

Helping Editors and Reviewers Understand Research Integrity Issues: An STM Workshop Report

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As part of the 2025 STM Research Integrity Day, STM introduced a new element to the program: a series of expert-led research integrity workshops, held in parallel with the afternoon Innovator Fair. Designed as interactive, small-group sessions, these workshops aimed to move beyond awareness-raising and into practical, applied discussion around real-world integrity challenges.

The workshop focused on a critical pressure point in scholarly publishing: how research integrity professionals can better support journal editors and peer reviewers in identifying and responding to potential integrity issues during manuscript review. The session was aimed squarely at research integrity professionals and officers who are increasingly tasked with acting as translators between evolving integrity risks, editorial realities, and reviewer capacity.

The workshop was facilitated by an expert panel comprising Sabina Alam, Director of Publishing Ethics and Integrity at Taylor & Francis; Daniel Acuna, Founder and CEO of ReviewerZero AI and Associate Professor of Computer Science (on leave) at the University of Colorado Boulder; and Jigisha Patel, Independent Research Integrity Specialist and Founder of Jigisha Patel Research Integrity Limited.

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Setting the Scene: Taking the Temperature of the Room

The workshop began with a short series of live polls, run via Mentimeter, designed to quickly surface who was in the room, the level of experience participants brought with them, and the integrity pressures they were currently facing. Rather than serving as a simple icebreaker, the polling helped anchor the discussion in shared realities and highlighted the diversity—and unevenness—of experience, even within a relatively small group.

The audience identified primarily as publishers and research integrity officers, with additional participants selecting “other roles.” Only a small number identified as editors, and none identified primarily as researchers or librarians. This reinforced a key assumption behind the workshop’s design: While editors and reviewers are central actors in research integrity, much of the responsibility for supporting them falls on publisher-side and integrity-focused roles.

When asked about experience managing research integrity issues, responses showed a broad spread. Several participants described themselves as very experienced or moderately experienced, while the largest group reported having managed only a few cases. A small number indicated they had never directly managed a research integrity issue. Taken together, this suggested a mixed cohort—experienced enough to engage deeply with real scenarios, but not uniformly confident or specialized, underscoring the need for practical guidance rather than abstract principles.

Polling on experience with paper mill activity revealed that the majority of participants had encountered it in some form. Most respondents indicated they had direct experience investigating and resolving paper mill–related issues, while others had seen suspected activity without being directly responsible for managing it. Only a small minority reported no exposure at all. This confirmed that

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paper mills were not a hypothetical concern for the group, but an active and ongoing challenge shaping day-to-day editorial and integrity work.

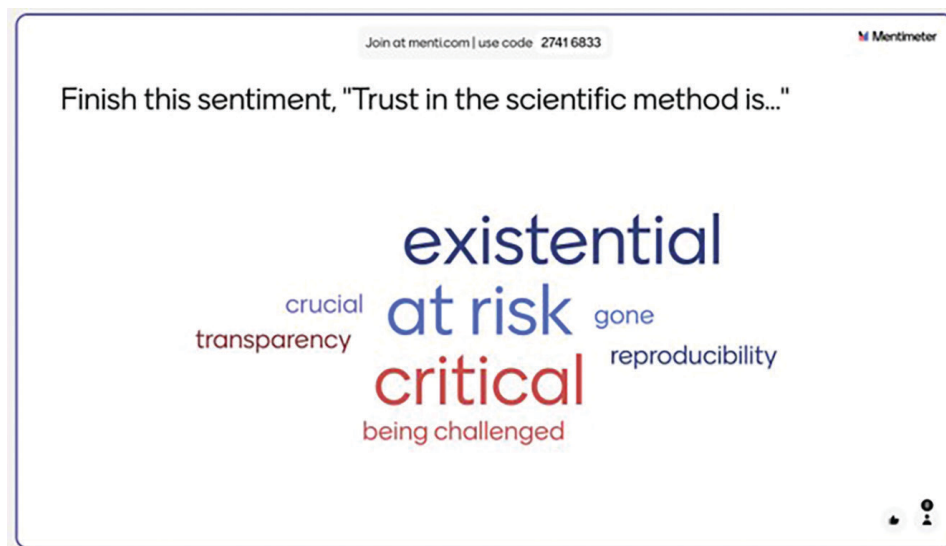
Participants were then asked about their biggest concerns regarding artificial intelligence (AI) in publishing and peer review. The resulting word cloud was dominated by themes of volume and scale—an avalanche of submissions, resourcing constraints, and the time and effort required to filter content effectively. Closely related concerns included fake papers, fake authorship, confidentiality of peer review, and the risk of penalizing good actors while bad actors exploit system weaknesses. The prominence of “resourcing” and “confidentiality” reflected anxiety not only about detection, but about sustainability and trust within existing workflows.

