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## Geospatial Big Data and Machine Learning Opportunities and Prospects

Guest Editors:

### Dr. Raja Sengupta

Department of Geography and  
School of Environment, McGill  
University, 805 Sherbrooke St W.,  
Montreal, QC H3A 0B9, Canada

### Dr. Liliana Perez

Laboratory of Environmental  
Geosimulation (LEDGE),  
Department of Geography,  
Université de Montréal, 1375 Ave.  
Thérèse-Lavoie-Roux, Montreal,  
QC H2V 0B3, Canada

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### Message from the Guest Editors

Dear Colleagues,

The increasing availability of large, dynamic data sets creates tremendous opportunities and challenges for empirical science. As an editorial in *Nature* pointed out, “Big Data” is relevant not only because it is big, but it is also complex.

Further, the growth in Big Data has been accompanied by new computational methods that include the use of “machine learning” methodologies to process and make sense of such large datasets. Machine learning algorithms can be applied to geospatial Big Data for a variety of reasons, including enhancing our understanding of causal dynamics in systems, capturing those processes, and predicting system states. Better integration of geospatial Big Data with machine learning algorithms presents opportunities to scale geospatial data analysis over larger geographic extents, represent dynamic system behaviors in near real-time, and use model predictions to anticipate and control networked devices and sensors.



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### Prof. Dr. Wolfgang Kainz

Cartography and Geographic  
Information Science, Department  
of Geography and Regional  
Research, University of Vienna,  
Universitätsstr. 7, A-1010 Vienna,  
Austria

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*ISPRS International Journal of Geo-  
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MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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