



Publish Faster. Publish Smarter.

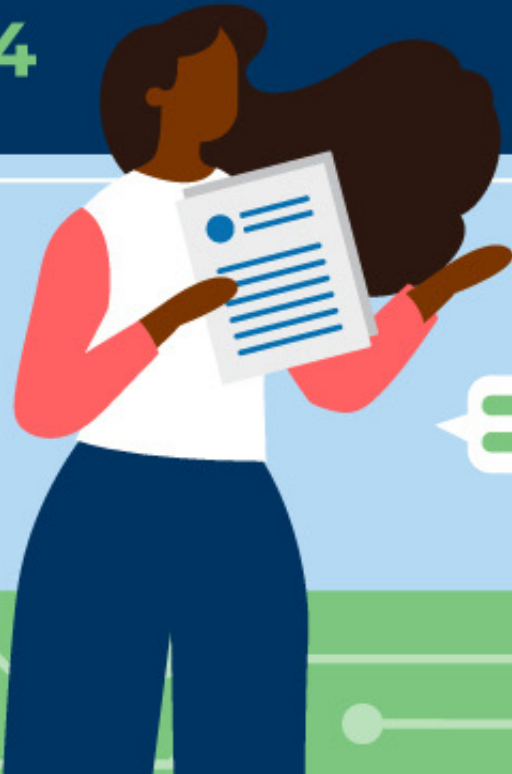
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EMUG 2024

Revere Hotel Boston Common

June 12-13, 2024



EMUG 2024

Trust, Transparency, and Integrity

Kevin Lawson

Product Manager

klawson@ariessys.com

Elysia Williams

Sr. Account Manager

ewilliams@ariessys.com

Darci Dubreuil, JD

Principal Product Manager

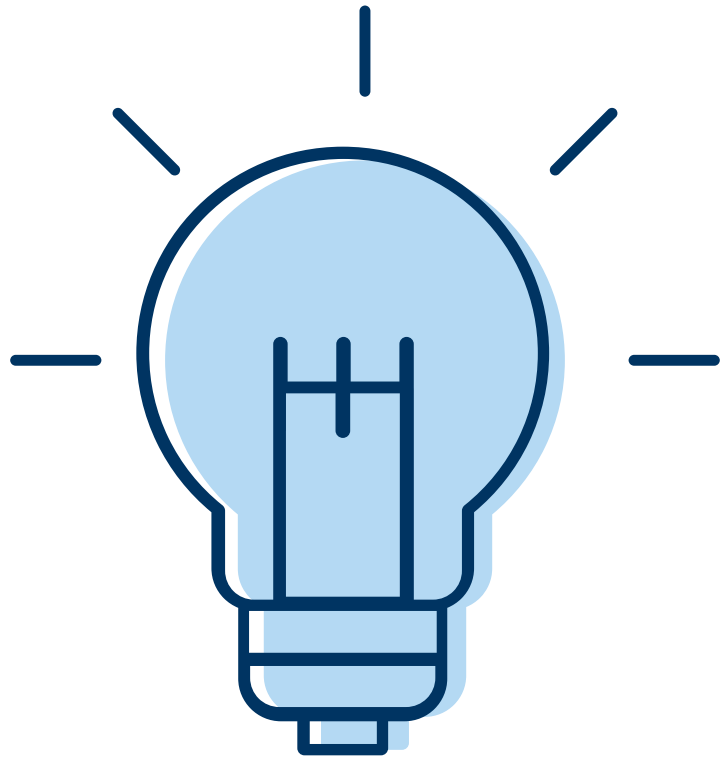
d.dubreuil@elsevier.com

Agenda

Welcome to EMUG: Day 2

- Recognizing the Challenges
 - Why trust, transparency, and integrity?
 - Paper mills
- Collaborative Solutions
 - STM Researcher Identity Working Group
 - STM Integrity Hub
 - STM Duplicate Submissions Working Group
 - Elsevier Integrity Initiatives
 - Aries Ecosystem: Integrated Solutions
- Resources





Recognizing the Challenges

Why Trust, Transparency and Integrity?

