

---

Learn

---

Serve

---

Lead

# The Use of AI Tools in the Scholarly Publishing Process

## Considerations and Practical Suggestions for Scholars

**Chhavi Chauhan, PhD, ELS**

**Tom Ciavarella**

Sept. 10, 2024



Association of  
American Medical Colleges

# Agenda

- Today's speakers
- Responsible use of AI-generated content (AIGC)
- What makes AI a powerful assistant?
- The Role of
  - Authors/Researchers
  - Peer Reviewers
  - Publishers
- Q&A

# Today's speakers

*Tom's contributions are based on the research of*

Marie Soulière, PhD  
Head of Editorial Ethics and Quality Assurance –  
Frontiers  
Elected council member – Committee on Publication  
Ethics (COPE)



## **Chhavi Chauhan, PhD, ELS**

***Director of Scientific Outreach***

***American Society for Investigative Pathology***

Dr. Chhavi Chauhan is Director of Scientific Outreach at the American Society for Investigative Pathology, a Program Manager for the Women in AI Accelerate & Raise Program, and serves on the boards for various mission-driven organizations in the spheres of scholarly publishing, digital pathology, AI ethics, & youth education. She is a former biomedical researcher, expert scholarly communicator, and a sought-after mentor in the fields of scientific research, scholarly publishing, and AI ethics, especially for women and those from underrepresented groups. She has gathered several awards and accolades in each of these domains. She is a thought leader, a renowned international speaker, and a strong advocate for equitable and accessible health care.



## **Tom Ciavarella**

***Head of Public Affairs and Advocacy, North America***

***Frontiers Media***

Tom Ciavarella is the head of Public Affairs and Advocacy in North America for Frontiers, a Gold Open Access publisher working to make science open so that researchers can collaborate better and innovate faster. Tom oversees government relations in the United States and Canada and works with key stakeholders on improving science and technology policy. He is formerly manager of Publisher Relations for the Web of Science Group (part of Clarivate) and runs a consultancy that works with startups and STM publishers. He lives in Chicago.

# Artificial Intelligence–Generated Content (AIGC)



# Artificial Intelligence–Generated Content (AIGC)



# Artificial Intelligence–Generated Content (AIGC)

- Authors
  - Hypothesis & ideas (eg, lit review)
  - Research paper generation
  - Figures creation
- Reviewers
  - AI-generated review reports
  - Quality and integrity checks
- Publishers
  - Workflow automation
  - AI-supported peer review
  - AI decision-making


# Guidance on AIGC in publishing



**STM exists to advance trusted research**

As the leading association of scholarly publishers, STM Association advances trusted research for the benefit of society. We do this by fostering collaboration and innovation among our members and the wider scholarly community.

STM



**Chatbots, Generative AI, and Scholarly Manuscripts**

**WAME Recommendations on Chatbots and Generative Artificial Intelligence in Relation to Scholarly Publications**

**WAME Recommendation 1: Chatbots cannot be authors.**

Journals have begun to publish articles in which chatbots such as Bard, Bing and ChatGPT have been used, with some journals listing chatbots as co-authors. The legal status of an author differs from country to country but under most jurisdictions, an author must be a legal person. Chatbots do not meet the International Committee of Medical Journal Editors (ICMJE) authorship criteria, particularly that of being able to give "final approval of the version to be published."

WAME



**PROMOTING INTEGRITY IN SCHOLARLY RESEARCH AND ITS PUBLICATION**

**Guidance & discussion**

**AI and authorship**  
What does the development of AI tools, such as ChatGPT, mean for publication ethics and authorship?  
[Read article](#)

**AI and fake papers**  
COPE members join us for the COPE Forum where we meet various subjects surrounding the use of AI, fake paper creation and the production of papers based on false research. The aim is to discuss the aspects of authorship, data integrity, peer review, AI tools for research and more.  
[Read more and register](#)

**AI challenge for editors**  
Editors share their experience of a student being involved in an author list, and how they view the challenges of AI for journal editors.  
[Read guest editorial](#)

