

9th GeoLeague Contest Report- May 9, 2024

Organizer:

**Student Scientific Association of The Faculty of Geodesy and Geomatics
Engineering**

K. N. Toosi University of Technology

Submitted Teams:

20

Accepted Teams:

15

Important Links:

<https://geokntu.ir/>

انجمن علمی نقشه برداری دانشگاه خواجه نصیرالدین طوسی

• Introduction:

The Geoleague competition, a fusion of "Geomatics" and "League," stands as a cornerstone event within the realm of geomatics. Originating in 2013 at the K. N. Toosi University of Technology, this prestigious competition has celebrated nine successful editions to date. Each iteration hosted teams from across the nation vying for top honors, making it a pivotal national event. Geoleague serves as a catalyst for fostering innovation, collaboration, and the advancement of undergraduate students in the domain of geodesy and geomatics engineering.

The ninth edition, held in May 2024, marked a significant milestone for this esteemed competition. We take great pride in announcing our collaboration with the International Society for Photogrammetry and Remote Sensing (ISPRS) Student Consortium, the foremost global community in geomatics. This partnership underscores our commitment to sharing knowledge and expertise on an international stage, reaffirming our dedication to the advancement of the field.

• Objectives of GeoLeague:

- 1) Enhancing the scientific and practical proficiencies of students in geodesy and geomatics engineering.
- 2) Cultivating teamwork capabilities and facilitating networking opportunities within the national industry scene for students.
- 3) Strengthening the capacity to effectively manage quality, cost, and time concurrently.
- 4) Introducing students to practical aspects of diverse geodesy and geomatics trends.
- 5) Inspiring students and fostering a vibrant competitive atmosphere to stimulate growth.
- 6) Promoting and advancing geomatics sciences and technologies nationwide through a collaborative and competitive platform.
- 7) Showcasing the geomatics expertise and knowledge of the Iranian students on the international stage through engagement with ISPRS-SC.

- **Description and chronological order of the 9th GeoLeague:**

Geoleague epitomizes a multidisciplinary contest encapsulating the diverse realms of geomatics, spanning geographic information systems (GIS), Remote Sensing, Photogrammetry, Land Surveying, and Geodesy. Participants are immersed in real-world scenarios and dilemmas intrinsic to the field of geomatics, thus fostering the application of their knowledge, skills, and ingenuity towards devising innovative solutions.

I. Reception

On the 9th of May 2024, teams were checked in at the faculty and were led to the competition's secretariat and reception desk in order to complete their registration process and confirm every members identity.

Each team choose a name for their team by which they were known during the contest.

All the electrical devices such as cell phones and smart watches were be taken from every single member of each team to avoid cheating during the contest.



III. Opening Ceremony

The day began with breakfast, followed by an assembly in the amphitheater of the campus at which the national anthem sets the tone. A brief video introduced each team before the organizers took the stage to welcome participants and audience. The scientific secretary outlined the contest's sections and rules. The opening was concluded by a warm welcome note from the head of ISPRS-SC, Ms. Laxmi Thapa.

To ensure fairness, teams were drawn randomly for each of the five stages, with no two teams from the same university competing in the same section. Each team was accompanied by a supervisor and a controller to oversee their progress. With the opening ceremony concluded, teams disperse to their respective stages, officially kicking off the contest at 9 a.m.



IV. First Stage of the Contest

At the first stage teams compete in 5 fields of Geomatics: Photogrammetry, Remote Sensing, Geodesy, GIS and Land Surveying.

Each team was assigned a time limit of 45 minutes to solve the problems in every section within 15 minutes break in between.

During the 15 minutes break, judges in different sections score each team based on their revenue during the contest. This stage was concluded at 2p.m.



VI. Afternoon Session-Final

In the Final stage, the top five teams vie for the coveted first, second, and third place rankings. This phase entails the completion of comprehensive projects predominantly centered around Remote Sensing, Photogrammetry, and GIS applications. The stage concluded at 17:30, with results promptly prepared by 18:30 and officially announced at 19:00 at the closing ceremony venue, the amphitheatre of the campus.



VII. Afternoon Session-Creativity Section

The teams that did not advance to the final stage participated at the creativity section, where they showcased their innovative capabilities to solve problems. This segment typically featured activities such as board games or projects with a geomatics theme. For example, in GL8, a treasure hunt took place within the faculty building. In this year's edition, teams embarked on a quest to locate geomatics-related words on a map of Tehran. Subsequently, one team member had to pantomime these words onstage for the audience's entertainment. This stage was concluded at 17:30.

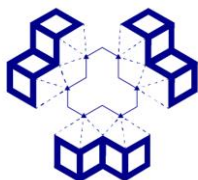
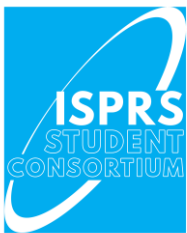


III. Closing Ceremony

After the breath-taking contest, teams gathered up in amphitheater and were entertained by aa student music band on the stage. Three top teams and the winner of creativity section were announced and prizes were distributed.



• Organizers and Partners of the 9th GeoLeague:



Students' Scientific Association of geomatics
engineering of K. N. Toosi University of Technology



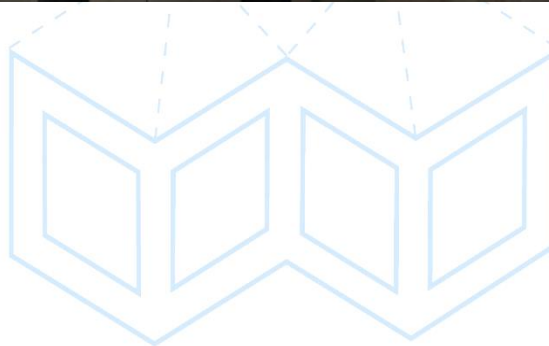
آموزش نقشه برداری
مهندس نباتی





Core organizing team:

- Mohammad Javad Soltani
- Melika Goodarzi
- Kimya Kheirkhah
- Hanieh Bahiraei
- Rojin Marabi
- Reza Saeed Karim Abadi
- Aryan Hossein Aghaei
- Donya Bahreman
- Fatemeh Hajisharafi
- Abtin Norasti
- Roja Bahrampour
- Barbod Alamian
- Alireza Biukian
- Yasin Mohammadi
- Ali Aghajani



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• Conclusion:

The 9th Geoleague featured a remarkable development in comparison with previous Geoleagues. Many organizations and companies supported the event, and it was well received by students from all over the country.

Our vision for the future of this contest is to hold this contest at the international level and host international students from the region and beyond. Although the financial and organizational may hamper this goal, the organizers would give their best to enhance the event at the level of an international contest in the future. ISPRS-SC continuous support would notably contribute this overarching aim.

Examining the potentials with regard to the holding of 9 rounds of contest shows that the contest level can be brought closer to modern geomatics, by integrating sections on artificial intelligence, machine learning and unmanned aerial vehicle-based imaging in the future. In addition, sections on more advanced programming skills and parallel/cloud computing and integrating them at different stages of the contest are examples the potentials for improvement, which can make the contest more challenging and exciting, tailored to the state-of-the-art scientific requirements of geomatics engineering.

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