- **Trust** is about honesty and adherence to ethical principles, and it exists between people or entities
- **Integrity** is doing the right thing, the right way
- **Transparency** is about being open and upfront, which is a critical component in building trust because trust is earned

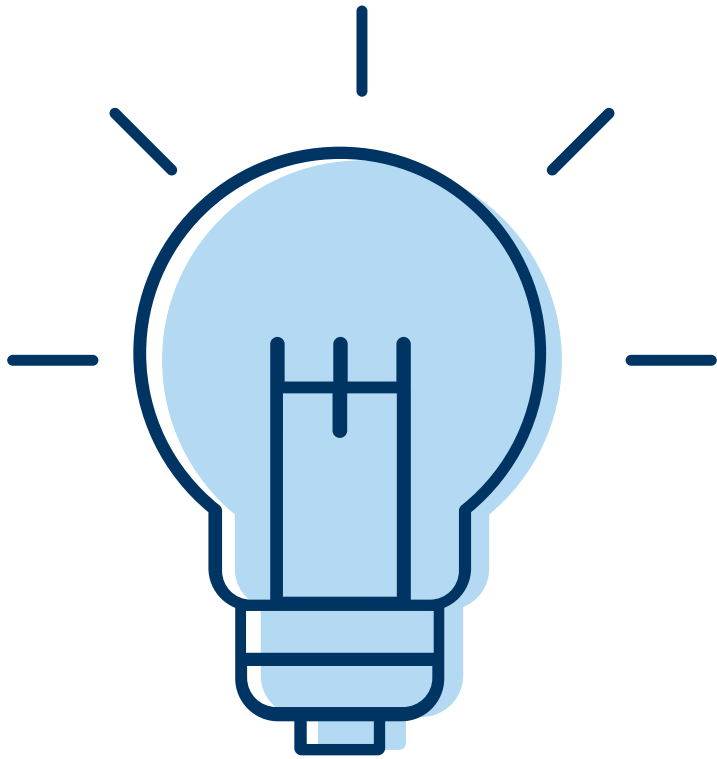


The Perils of Paper Mills

Staff and freelancers **craft manuscripts for Authors, which deliberately deceive journals**

- **Fake papers:** describing research that never happened
- Papers describing real research but with **sold authorship**
- Papers describing either fake or real research but with **fake Guest Editors, fake reviewers and fake reviews**
- **Any combination** of the above





