**Special Issue theme:** Spatial Agent-Based Models: Current Practices and Future Trends  
**Editors:** Alison Heppenstall (Leeds) and Andrew Crooks (GMU)  
**Journal:** GeoInformatica  
**Impact rating:** 2.3

**Overview**

Over the last decade the agent-based modeling (ABM) paradigm has provided a new lens for understanding the effects of interactions of individuals and how through such interactions macro structures emerge, both in the social and physical environment of spatial systems. However, such a paradigm has been hindered due to computational power and a lack of large fine scale datasets. Within the last few years we have witnessed a massive increase in computational processing power and storage, combined with the onset of Big Data. Today geographers find themselves in a data rich era. We now have access to a variety of data sources (e.g., social media, mobile phone data, etc.) that tells us how, and when, individuals are using spaces. These data raise several questions: can we effectively use them to understand and model spatial systems as complex entities? How well have ABM approaches lent themselves to simulating the dynamics of spatial processes? What has been, or will be, the influence of Big Data on increasing our ability to understand and simulate spatial systems? What is the appropriate level of spatial analysis and time frame to model spatial phenomena? This special issue will concentrate on the best of current practice and future trends. We are interested in papers that will introduce the reader to:

- **Applications:** Well-developed and transparent applications;
- **Methodological innovations:** use of ‘big data’; machine learning methods; calibration and validation methods within agent-based models;
- **Thought pieces:** What is the future of ABM? What do ABMs need to achieve to become as accepted similar to methods from climate change? How have and can agent-based models be used for policy making?

**Indicative deadlines**

**Abstract (250 words):** December 8, 2017  
**Full Paper:** April 30, 2018

**PLEASE NOTE:**

Abstracts **must** first be submitted directly to the guest editors via email:  
Alison Heppenstall - A.J.Heppenstall@leeds.ac.uk  
Andrew Crooks - acrooks2@gmu.edu

Further submission will then be invited based on the content assessed in the abstract.

Full papers need to be between 5000 – 7000 words in length. Details of the journal submission requirements can be found at:  