Recent Advances in Pattern Recognition and Analysis in Landscape Ecology

Message from the Guest Editor

In the field of landscape ecology, satellite and drone (UAV) imagery, LIDAR, and novel tracking methods have allowed researchers to measure disturbances and predict their future spread, to predict native and invasive species dispersal through heterogeneous landscapes, and to better connect drivers such as climate, nutrient cycles, and species competition to the patterns observed in these data. Remote sensing is often combined with spatially explicit models, such as cellular automata and agent-based models, as well as spatial statistics for hypothesis testing and predictive simulations. We invite papers on the use of spatial pattern recognition and analysis to study landscape-scale processes, as well as review and perspective papers summarizing emerging areas, such as automated pattern recognition for imagery, and interdisciplinary papers which examine patterns in human-scaled landscapes (such as cities or regions).