

Special Issue

Soil Organic Matter and Carbon Content Analysis Using Machine Learning

Message from the Guest Editors

This Special Issue aims to bridge the gap between soil science and machine learning by showcasing cutting-edge research in soil organic analysis. By harnessing the power of machine learning algorithms, researchers can analyze large datasets derived from various sensing platforms, such as satellite imagery, drone cameras, and spectroscopic techniques. The resulting insights can revolutionize our understanding of soil properties, enabling more informed decision-making in agriculture, environmental monitoring, and land management. Research areas may include (but are not limited to) the following:

- *The development of machine learning algorithms for soil organic analysis;*
- *The integration of remote-sensing data into machine learning techniques for soil mapping;*
- *Applications of drone cameras and other advanced sensing technologies for soil characterization;*
- *The merging of several advanced detection technologies;*
- *Case studies demonstrating the efficacy of machine learning in soil organic analysis;*
- *Challenges and future directions in the field of soil science and machine learning*

Guest Editors

Dr. Yaping Xu

Department of Environmental and Geosciences, Sam Houston State University, Huntsville, Texas 77340, USA

Dr. Rafael López Núñez

IRNAS-CSIC, Institute of Natural Resources and Agrobiological of Seville, Avda Reina Mercedes 10, 41012 Sevilla, Spain

Deadline for manuscript submissions

20 July 2025



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/204533

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

[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



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), Inspec, CAPIus / SciFinder, and other databases.

Journal Rank:

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