

Methodologies for selecting high-impact publications for Open Access award recognition

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Abstract

We developed methodologies to identify high-impact Open Access (OA) publications for the Library Open Access Award. The analysis focuses on OA outputs from a single publication year, specifically Scopus-indexed articles, reviews, conference papers, books, and book chapters with a maximum of 20 authors and at least one corresponding author affiliated with Chalmers University of Technology. A substantial proportion of the university's annual research output is openly available, and a large subset meets these inclusion criteria. Impact and visibility are assessed using Field-Weighted Citation Impact (FWCI) from SciVal and Altmetric Attention Scores. By capturing both citation performance and societal attention, we generate shortlists of the highest-ranked publications according to each metric, while excluding previous awardees. This replicable approach can be adapted by other institutions using comparable bibliometric and altmetric tools.

Keywords: Open Access; research impact; bibliometrics; altmetrics; award selection.

We developed systematic approaches to select high-impact Open Access (OA) publications for recognizing excellence in research. Chalmers University of Technology Library annually awards an OA Prize to researchers whose work has made a significant impact on the research community, in celebration of OA Week. This exercise is carried out each October, reviewing all publications from the previous full year. Our main challenge was to formulate methods for identifying impactful OA publications within a defined time frame, i.e., one year. In this poster, we share the methodologies used to identify the prize winner.

In 2024, researchers affiliated with Chalmers published a total of 3,148 publications, of which 66% (2,069 publications) were available as OA. Publications were retrieved from the Chalmers Research Information System and included only articles, reviews, conference papers, books, and book chapters. We focused on publications indexed in the Scopus database and selected those with no more than 20 authors. This criterion ensured that the selected publications represented research teams of a more identifiable size, where individual contributions were more transparent. Furthermore, we limited our analysis to publications in which at least one corresponding author was affiliated with Chalmers. Corresponding authors often indicate scientific leadership and collaboration, as they typically serve as the primary contact and coordinator of the research.

Additionally, the corresponding author had to be employed at Chalmers. We found that 42% (871 publications) of OA publications met the above selection criteria.

We assessed publication impact and visibility using two different metrics: FWCI (Field Weighted Citation Impact) and Altmetrics (alternative metrics). FWCI shows how often a paper is cited compared to the global average for similar papers in its field, year, and publication type, allowing a fair comparison across disciplines. For example, a FWCI of 2.0 in Physics and a FWCI of 2.0 in Sociology both indicated that each paper was cited twice as much as the global average for its field, even though citation practices differed between fields. Since we analyzed publications from the most recent full year, citation metrics can be influenced by citation delays. Altmetrics provides insights into research impact because it captures attention immediately, and how research is discussed and shared across diverse social platforms (e.g. news outlets, policy documents, and social media etc.) and audiences. An article with an Altmetric attention score of 500 might indicate that it has received significant attention suggesting that the research is influential both within and outside the academic community.

Using these methods, we selected the top five open access publications with the highest FWCI and the top five with the highest Altmetric scores. We then checked whether any publication appeared in both lists; none did. Next, we verified whether any of the authors had received the OA award in the previous year to ensure a new winner was selected. Two authors from last year's prize were identified, and their papers were excluded to avoid duplication. Although both approaches, FWCI and Altmetric score, are valid for selecting the 2025 winner based on 2024 publications, we chose the paper with the highest Altmetric score as the winner because it reflects real time attention.

Our methodologies provide a transparent and replicable framework that other organizations can adopt for similar purposes. We used the Scopus database and SciVal tools to calculate the FWCI, and the Altmetric database to obtain the Altmetric score. Organizations with access to other databases can replicate our approach by using equivalent metrics available through those platforms.

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