



## CALL FOR PAPERS

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### MATHEMATICAL GEOSCIENCES SPECIAL ISSUE ON

### *Data Science in Geosciences*

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#### **Guest Editors:**

Vasily Demyanov (Heriot-Watt University, Edinburgh, UK)

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Modern geoscience is facing a step change in the view of the amounts of data to be processed in almost real time in modern day digital era. There are still large volumes of heritage monitoring data that encapsulate essential domain knowledge and is often underused especially while inferring uncertainty of Earth system behaviour. The challenge comes in the processing, integration and assimilation of big data sets consisting in a diversity of types and nature of information. Emerging new field of data science, machine learning and data driven modelling attracts more and more attention across the geoscience audience.

The special issue aims to provide an overview of emerging data science links with geoscience applications, including big data, challenging case studies in geosciences, adaptation of data science tech to the domain content, comparative studies, etc. We are specifically looking for original contribution that are not limited to a somewhat mechanistic application of the existing data science technology but rather reveal new contextual scientific merit for the geoscience domain knowledge.

#### **Main topics:**

- Data science in Geosciences: new concepts, new tools
- Environmental data mining
- Big data in geoscience
- Machine learning in geosciences
- Visual analytics of geo- and environmental data
- Data driven prediction modelling
- Applications: geoscience data, environmental risks, natural hazards, other

#### **Timelines:**

- Paper submission before: **October 31<sup>st</sup>, 2018**
- Return of reviews to authors before: **January 31<sup>st</sup>, 2019**
- Submission of final papers deadline: **March 31<sup>st</sup>, 2019**
- Publication in the Spring or Summer 2019

**Submit Papers** on-line through the journal's website

<http://www.springer.com/journal/11004>

When submitting you must choose the SI: "Data Science in Geosciences".

Submitted manuscripts must fully comply with the journal's Instructions for Authors in preparing manuscripts.

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