**AI in the news**  
Some of the key themes and questions around using artificial intelligence in writing are starting to emerge in the flurry of news, and we offer a brief overview of current discussions.  
[Read more](#)

COPE

## Key points

- AI tools can offer data driven guidance to assist humans in decision making or offer automated decision making without human intervention.
- 'AI' should not be used interchangeably with 'automation' - automation refers to rules based software, whereas AI refers to technology which learns and replicates a level of human intelligence to make decisions or return information.
- AI and automation tools have demonstrated success in assisting faster and accurate peer review.
- Accountability must ensure the technology is non-discriminatory and fair.
- Responsible application of technology requires human oversight, checks, and monitoring.
- Transparency of processes must ensure technical robustness and rigorous data governance.
- Bias in data sources and potential bias in the design of the tools should be identified and corrected. Where it is not possible, transparency on the limitations is essential.
- Recommendations are made for publishers, editors, and authors on the ethical application of AI.

<https://publicationethics.org/resources/seminars-and-webinars/artificial-intelligence>

publicationethics.org


### DISCUSSION DOCUMENT: ARTIFICIAL INTELLIGENCE (AI) IN DECISION MAKING

Writing –  
review and editing:  
Marie Soulière,  
Sonja Krane,  
Catriona Fennell,  
Howard Browman

## Uses of GenAI by Authors

Key Indicator	Permitted—disclosure not necessary	Disclosure necessary—permission by editorial teams	Not permitted
Basic author support tool (refine, correct, edit, and format text and documents)	✓		
Uses transcending basic author support tool		✓	
Create, alter, or manipulate original research data and results			✗
Credit GenAI as an author of a published work <sup>1</sup>			✗

<sup>1</sup> <https://www.stm-assoc.org/events/stms-ethical-and-practical-guidelines-for-the-use-of-generative-ai-in-the-publication-process/>




HOME ABOUT US **POLICIES** RESOURCES ELP DONATE NEWS EVENTS CONTACT US Q

## Chatbots, Generative AI, and Scholarly Manuscripts

WAME Recommendations on Chatbots and Generative Artificial Intelligence in Relation to Scholarly Publications

**WAME Recommendation 4:** *Editors and peer reviewers should specify, to authors and each other, any use of chatbots in the evaluation of the manuscript and generation of reviews and correspondence. If they use chatbots in their communications with authors and each other, they should explain how they were used.* Editors and reviewers are responsible for any content and citations generated by a chatbot. They should be aware that chatbots retain the prompts fed to them, including manuscript content, and supplying an author's manuscript to a chatbot breaches confidentiality of the submitted manuscript.

<https://wame.org/page3.php?id=106>



About us ▾ All journals All articles Submit your research Q

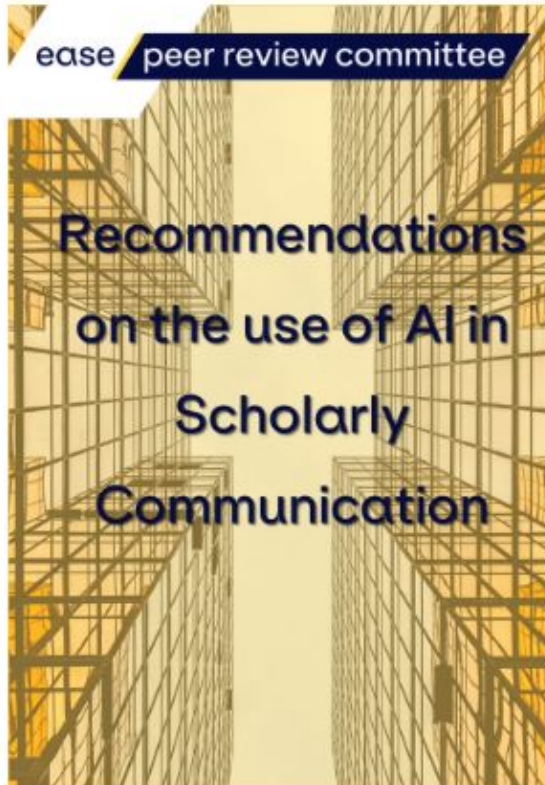
### AI use by editors and reviewers

Generative AI technologies should not be used to review the content of a submitted manuscript or used to make decisions as to the acceptance or rejection of a manuscript. Responsibility for the integrity of the review process must remain with the editors and reviewers who have accepted their roles as relevant experts.

