



Troy to Gallipoli: A place where counterparts become friends



Symposium on GeoSpatial Technologies: Visions and Horizons 2025

POCKET PROGRAM



8-10 October 2025

Çanakkale Onsekiz Mart University,
Troia Culture Centre
Çanakkale - Türkiye

www.geovisions2025.org

October 08, 2025 Wednesday

08:30 - 11:00	Registration
11:00 - 11:30	Welcome Ceremony
11:30 - 12:15	Keynote Speech I Chairperson: Orhan Altan GeoAI – Chances and Challenges Speaker: Sester, Monika
12:15 - 13:30	Lunch 
13:30 - 14:45	Technical Session I — Remote Sensing Applications in Hazard Monitoring and Management Chairperson: Marco Scaioni OP - 01 <i>Influence of Geological and Geomorphological Factors on Vertical Co-Seismic Deformation Induced by the Mw 7.2 Al Haouz Earthquake (Morocco, 2023)</i> <i>Habib, Adnane; El Adnani, Ayoub; Berrada, Ilyasse; Najih, Amine; Fadili, Ahmed; Laaziz, Youness Ahmed; Arrad, Taha Youness; Lagnaoui, Abdelouahed</i> OP - 02 <i>Integration of Remote Sensing Data in Rain-on-Grid Flood Modelling and Post-Event Validation Using Orthophotos</i> <i>Akpınar, M. Berkay; Akyürek, Zuhal</i> OP - 03 <i>Mapping Post-Rainfall Recovery in Arid Regions Using a Hierarchical U-Net</i> <i>Hong, Xin</i> OP - 04 <i>Spatiotemporal Evaluation of Pre-Seismic Deformation Patterns: The Case of Northern Thessaly, Greece</i> <i>Eskandari, Rasoul; Biparvayekhiabani, Seyedmohammadmahdi; Genzano, Nicola; Castiglioni, Carlo Andrea; Scaioni, Marco</i>

October 08, 2025 Wednesday

Poster Presentations I

PP - 01 *GeoTopo-Net: A GIS-Based Framework for Automated Topology Recognition and Equipment Grouping in Power Distribution Networks*

Deniz, Oğuz; Tekin, Elif Rana; Arslan, Süha Nur

PP - 02 *Climate Hazard Assessment for Dairy Farming in Aydin, Türkiye: Preliminary Results from the CliResDairy Project*

Karaman, Çağrı; Cerit, Hediye; Demirkol, Mehmet Kemal; Koç, Engin; Kiper, Elif İrem Köse; Çukurlu, Göktuğ Yaşar; Demir, Nusret

PP - 03 *Assessing Mangrove Ecosystem Health and Identifying Optimal Planting Regions Using Remote Sensing and GIS in the UAE*

Ben Salem, Imen; Annamalai, Karthi

PP - 04 *Mapping Social Vulnerability Through Accessibility Patterns: The Istanbul Case*

Terzi, Aydın Furkan; Aksu, Koray; Koçyiğit, Ayşenur; Demirel, Hande

PP - 05 *Overview of the Top-Level Design and Practice of the ReS3D China*

Xue, Chao

PP - 06 *Assessing Urban Flooding and Vegetation Impact in Dubai Creek Following the April 2024 Extreme Rainfall*

Alhammadi, Dana; Hong, Xin

PP - 07 *Mapping Urban Vegetation Changes Using PlanetScope Imagery and GIS: A Case Study of the 2024 Dubai Flood*

Almansoori, Sumayya; Hong, Xin

PP - 08 *GIS-Based Morphometric Terrain Analysis for Watershed Characterization: Case Study of Ain Leuh Watershed, Morocco*

El Mhamdi, Akif; Habib, Adnane; Tajdi, Amina; Aarab, Mohammed

PP - 09 *No-Code GIS for Big Spatial Data: A Platform for Interactive Logistics Visualization*

Sarı, Sefa; Kabil, Ali Osman; Kamaşak, Mustafa E.

