkey and Myanmar, among several others. It was remarkable to see how far geospatial intelligence has progressed—not only in capturing imagery but also in analyzing, detecting, and tracking objects and changes as they occur.

On the first day, I had the opportunity to present my paper in the session on *Uncertainty Modeling in Smart Spatio-Temporal Analysis*. My study focused on using Monte Carlo simulations to better understand uncertainty in SDG 11.3.1 indicators, particularly in estimating built-up areas and assessing land-use efficiency using Earth Observation data. It was encouraging to receive insightful feedback from peers and experts, including valuable suggestions that I plan to integrate into my future work. Presenting in front of an international audience was both challenging and rewarding—it gave me confidence and new perspectives on how to communicate my research clearly and effectively.

I attended several sessions focused on remote sensing and geospatial analysis of urban environments, including those with presentations related to the Sustainable Development Goals (SGDs), which are directly aligned with my doctoral research. I also followed sessions on geospatial AI—a fast-evolving field that is increasingly shaping how we extract information from satellite imagery. New methods and techniques on urban area mapping, building footprint extraction, land cover classification, and disaster damage mapping were explored in depth. One presentation that particularly caught my attention showed how AI was applied to colorize black-and-white images of forested areas, significantly improving the accuracy of tree crown detection. It was a creative and compelling demonstration of how deep learning can add value even to historical imagery.

Beyond the technical sessions, the poster presentations provided an excellent opportunity to have deeper conversations with researchers. Unlike oral sessions, the poster area allowed for unhurried discussions, and I appreciated being able to ask follow-up questions and hear presenters speak passionately about their work. Attending GSW 2025 also prompted reflection on the disparities in research capacity between institutions. While many of the advanced techniques I encountered—particularly those involving deep learning and other AI-based approaches—are actively being developed and applied at IPI-Leibniz University Hannover, they remain largely absent in research efforts at my home institution in the Philippines. The conference served not only as a platform for knowledge exchange but also as a source of motivation. I left with a renewed commitment to help introduce and apply some of these methods in my country, particularly through collaborative projects, capacity building, and training initiatives.

Of course, experiencing Dubai was unforgettable. Seeing the Burj Khalifa, Burj Al Arab, and the Dubai Mall in person was exciting, especially for someone who had only seen them in photos and movies. The city's rapid development and vertical growth reflect how geospatial data can guide urban planning at scale. I also felt surprisingly at home, thanks to the large Filipino community in Dubai—including some working behind the scenes at the conference. It made the experience even more meaningful.

I would like to sincerely thank The ISPRS Foundation (TIF) for the partial travel grant that supported my participation. Despite being partial, the grant made it possible for me to attend this important event. I am also grateful to the Mohammed Bin Rashid Space Centre (MBRSC) and ISPRS for organizing such a well-curated and forward-thinking conference. GSW 2025 has enriched my research, broadened my perspective, and strengthened my motivation to contribute to the global geospatial science community.



TIF Travel Grant Awardees receiving their certificates from ISPRS President Dr. Lena Halounová (first from right) and ISPRS Treasurer Dr. Stewart Walker (first from left). I am the ninth person from the right. Photo courtesy of Dr. Christian Heipke.



With fellow Filipino delegate at ISPRS GSW 2025, Engr. Margaux Angelica Abella Cruz, a former colleague from the University of the Philippines Diliman.



Presenting our paper during the session on Uncertainty Modeling in Smart Spatio-Temporal Analysis at ISPRS GSW 2025.



A snapshot from Prof. Deren Li's plenary talk titled "Spatio-temporal Intelligence for SDG" at ISPRS GSW 2025, highlighting how satellites can identify and track objects from space in (near)real time.



One of the interesting technical sessions I attended at GSW 2025.