A similar pattern emerged when participants were asked to identify their biggest research integrity challenge overall. “Editor engagement” and “volume” stood out clearly, alongside paper mills, fake content, plagiarism, authorship disputes, and the difficulty of separating signal from noise. Several responses pointed to challenges around education and training—particularly how to engage editors who are time-poor, volunteer their expertise, and may be resistant to new tools or processes.

The final polling question asked participants to complete the sentence: “Trust in the scientific method is...” The responses were striking in tone. Words such as *critical*, *existential*, *at risk*, *being challenged*, and *crucial* featured prominently, alongside calls for transparency and



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reproducibility. This moment set a reflective, even sobering, frame for the rest of the workshop, making clear that the discussion was not merely about operational fixes, but about safeguarding confidence in the scholarly record itself.

Collectively, the polling confirmed several themes that would recur throughout the session: the scale of the problem, the strain on editorial systems, the uneven distribution of expertise, and the urgent need to rethink how editors and reviewers are supported—without overwhelming them—as research integrity threats continue to evolve.

Expert Perspectives: What Editors and Reviewers May Not See

The polling was followed by three short expert presentations, each highlighting a different dimension of the integrity landscape.

Jigisha Patel focused on legitimate publishing versus predatory publishing and paper mills. She emphasized that paper mills and predatory publishers are different, but related, entities. Predatory publishers have no quality control processes and often imitate legitimate journals to dupe researchers into submitting to them. Paper mills usually target legitimate publishers. She highlighted how, in legitimate journals, weak, inconsistent, or poorly enforced quality control measures, and editorial workflows that rely too heavily on trust without verification, can be easily exploited by paper mills.

Sabina Alam drew on publisher-level data and ethics case trends to show how research integrity concerns are evolving and increasing in volume, requiring publishers to continually adapt policies, workflows, and escalation pathways. Her presentation reinforced the idea that integrity oversight can no longer be reactive or handled in isolation but must be embedded across editorial operations.

Daniel Acuna addressed the accelerating role of AI, underscoring two simple, but profound, shifts: AI is becoming exponentially better, and it is becoming cheaper. He highlighted how this combination challenges traditional assumptions about what editors and reviewers can reliably detect, particularly as AI-generated manuscripts and reviews become increasingly polished and difficult to distinguish from human work.

Small-Group Discussions: From Policy Gaps to Practical Actions

Following the presentations, participants moved into structured small-group discussions, first in pairs and then in groups of 4, to work through a series of realistic scenarios drawn directly from the workshop materials. Discussion materials are provided as a supplemental material.

One discussion exercise asked participants to categorize a range of publishing practices—such as author-nominated reviewers, weak reviewer identity checks, and performance incentives tied to speed—as weak or absent policies, questionable practices, or outright publisher misconduct. The exercise revealed how difficult it can be to draw firm lines, particularly when practices sit in gray areas shaped by resource constraints or legacy workflows.

Another scenario focused on a journal experiencing a sudden surge in submissions of mixed quality, alongside rising postpublication integrity concerns and reviewer fatigue. Across tables, participants converged on a set of urgent actions, including pausing or slowing submissions, auditing the existing pipeline for red flags, reassessing published articles, tightening submission triage, and providing immediate support to overwhelmed editors.

A final scenario explored a near-future world in which generative AI models produce manuscripts and peer

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reviews that evade current detection tools. This prompted deeper reflection on what conditions are necessary to trust the scientific record at all. Groups emphasized identity verification for authors and reviewers, transparency through open data and open science practices, and a renewed focus on reviewers' ability to assess the *science itself*, rather than trying to detect AI.

Large-Group Reflections: Redefining Roles and Responsibilities

When the groups reconvened, several cross-cutting themes emerged. Participants repeatedly noted that editors are often only partially engaged, frequently volunteering their time and prioritizing scientific judgment over procedural or technical checks. Expecting editors to run tools, interpret complex reports, or stay abreast of rapidly changing integrity threats was widely seen as unrealistic.

Instead, there was strong agreement that publishers and research integrity teams carry the primary responsibility for staying informed about emerging risks and embedding safeguards upstream. Tools and checks should be run before manuscripts reach editors, with results summarized

clearly so editors can make informed decisions without being overwhelmed. Editors, participants argued, should not be expected to read lengthy guidelines; they need confidence that policies exist and that the editorial office will support decisions to reject or investigate when red flags arise.

Participants also highlighted the importance of researcher education and of framing integrity support in ways that do not alienate editors or reviewers. Human oversight and critical thinking were repeatedly emphasized, even as AI tools become more prevalent. As one discussion put it bluntly: *we cannot simply end up using AI to check AI*.

Closing Observations

By the end of the session, the workshop had achieved its core aim: surfacing what research integrity professionals collectively know, what they may underestimate, and where responsibilities realistically lie. Rather than offering a single set of prescriptions, the workshop underscored the need for layered responsibility—with publishers building robust systems and policies, editorial offices handling triage and escalation, and editors and reviewers supported to focus on scientific quality.