Special Issue

Advancements in Geographic Information Systems (GIS) and Data Mining Technologies

Message from the Guest Editor

This Special Issue disseminates knowledge at the forefront of geospatial science and data mining. The discovery of spatial patterns is essential for understanding complex geographical phenomena. Remote sensing image segmentation using deep learning enhances geospatial data analysis. Case studies demonstrate the application of GIS technologies and data mining techniques. Integrating geospatial data and data mining is revolutionizing urban planning, environmental monitoring, and infrastructure development. Model-based workflows, including Building Information Modeling and digital twins, enable precise workflows. Advanced data collection methods like 3D scanners and mobile mapping improve reality capture. Articles evaluating livable cities and urban resilience through GIS provide insights for sustainable development. Incorporating GPT, large language models, and generative AI opens new data analysis methods. This Special Issue provides a comprehensive overview of these developments, offering valuable perspectives for researchers and practitioners.

Keyword: machine learning; data mining; GIS; spatial pattern

Guest Editor

Dr. Zdena Dobesova

Department of Geoinformatics, Faculty of Science, Palacky University in Olomouc, 771 46 Olomouc, Czech Republic

Deadline for manuscript submissions

20 February 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/226823

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)