Researcher Identity Working Group

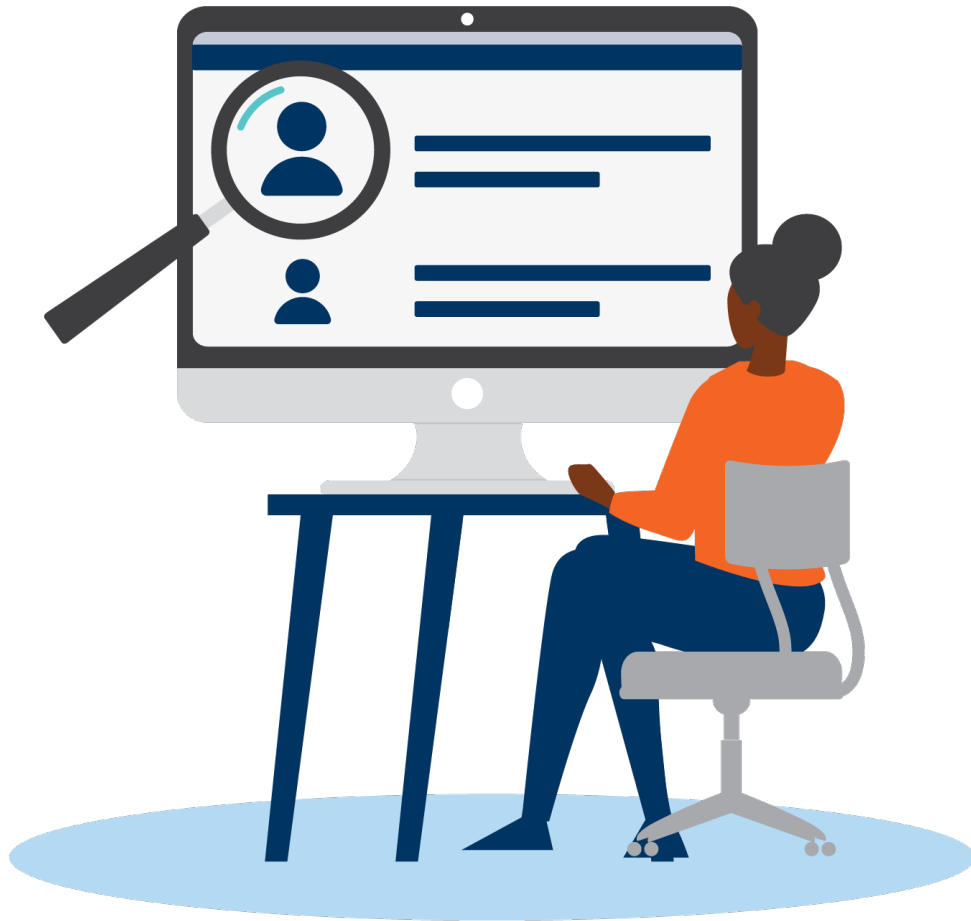
Researcher Identity Working Group (RIWG)

STM Solutions

- Subsidiary of STM that also develops/operates the STM Integrity Hub platform
- Tackling fraudulence within the peer review/editorial process
- Collaborating to improve trust in the identity of Authors, Reviewers, and Editors
- Goal = industry recommendations and best practices



Discovery



- Parallel Industries
 - Academic Publishing
 - Social Media
 - Government Services
 - Healthcare
 - Shops
 - Banking/Financial Services
 - Travel
- Account/User Friction

Discovery

Fraud solution strategies by category

- Technological/pattern recognition
- Policy and governance
- Behavioral
- Community



User Perspective

Define example actions by **Actor, Verb, Object**

- Person Asserts Identity
- Author Submits Article
- Journal Editor Invites Guest Editor

Persona use cases

- John logs into the publisher's editorial system using a fictional non-institutional email address. (e.g., fake.person@gmail.com)



User Perspective

Initial Cases turned into User Stories

- Email domain does not match known affiliation
- Same email address used by more than one individual
- Fake affiliations
- Fabricated identities
- And others...

