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Advancing Responsible Bibliometric Practices in Research Assessment

An Introduction to the ISSI 2025 Special Track "A framework for the responsible use of bibliometrics in research evaluation" (FRAME)

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The role of bibliometric indicators in research evaluation has undergone substantial evolution over the past decades, becoming integral to institutional assessments, funding decisions, and science policy at large. While their widespread adoption has enabled new forms of analysis and benchmarking, it has also sparked ongoing debates around their transparency, ethical integrity, and contextual relevance. A central concern is the over-reliance on narrow performance metrics, such as publication counts or citation-based rankings, often applied uniformly and without sufficient consideration of disciplinary norms, research diversity, or the broader societal value of scientific work.

Recent international initiatives—most notably the *Agreement on Reforming Research Assessment* (CoARA, 2022)—have brought renewed attention to the need for holistic, inclusive, and responsible evaluation frameworks. These efforts underscore the importance of balancing quantitative indicators with qualitative judgment, and of ensuring that assessment systems reinforce, rather than distort, the values of academic integrity, transparency, and societal engagement.

In this context, the special track "*A Framework for the Responsible Use of Bibliometrics in Research Evaluation*" (FRAME), hosted at ISSI 2025, aims to foster critical reflection and advance practical guidance for the responsible integration of bibliometrics into research assessment. Its overarching goal is to articulate concrete criteria, protocols, and governance models that ensure metrics are used ethically, appropriately, and effectively across diverse evaluation settings.

This track is structured around five core objectives:

1. To promote a shared understanding of what constitutes responsible metrics, clarifying their scope of application and potential limitations.
2. To co-design evaluation systems that align with principles of academic rigor, respond to the needs of diverse stakeholders, and account for both scholarly and societal impact.

3. To develop standardized protocols and ethical guidelines to improve the transparency, reproducibility, and inclusivity of metric-based assessments.
4. To anticipate and address challenges posed by emerging technologies, particularly the increasing use of AI tools in scientific publishing, reporting, and peer review.
5. To foster collaboration among key actors in the scientometric community, including researchers, practitioners, funders, and policy institutions.

To support these goals, the FRAME track invited interdisciplinary contributions that explore the theoretical foundations, practical applications, and policy implications of responsible bibliometric use.

The selected papers include:

- Conceptual frameworks and empirical models that support context-sensitive indicator use (Daraio, Glänzel, and Gorraiz, 2025; Xenou et al., 2025).
- Studies evaluating the interplay between academic and non-academic impact in assessment models (Haunschild and Bornmann, 2025).
- Analyses of how bibliometric indicators influence research behavior, institutional strategies, and policy formulation (Engels., Houben and Spooren, 2025; Rousseau, 2025; Sivertsen, Zhang, and Rushforth, 2025).
- Reforming research assessment in Social Science and Humanities (SSH, Bonaccorsi, 2025).
- Critical assessments of AI-assisted tools in scholarly communication and their implications for research evaluation systems (Thelwall 2025).
- Ethical, legal, and social considerations surrounding indicator selection, data governance, and accountability (Huang et al., 2025; Kosmulski, 2025; Tejada-Gómez and Ayure-Urrego, 2025; Vaccari and Daraio, 2025).

By convening diverse perspectives and encouraging methodological innovation, this track contributes to the broader agenda of transforming research assessment systems in ways that are fair, credible, and future-oriented. It supports the development of actionable tools and shared principles that enable responsible metric use while embracing the complexity and diversity of contemporary scientific practice.

List of contributions to the Special Track

Bonaccorsi A. (2025), “The new alliance. Bringing together bibliometric and library science for a responsible assessment of research in SSH”, in this Special Track.

Daraio C., Glänzel W., Gorraiz J. (2025), A Responsible Framework for an Appropriate Bibliometric-Based Research Assessment, in this Special Track.

Engels T. C. E., Houben B., Spooren P. (20205), Responsible research assessment of teams: reflections and perspectives after two evaluation cycles at the University of Antwerp, Belgium, in this Special Track.

Haunschild R., and Bornmann L. (2025), Mapping national research that targets sustainable development goals: The responsible visualization of OpenAlex data for societal impact measurements of research, in this Special Track.

Huang Y., Liu W., Fu H., Ma J., Zhang G., Bu Y., Min C., Wu Z. (2025), Toward Responsible Scientometrics: Normative Data Practices for Research Evaluation, in this Special Track.

Kosmulski M. (2025), Can scientific papers be unretracted? in this Special Track.

Rousseau R. (2025), Trueblood et al.'s Ideas on Research Evaluation and Implications for Reforming Research Assessment, in this Special Track.

Sivertsen G., Zhang L., Rushforth A. (2025), "Responsible metrics for the assessment of research organizations", in this Special Track.

Tejada-Gómez M. A., Ayure-Urrego M. (2025), Ethical and responsible model for the National Science, Technology and Innovation System in Colombia, in this Special Track.

Thelwall M. (2025), Responsible Uses of Large Language Models for Research Evaluation, in this Special Track.

Vaccari A., Daraio, C. (2025), Does Evaluating Research Still Need Virtues in the Age of Chat GPT?, in this Special Track.

Xenou Z., Malanguarneral G., Provost L., Manola N. (2025), Towards a Responsible Research Assessment Transition: A Novel Framework for Researcher Profiles, in this Special Track.