Call for Papers for a **special issue on** *The Epistemology of Data Science*

INTRODUCTION

Data science is increasingly a force for innovation and potentially seen as a normative model for scientific research. Computational research-methods as well as efficient, smart, and potentially disruptive uses of data are quickly growing in popularity and significance, increasingly influencing all forms of knowledge-work. These developments rely on, but also reinforce a powerful narrative about the future of knowledge production. Traditionally, data science is characterised as a data- and computing-intensive techno-scientific practice, built on top of a heterogeneous array of methods for gathering, filtering, modifying, and analysing data using computational and statistical tools to extract information. This situates data science within a network of technological affordances, where more data, increasing computing power, and better mathematical tools enable new methods for extracting value from large data sets. However, data science can also be situated within a network of epistemic norms, values, practices, and epistemic virtues that are equally novel and revolutionary, and jointly constitute a "data science model of knowledge". Finally, data science may also be seen as a specific style of analysis that inherits its epistemic criteria from the statistical modeling of regularities, is deployed in a social and technological context that enables its wider application, and whose use is validated and reinforced by a belief in its epistemic and/or pragmatic superiority. This overall perspective emphasises that data science may be not only a new way of doing science, but also a new model for how science could be done and how scientific practices and knowledge-work may evolve.

Given the importance and complexity of data science and its current impact on the development of knowledge, it is crucial to understand its nature, scope, and theoretical foundations. This is the goal of this special issue, which seeks to contribute and advance the current debate on the epistemology of data science by bringing together experts from a variety of scientific fields and scholarly traditions, including computer science, data science, epistemology, statistics, philosophy of computer science, philosophy of information, and philosophy of science, to analyse and ground the status of data science as a science.

TOPICS

The journal seeks submissions on the conceptual, epistemological, foundational, methodological, or philosophical issues concerning data science. While the motivating questions should be of a conceptual, theoretical, or philosophical nature, the journal welcomes high-quality submissions regardless of philosophical tradition, research methodology, school of thought, or disciplinary background.

TIMETABLE

December 1, 2019: Deadline for paper submissions
January 15, 2019: Decisions and revisions returned
February 15, 2019: Deadline for revised papers
March 2020: Publication of the special issue

SUBMISSION DETAILS

To submit a paper for this special issue, authors should go to the journal's Editorial Manager
http://www.editorialmanager.com/phte/
The author (or a corresponding author for each submission in case of co- authored papers) must register into EM.

The author must then select the special article type: **"Epistemology of Data Science**" from the selection provided in the submission process. This is needed in order to assign the submissions to the Guest Editors. Submissions will then be assessed according to the following procedure:

New Submission $\Rightarrow$ Journal Editorial Office $\Rightarrow$ Guest Editor(s) $\Rightarrow$ (double-blind) Reviewers $\Rightarrow$ Reviewers' Recommendations $\Rightarrow$ Guest Editor(s)' Recommendation $\Rightarrow$ Editor-in-Chief's Decision $\Rightarrow$ Author Notification of the Decision.

The process will be reiterated in case of requests for revisions.

For any further information please contact:

Danuta Farah pa.floridi@oii.ox.ac.uk