As an author

I want to publish a **fake article**

So that I am **awarded my degree** without putting in the work

As an author

I want to create **fake reviewers**

So that I can provide positive feedback **on my own paper**

As a "papermill" owner

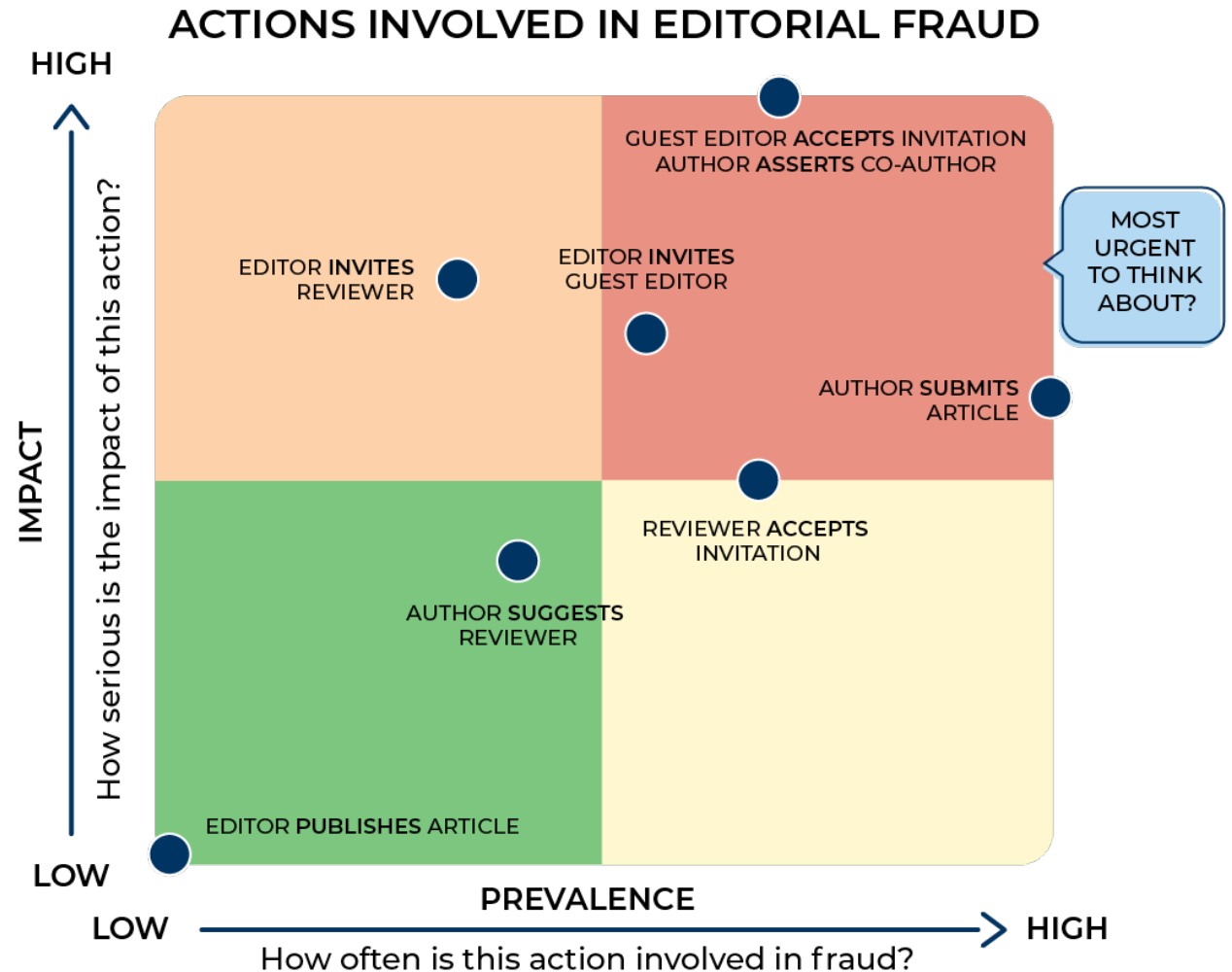
I want to create **fake papers**

So that I can provide positive feedback **on my own paper**



User Perspective

- Mapping the actions to an Editorial Workflow
- Prioritizing the actions
- Scoring actions by Impact and Prevalence



User Perspective



- Publisher survey
- Mechanisms involved in fraudulent access
 - Fakeness
 - Impersonation
 - Identity Theft
 - Corruption