PP - 10 *Pixel-Based Classification of Olive Trees Using Multi-Spectral UAV Images and Vegetation Indices*

Kemal, Rabia; Afanyalı, Mine; Baharoğlu, Zeren; Eryavuz, İpek; Atik, Muhammed Enes; Atik, Şaziye Özge



October 08, 2025 Wednesday

Poster Presentations I

PP - 11 *Law of Sines Based Approach for the Accurate Orientation Determination*

Kaya, Merve; Doğan, Nezir; Bettemir, Önder Halis

PP - 12 *Deep Learning-Driven Wildfire Detection in Türkiye Using Sentinel-2 Imagery and Convolutional Neural Networks*

Mohamed, Mahmoud; Şahin, Sefa; Oumate, Mahamat Oumar; Karaş, İsmail Rakıp; Sevinç, Hacer Kübra

PP - 13 *Wildfire Susceptibility Mapping in Karabük Province, Turkey Using Machine Learning Algorithms*

Yılmaz, Melih; Dönmez, Ahmet Serdar; Afana, Osama; Abujayyab, Sohaib K. M.; Sevinç, Hacer Kübra; Açmalı, Şüheda Semih; Karaş, İsmail Rakıp

PP - 14

Metaverse-Enabled Digital Twins for Business and Smart Cities: Toward a Humancentered Framework for Digital Transformation

Qudaih, Rasem; Caldwell, Nicholas; Ben Salem, Imen; Karthi,

October 08, 2025 Wednesday

Technical Session II — SAR and InSAR Applications in Earth Observation

Chairperson: Saygın Abdikan

OP - 05 Explainable Artificial Intelligence in Forecasting MT-InSAR Based Time Series Surface Movements

Yagmur Aydin, Nur; Erten, Esra; Taskin, Gulsen; Musaoglu, Nebiye

OP - 06 Overcoming Optical Gaps: Evaluating SAR–Optical Consistency for Cotton Phenology

Demirci, Alp Eren Furkan; Sunar, Filiz

OP - 07 AI-Based Framework for Rapid Extraction of InSAR Coherence from COMET-LiCSAR Portal

Çukurlu, Göktuğ Yaşar; Veziro, Furkan; Demir, Nusret

OP - 08 Monitoring of Surface Deformations in Geothermal Areas Using the InSAR Method: A Case Study from Denizli, Türkiye

Polat, Ahmet Batuhan; Akcay, Ozgun; Avsar, Emin Ozgur

OP - 09 InSAR Time-Series Analysis of Surface Motions Caused by the 2023 Kahramanmaraş Earthquake in Hatay, Türkiye

Coskun, Suat; Bayik, Caglar; Abdikan, Saygin; Gorum, Tolga; Balik Sanli, Fusun

Coffee Break



October 08, 2025 Wednesday

Technical Session III — Applied Geospatial Analysis and Modelling

Chairperson: *Andrea Masiero*

OP - 10 *Age Matters: Demographic-based Perceptions of Included Location Information*

Sutton, Dominick; Polat Kayali, Merve; Basiri, Anahid

OP - 11 *Road Maintenance Prioritization (RMP) System*

Afana, Osama; Saghir, Mewlud; Karaş, İsmail Rakıp; Abujayyab, Sohaib K. M.

17:00
-
18:15

OP - 12 *An Automated Data Validation Approach for Power Distribution Networks using Grid Partitioning and Multi-faceted Quality Scoring*

Deniz, Oğuz; Arslan, Süha Nur

OP - 13 *Data Classification on the Geoid Surface with Grey Wolf Optimization*

Kirici Yildirim, Ulku; Sisman, Yasemin

OP - 14 *Influence of Vegetation Period on Personal Laser Scanning Accuracy for Tree Attribute Estimation in Pedunculate Oak and European Beech Forests*

Kokeza, Andro; Medak, Damir; Domazetović, Fran; Marić, Ivan; Šiljeg, Ante; Seitz, Albert; Balenović, Ivan

19:30
-
21:30

Welcome Reception

October 09, 2025 Thursday

Technical Session IV — GeoAI and Urban Spatial Analysis

Chairperson: Maria Antonia Brovelli

OP - 15 *GeoAI Applications in Smart Cities: A Systematic Review on Transportation, Building Models, and Navigation*

Sevinç, Hacer Kübra; Demiral, Emrullah; Açmalı, Şüheda Semih;
Karaş, İsmail Rakıp