<https://www.frontiersin.org/about/peer-review>

# EASE Recommendations on Use of AI in Scholarly Communication

## New RFI – Recommendations on the Use of AI in Scholarly Communication



Following the launch of the Peer Review Quality Assessment page of the Toolkit in June, the EASE Peer Review Committee invite comments and suggestions on the draft of new Peer Review Toolkit entry, Recommendations on Use of AI in Scholarly Communication.

Response to this request for information (RFI) is voluntary and may be submitted anonymously till 15th September 2024 using the feedback form.

The recent development of Large Language Models (LLMs) and Generative AI (GenAI) presents new challenges and opportunities in scholarly communication. This has resulted in diverse policies of journals, publishers and funders around the use of AI tools. Research studies, including surveys, suggest that researchers are already using AIs at a significant scale, for both creation or editing of manuscripts and peer review reports. And yet AI accuracy, effectiveness, and reproducibility remains uncertain.

# What makes AI a powerful assistant for research and publishing?

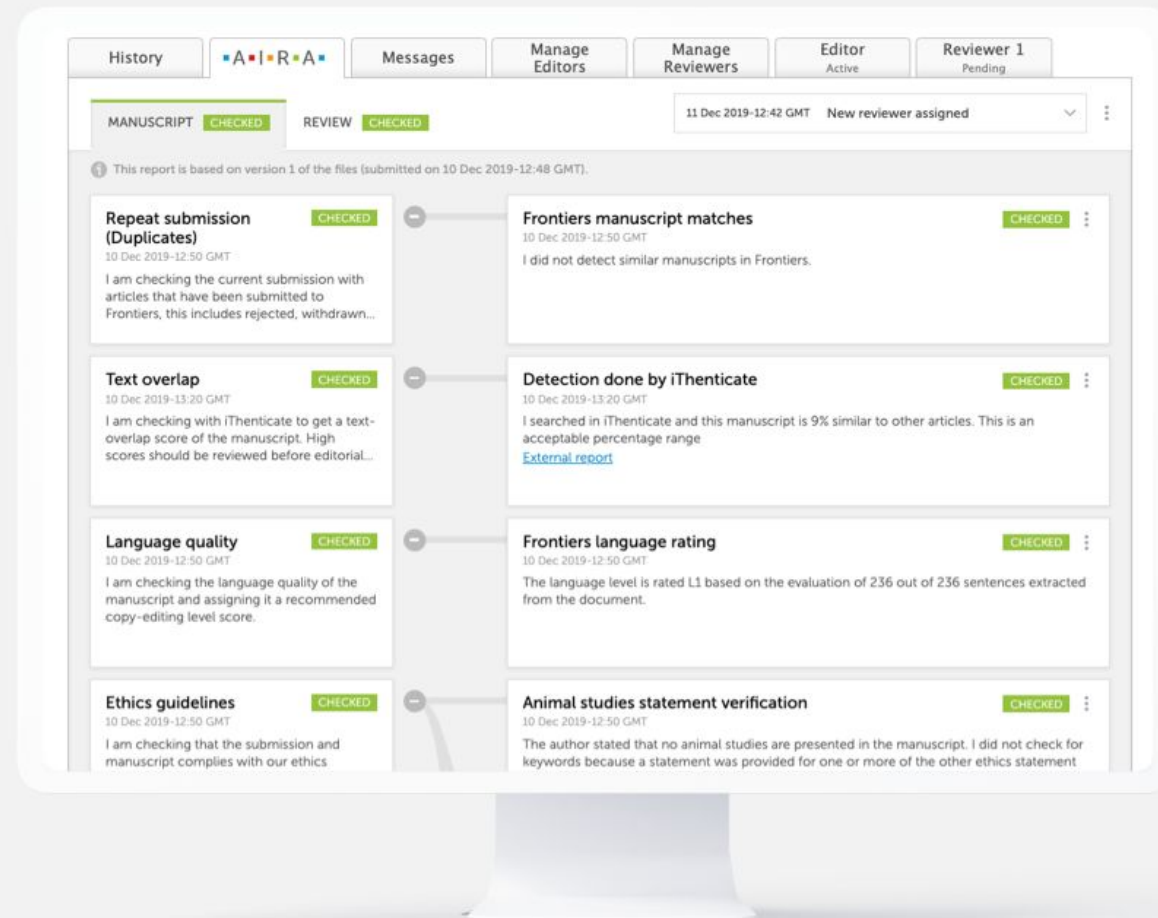
- Pattern recognition
- Content classification
- Anomaly detection
- Recommender systems
- Predictive analytics
- Decision support