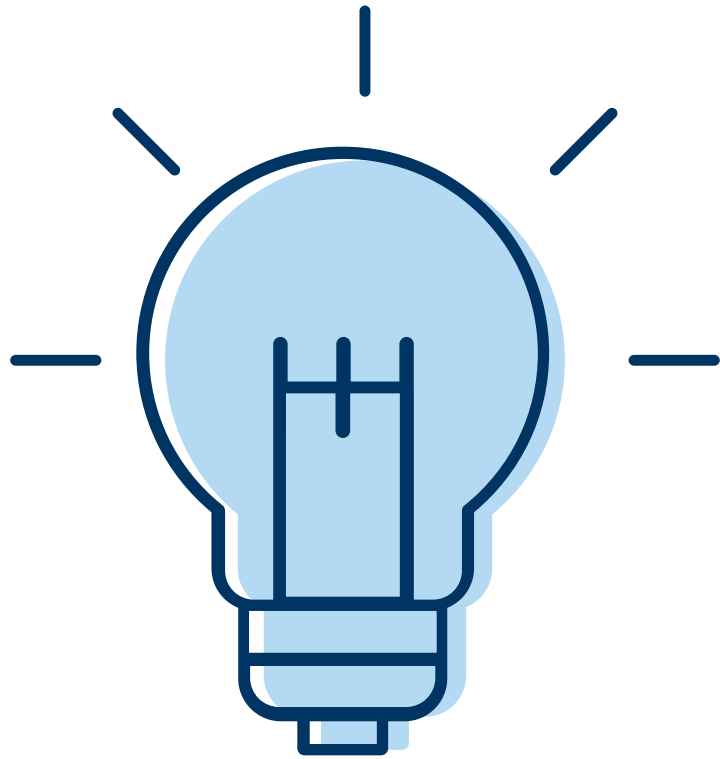
Trust Factors

- Other party vs. self-identification
- Trust Factors
 - Confirmed email address (no trust)
 - Organizational email address
 - Sign-in via organizational IdP (is the IdP trusted?)
 - Authorized lists/block lists
 - MFA/2FA – verify identity has not been stolen
 - Connections to trusted others
 - Verified activity history (e.g., ORCID)
 - Person is real, others have trusted in the past
 - Link to external verified identity – use of official documents



