

Introduction to the Open Science Practices in Information Systems Research Minitrack

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1. Introduction

In a world that is starting to question critical thought, and the contributions of experts, it's never been more important for scientists to promote research practices that can build more trust in the research they produce. This can be achieved by becoming more transparent and open with their research by adopting open science (OS) practices. OS refers to making scientific knowledge freely available to the public, and is becoming easier with the advent of information technology, the internet, and platforms such as the Open Science Framework (OSF). This has already resulted in scientists in other disciplines adopting these more open practices, which has seen OS growing in prominence in recent years, challenging the traditional scientific process. This provides IS researchers with an opportunity to do the same, opening up the opportunity for their research not just to be more transparent but increase the possibility of it being adopted by practitioners.

OS consists of different concepts such as open access (making published research articles freely available under an open access licence); open data (requiring researchers to make research data publicly available with their submitted papers); open artefact(s) (making artefacts accessible online for free, with an open license to use, modify and reuse); and open peer review (where researchers and reviewers know each others identities) [1]. There are also registered reports (RR), which facilitate a form of peer review that breaks studies into two stages: (i) study pre-registration - authors identify a relevant problem and detail their research design, which is submitted for (open) peer review and feedback, (ii) improved research execution - the study is completed with the improved design. An example of such an approach in IS research can be seen in Doyle and Luczak-Roesch [2].

The objective of this minitrack is to give researchers the opportunity to present novel and innovative ways that they are conducting research

using OS concepts outlined above. In doing so we aim to push the boundary of how IS research is conducted and communicated to the community. Indeed, OS should be more transparent, with greater potential to verify, replicate, and freely share the results. Such openness should also provide a platform for creating research that demonstrates proof-of-use [3] as the community strives to become more relevant to practice. We therefore suggest that the community should strongly engage with OS, and in order to do so, we look for both conceptual and empirical papers that either further our understanding of OS in IS research, or studies that practice it.

The papers in this year's inaugural minitrack are: *"How Can I Share My Work? A Review of the Open Access Policies of IS Journals"*. This paper completes a review of the open access policies offered by numerous IS journals which shows that they are adapting to the evolving research landscape, incorporating open science practices, and argues that IS researchers need to adapt also. From there they suggest IS researchers should look beyond the academic paper as being the only output of their research projects but need to consider other components that they can make freely available as open artefacts. The outcome of doing so is not only an increase in research outputs, but the development of their academic profile, and opportunities for new collaborations.

"The Pragmatic School of Thought in Open Science: A Case Study of Multistakeholder Participation in Shaping the Future of Internet Governance". This paper indicates that while the 'pragmatic' school of thought in open science advocates for collaboration between diverse stakeholder groups to encourage positive change, there is a lack of understanding as to how it can be used for assimilating knowledge on complex socio-political issues remains nascent. They then introduce a project that practices a number of OS concepts including

stakeholder-led evaluations and open access publications with the emerging discussion highlighting the potential of open science to mobilise groups and combat public scepticism in policy-making.

2. References

- [1] Doyle, C., Luczak-Roesch, M., and Mittal, A. (2019). We Need the Open Artefact: Design Science as a Pathway to Open Science in Information Systems Research. In Proceedings of the International Conference on Design Science Research in Information Systems and Technology 2019, pp. 46–60..
- [2] Doyle, C., and Luczak-Roesch, M. (2020). This paper is an artefact: On open science practices in design science research using registered reports. In Proceedings of the 53rd Hawaii International Conference on System Sciences, pp. 5026-5035.
- [3] Nunamaker Jr, J.F., Briggs, R.O., Derrick, D.C. and Schwabe, G., 2015. The last research mile: Achieving both rigor and relevance in information systems research. *Journal of Management Information Systems*, 32(3), pp.10-47.