

Peer review at the crossroads

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New tools, platforms and services enrich scholarly communication across all phases of the research workflow, and in particular provide functionalities to continuously revisit and re-evaluate the process and the outcomes of the scholarly discourse. The publishing scene has come to include open access e-journals, independent publishing platforms, overlay journals based on repository content, blogs and journal clubs. As dissemination methods diversify the scholarly communication scene, the related review processes have been revisited as well.

Emerging alternative peer review methods move away from the traditional closed peer review process towards a more open and transparent methodology with varying degrees of openness in identity, documentation, participation, and time. New, innovative tools incorporate the basic principles of open science by employing open, collaborative and network-based publishing and review methodology. The presentation will demonstrate how these alternative peer review tools and methods shape the communication of scholarly results and how they contribute to the strengthening discourse of open science.

Based on a landscape scan of alternative review methods and services, the presentation exhibits the innovative ways researchers communicate their scientific results at smaller, communal level or at a wider, global level, and evaluate each other's work. These new workflows and services carry the common features of network-based solutions, employment of digital technologies and collaborative research applications, and therefore, represent good examples of Open Science, in terms of methodology, tools, and networking among researchers. The analysis of peer review methods and processes is currently conducted in the framework of the EU-funded OpenUp project (www.openup-h2020.eu) which sets out to further shape the current discourse of scientific dissemination, evaluation and assessment by mapping out the current scholarly environment and unraveling the underlying processes. Through an evaluation of alternative peer review methods the study contributes to a more democratic, transparent and community-based knowledge discovery and dissemination.