Advanced Geospatial Artificial Intelligence for Forest Modeling, Prediction, Conservation and Management

Guest Editors:

Prof. Dr. Dieu Tien Bui
Geographic Information System Group, Department of Business and IT, University of South-Eastern Norway, Notodden, Norway
Dieu.T.Bui@usn.no

Dr. Tien Dat Pham
Geoinformatics Unit, the RIKEN Center for Advanced Intelligence Project (AIP), Mitsui Building, 15th floor, 1-4-1 Nihonbashi, Chuo-ku, Tokyo 103-0027, Japan
tiendat.pham@riken.jp

Deadline for manuscript submissions:
30 November 2021

Message from the Guest Editors

Recent advances in computer vision, pattern recognition, and artificial intelligence (AI) technologies have resulted in the development of new machine learning, geospatial data mining techniques, and allowing the monitoring of forest ecosystems with higher accuracy. Earth observation (e.g., optical, SAR, UAV, and LiDAR) data provides an important tool for monitoring forests and identifying attributes such as species, biomass, and carbon stocks. Advanced machine learning and remote sensing approaches offer a way to reduce the uncertainty in estimates of forest ecosystem service loss, and are needed for the monitoring, reporting, and verification (MRV) of international conservation programs such as Reducing Emissions from Deforestation and Forest Degradation (REDD+).

- geospatial technology, remote sensing, UAV photogrammetry, and machine learning for forest monitoring;
- geospatial AI for forest aboveground biomass and carbon stock estimation, forest fire prediction and, forest conservation and management;
- the temporal dynamics of forest change;
- monitoring tree species and structure;
- data fusion techniques for forest monitoring;

mdpi.com/si/26867