# How Frontiers uses AI



## Quality and Integrity Checks

- 13 AI-powered quality checks
- Flags manuscripts that require attention
- Human validation
- 100% transparency over decisions



Powered by



# How Collaborative Use of AI Advances Ethical AI

STM

Advancing trusted research

Search

Library

Press Room

Contact

Join our mailing list

Members Area

Home

About STM

Our Work

Membership

News

Events & Training

STM exists to advance trusted research

As the leading association of scholarly publishers, STM Association advances trusted research for the benefit of society. We do this by fostering collaboration and innovation among our members and the wider scholarly community.

To drive this mission forward, STM's strategic areas of activity focus on advancing research integrity, open research and social responsibility — and are powered by standards and technology to deliver real impact.

Research Integrity

We see research integrity as the foundational pillar of scholarly communications — and strive to ensure the credibility and trustworthiness of academic findings through policies, practices and stakeholder collaboration. [Learn more.](#)

Social Responsibility

STM's Social Responsibility work drives collective actions across academic and scholarly publishing that will positively contribute to a more equitable, inclusive, and sustainable world for both people and planet. [Learn more](#)

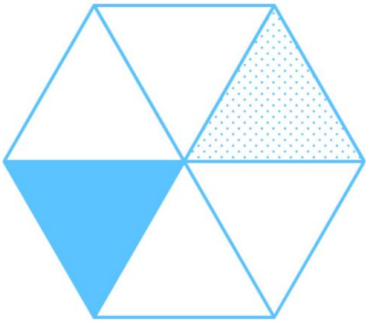
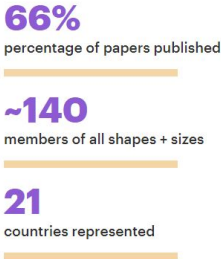
Open Research

STM stands for advancing open and trusted research, where researchers and the rest of society can rely on information that is credible, accessible, linked and searchable in perpetuity. [Learn more](#)

Standards & Technology

Our work here convenes STM members of all shapes and sizes to pool ideas, resources, experience, and innovations to advance open, trusted research — together. [Learn more](#)

Our Members by the Numbers



# Keeping up with the Use of Responsible AI in Scholarly Publishing

- Join relevant working groups & task forces
- Why reinvent the wheel: join an existing forum: SSP AI Community of Interest (SSP AI CoIN)
- Follow the field: ITHAKA
- Follow relevant blog posts & newsletters

# Q & A

# Thank you

Chhavi Chauhan, PhD, ELS

Director of Scientific Outreach

American Society for Investigative Pathology

[Cchauhan@asip.org](mailto:Cchauhan@asip.org)

<https://www.asip.org>

Tom Ciavarella

Head of Public Affairs and Advocacy, North America

Frontiers Media

[tom.ciavarella@frontiersin.org](mailto:tom.ciavarella@frontiersin.org)

[www.frontiersin.org](http://www.frontiersin.org)