Topical Collection on Reproducible Research in Transportation

1. **Submission deadline:** 31 December 2024

2. **Guest editor(s):**

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3. **Outline:**

This collection aims to highlight the importance of reproducibility in transportation research, fostering advancements and enhancing the credibility of scientific findings. The collection targets a broad audience of researchers, practitioners and policy-makers.

Reproducibility is essential in scientific research, enabling validation and further development of existing work. In transportation research, the increasing availability of open data and the rapid advancement of both technologies and data analysis methods have emphasised the need for reproducible research practices. Reproducibility ensures that data, methods and results are transparent, reliable, and reusable. We invite submissions on a wide range of topics where reproducibility can improve the quality and the outcome of transportation research, including but not limited to:

- Review and meta-analysis of reproducible research practices in transportation;
- Data sharing, data documentation and open data initiatives in transportation;
- Reproducible workflows and tools in transportation data analysis;
- Reproducible computation in transportation (e.g., traffic flow modelling and simulation, traffic control, travel behaviour analysis, planning and forecasting);
- Validation and benchmarking of simulation tools (e.g., definition of test cases and data collection);
- Reproducible and interpretable data-driven methods in transportation;
- Replication of important transportation research findings in the literature, such as capacity drop, Macroscopic Fundamental Diagram (MFD), etc.;
- Frameworks for reproducibility and knowledge transfer among researchers, practitioners, and policymakers in transportation;
- Training and disseminating best practices for reproducible transportation research (e.g., data sharing and data analysis tools).

4. **Selection of articles:**

Manuscripts should be original and not currently under review by other journals or conferences. All submissions will undergo a rigorous peer-review process. Authors must provide detailed methodological descriptions, data availability statements, and links to code repositories with clear instructions on executing them, ensuring the analysis in the manuscript can be reproduced (if applicable) because reproducibility will be the primary criterion in reviewing all submissions.

5. **Journal:**

The topical collection will be published in the European Transport Research Review (ETRR, https://etrr.springeropen.com). ETRR is a peer-reviewed open-access journal that publishes original high-quality research in transportation science, technology, and practice. The journal covers all transport modes and addresses engineering and social science perspectives. It offers a multidisciplinary platform for researchers, practitioners, engineers and policymakers. The journal encourages thematic collections of articles from major European conferences and international networks. For more information regarding the journal and the Author Processing Charges, please visit the website (https://etrr.springeropen.com/about).

6. **List of potential contributions:**

We are currently collecting a list of potential contributions that we intend to submit together with the full proposal for the topical collection to the editors of ETRR. If you are interested in contributing to the topical collection, please provide the following:

- authors' names,
- a paper title,
- an abstract.