OP - 16 *Assessment of Industrial Areas in Terms of Plan Sustainability through GIS and AHP Integration: The Case of Trabzon*

Terzi, Fatih; Atasoy, Bura Adem; Uzun, Bayram; Yıldırım, Volkan;
Aslan, Furkan; Uzun, Semih

OP - 17 *Development of a Land Vehicle and Data Acquisition System for Building Audit*

Doğan, Nezir; Şengül, Ayşe Nur; Uzunkaya, Ali; Kaya, Merve;
Bettemir, Önder Halis

OP - 18 *Advancing Building Footprint Extraction with Multi-Stage Regularization Techniques*

Emelyanov, Anton Vladimirovich; Knyaz, Vladimir Alexandrovich;
Kniaz, Vladimir Vladimirovich

OP - 19 *A Stacking Ensemble Technique to Predict Signal Path Loss via 3D GIS*

Perihanoglu, Güzide Miray; Karaman, Himmet; Akgül, Tayfun

09:00

10:15



October 09, 2025 Thursday

Poster Presentations II

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Keynote Speech II

Chairperson: Özgün Akçay

A Digital Twin of the Terrestrial Water Cycle: The Remote Sensing Perspective

Speaker: Wagner, Wolfgang

Lunch ☺



October 09, 2025 Thursday

Technical Session V — Geospatial AI and Machine Learning Applications in Remote Sensing

Chairperson: *Fabio Remondino*

OP - 20 *CNN-Based Downscaling of Land Surface Temperature and Scaling Effect Analysis Using Multi-Sensor Satellite Data: A Case Study in L'Aquila, Italy*

Ali, Kamran; Clementini, Eliseo; Patrizi, Roberto; Santic, Marco; Villante, Carlo

OP - 21 *A Comparative Study of Nature-Inspired Optimization Techniques for MLP-Based Sentinel-2 Image Segmentation*

Yeğin, Abdullah Furkan; Karaş, İsmail Rakıp; Abujayyab, Sohaib

OP - 22 *Towards Annotation-Less Semantic Segmentation of Aerial Point Clouds*

Alami, Ashkan; Remondino, Fabio

OP - 23 *Advances in Stereo Matching for Disparity Estimation from Satellite Imagery: Traditional Scanline Aggregation Methods versus Deep Learning-Based RAFTStereo*

Sayın, Yazgı Nur; Ok, Ali Özgün

OP - 24 *Detection of Hazelnut Orchards with Sentinel-2 Imagery and Machine Learning Classification Algorithms*

Sengul, Gafur Semi; Tümer, İlay Nur; Sertel, Elif; Ustaoglu, Beyza

Coffee Break



October 09, 2025 Thursday

Technical Session VI — Remote Sensing for Atmospheric Pollution and Environmental Monitoring

Chairperson: Filiz Sunar

OP - 25 Satellite-Based Assessment of NH_3 and CH_4 Levels around Biogas Facilities in Izmir

Bayram, Sedef; Aydın, Merve; Alban, Aykut Mehmet; Saracoglu, Serra; Kaynak, Burcak

OP - 26 Estimating Ground-Level Carbon Monoxide Concentrations Using Machine Learning Techniques: The Metropolitan City of Milan Case Study

Liang, Zhongyou; Cedeno Jimenez, Jesus Rodrigo; Yordanov, Vasil; Brovelli, Maria Antonia

OP - 27 Analyzing the Role of Topography in NO_2 Dispersion: Evidence from the 2021 Manavgat Forest Fire

Atalay, Hatice; Sunar, Filiz; Dervişoğlu, Adalet

OP - 28 Investigating the Role of Geographic Information Systems in Advancing Positive Energy Districts

Koçyiğit, Ayşenur; Aksu, Koray; Terzi, Aydın Furkan; Demirel, Hande

OP - 29 Investigation of NH_3 Concentrations around Livestock Farms in Balıkesir and Bursa

Tokgoz, Seda; Metin, Oykü; Alban, Aykut Mehmet; Saracoglu, Serra; Kaynak, Burcak

Coffee Break





October 09, 2025 Thursday

Technical Session VII — Mobile Mapping, SLAM, and Visualization

Chairperson: Ali Özgün Ok

OP - 30 *Update and Quality Assessment of GeoDBs in Urban Areas Based on SLAM Technology*

