Solution Session

Marbles – Upcycling research waste and making every effort count in the era of Open Science

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Organization(s): Research Agora

Abstract

Challenge:

The current research ecosystem often overlooks valuable contributions -such as negative results, alternative methodologies, replications, and exploratory findings- due to the narrow focus on conventional publications and impact metrics. This not only leads to research waste but also stifles creativity, collaboration, reproducibility and transparency. As AI and digital tools reshape the research landscape, there is a pressing need to broaden what counts as scientific contribution and to develop infrastructures that recognize and reward diverse outputs.

Proposed Solution:

Research Agora offers a flexible, collaborative platform designed to recognize and elevate all meaningful research contributions. At its core are “Marbles”-short, peer-reviewed, open-access reports linked to published articles, which add a reproducibility layer and enable the scientific record to grow dynamically. Marbles can document successful or failed replications, alternative methods, confirmation or rejection of hypotheses, negative results, and more. However, the Research Agora framework is intentionally open and evolving: we actively invite the community to shape what counts as a Marble and to propose other non-conventional publication strategies that reflect the realities and needs of modern research.

Our vision is to build a living “Mosaic” of interconnected research contributions, where each piece -whether a Marble or another innovative format- adds value, transparency, and context to the scientific narrative. This approach not only makes research more reproducible and accessible, but also supports fairer, more holistic researcher assessment and fosters a culture of collaboration over competition.

Session Plan:

- Introduction (15 min): We will introduce the challenges of research waste, reproducibility challenges, limited recognition, and the need for broader, more inclusive publication models. The core principles of Research Agora,

including Marbles and the Mosaic framework, will be presented, along with examples of non-conventional outputs that could be integrated.

- Collaborative Conceptualization (35 min): Participants will be invited to co-create the future of open research dissemination. Guided breakout discussions will explore:
    - What other non-traditional research outputs should be recognized and how?
    - What incentives, tools, or policies are needed to foster adoption and ensure equity, transparency, and global accessibility?
    - How can the platform adapt to support emerging needs, such as AI-generated research artefacts or citizen science contributions?
    - Flexibility regarding audience questions and suggestions.
- Documentation and Next Steps (10 min): Key ideas and proposed solutions will be collaboratively documented. We will outline opportunities for ongoing co-development, pilot projects, and partnerships to further expand and refine the Research Agora ecosystem.

Expected Outcomes:

Participants will gain a deeper understanding of how an open, community-driven approach can transform research assessment, reduce waste, and promote reproducibility. The session will generate actionable recommendations for expanding the definition and recognition of research outputs, and identify collaborators interested in shaping the next generation of open science infrastructure.