Genzano, Nicola; Scaioni, Marco

OP - 31 *Spatio-Temporal Detection and Filtering of Dynamic Objects in Mobile LiDAR Point Clouds*

Zeybek, Mustafa

OP - 32 *A Digital Layer of Memory: 3D Documentation, Art Historical Interpretation, and Web-Based Presentation of the Saint Michael Church*

Atasoy, Bura Adem; Akın, Alper Tunga; Terzi, Fatih; Yuka, Ahmet

OP - 33 *The Accuracy Analysis of the Visual-SLAM and LiDAR-SLAM Methods: A case study*

Özbayrak, Simla; Basaran, Aleyna; Kaya, Emirhan; Uçarlı, Ahmet Can; İlçi, Veli

OP - 34 *Generative Inpainting of Partially Destroyed Frescos*

Kniaz, Vladimir V.; Moshkantsev, Petr; Bordodymov, Artem; Knyaz, Vladimir A.

October 10, 2025 Friday

Technical Session VIII — Geospatial AI and Remote Sensing Applications

Chairperson: *Fusun Balık Şanlı*

OP - 35 *Evaluating the Accuracy of Pedunculate Oak Tree Volume Estimates Using Static Terrestrial and Mobile Personal Laser Scanning*

Seitz, Albert; Indir, Krunoslav; Kokeza, Andro; Balenović, Ivan

OP - 36 *Multi-Temporal Tree Species Classification using Sentinel-2 Imagery and Machine Learning: A Case Study from Bolu, Aladağ Forests*

Aksut, Arif; Kuter, Semih

OP - 37 *Synthetic and Real Data for Training and Testing Ground Camera-Based UAV Tracking*

Masiero, Andrea; Dabove, Paolo; Di Pietra, Vincenzo; Piragnolo, Marco; Guarnieri, Alberto; Vettore, Antonio; Toth, Charles

OP - 38 *Behavioural Analysis of Segmentation Accuracy Metrics on Synthetic Urban Objects*

Avşar, Emin Özgür; Akçay, Özgün; Polat, Ahmet Batuhan

OP - 39 *Multi-Scale Scene Graph Generation for Remote Sensing Imagery*

Knyaz, Vladimir A.; Kniaz, Vladimir V.; Emelyanov, Anton V.

Coffee Break



October 10, 2025 Friday

Technical Session IX — Earth Observation for Climate Dynamics and Environmental Sustainability

Chairperson: Zafer Aslan

OP - 40 *Enhancing Climate Variable Prediction through Wavelet-Machine Learning Integration and Remote Sensing Data*

Dwikat, Abdallah; Aslan, Zafer

OP - 41 *The Impact of Climate Change on Wildfire Dynamics and Forest Ecosystems: A Focus on the Aegean Region*

Yılmaz, Hüseyin Onur; Sabuncu, Aslı

OP - 42 *Next-Generation Snow Cover Monitoring in Near Real Time: Evaluating the EUMETSAT H SAF H43 Product from MTG-FCI across the European Alps*

Kuter, Semih; Karaman, Çağrı Hasan; Akpınar, Mustafa Berkay; Akyürek, Zuhul

OP - 43 *From Mesh to Meaning: 3D Models and VR for Knowledge Sharing in Landscape Restoration*

Gabriele, Marzia

OP - 44 *Harnessing EO and Natural Experiments for Urban Development: The UDENE Approach*

Yordanov, Vasil; Oxoli, Daniele; Obrenović, Nikola; Pejak, Branislav; Lenk, Onur; Musaoğlu, Nebiye; Kapukaya, Bekir; Erbay, Yücel; Kara, Seda Nur; İpek, T. Yücel; Rahji, Mohamed; El Fadhel, Ahmed; Souissi, Syrine; Özbayoglu, Murat; Pekkan, Hüseyin; Deniz, Oğuz; Türker, Ali; Tomić, Marina Carević; Brovelli, Maria Antonia

Lunch 

Visit the Troy Museum and the Archaeological Site of Troy

Museum of Troy & Ancient City of Troy

Trip to Çanakkale

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