Next Steps



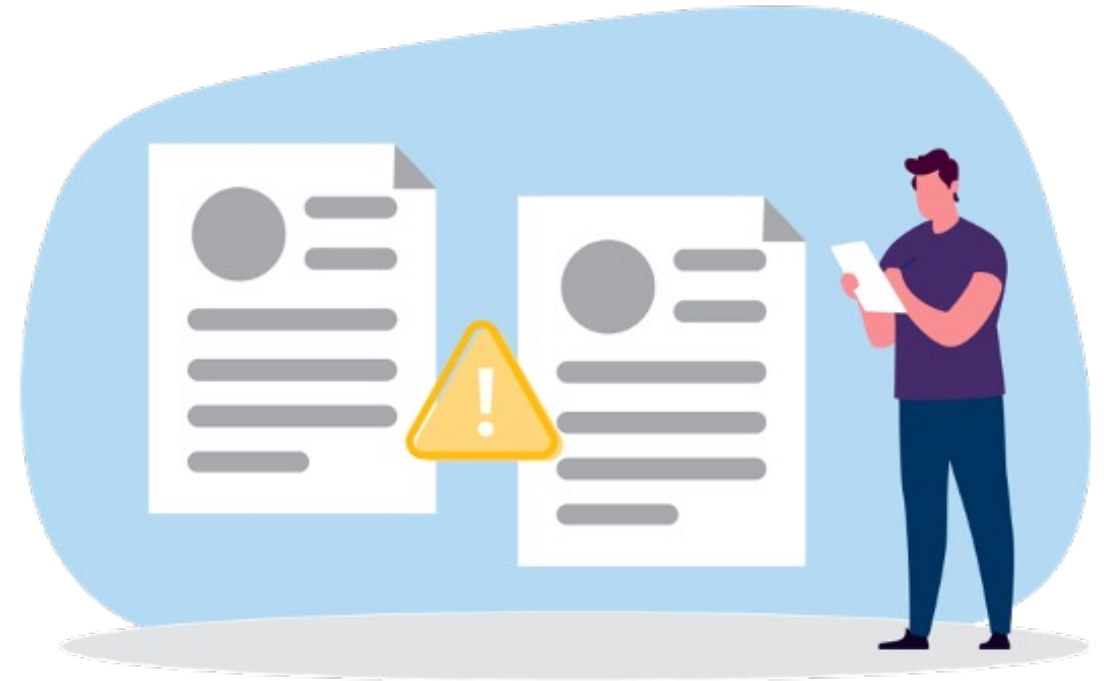


The STM Integrity Hub

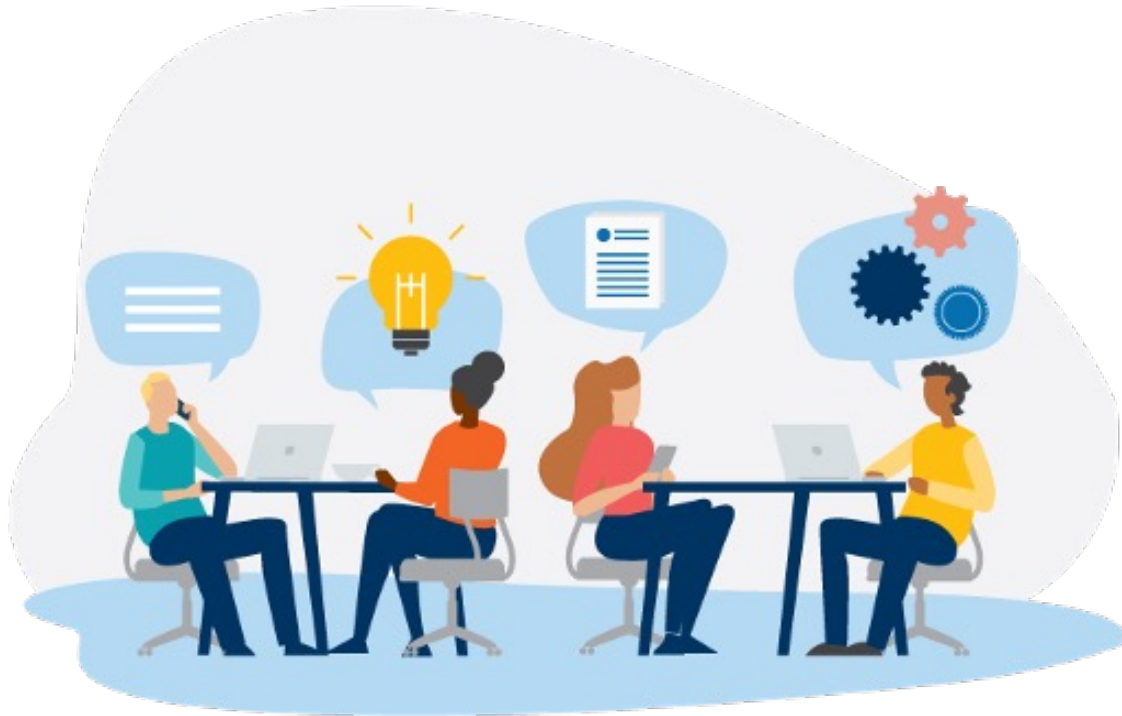
Duplicate Submission Working Group

STM Working Group formed to explore the issue of simultaneous and duplicate submissions

- Working group formed in 2021
- Initial participation from six publishers, continues to grow



Duplicate Submission Working Group



How can the publishing industry identify the size of the problem of duplicate submissions?

- Aries was invited to participate, along with Clarivate, as this requires mutual cooperation
- Sharing data on unpublished manuscripts across publishers posed legal challenges
- Desire for a trusted third party

STM's Solution: the STM Integrity Hub

What started off as a research question quickly evolved into the recognized need for a technical solution: **the STM Integrity Hub**

- Duplicate submission checker
- Paper Mill tool (third party)
- STM Solutions will build their own tools for the hub, while providing a one-stop shop for publishers to connect with other third parties with integrity tools

28 April 2022

Demonstrator is launched

13 April 2023

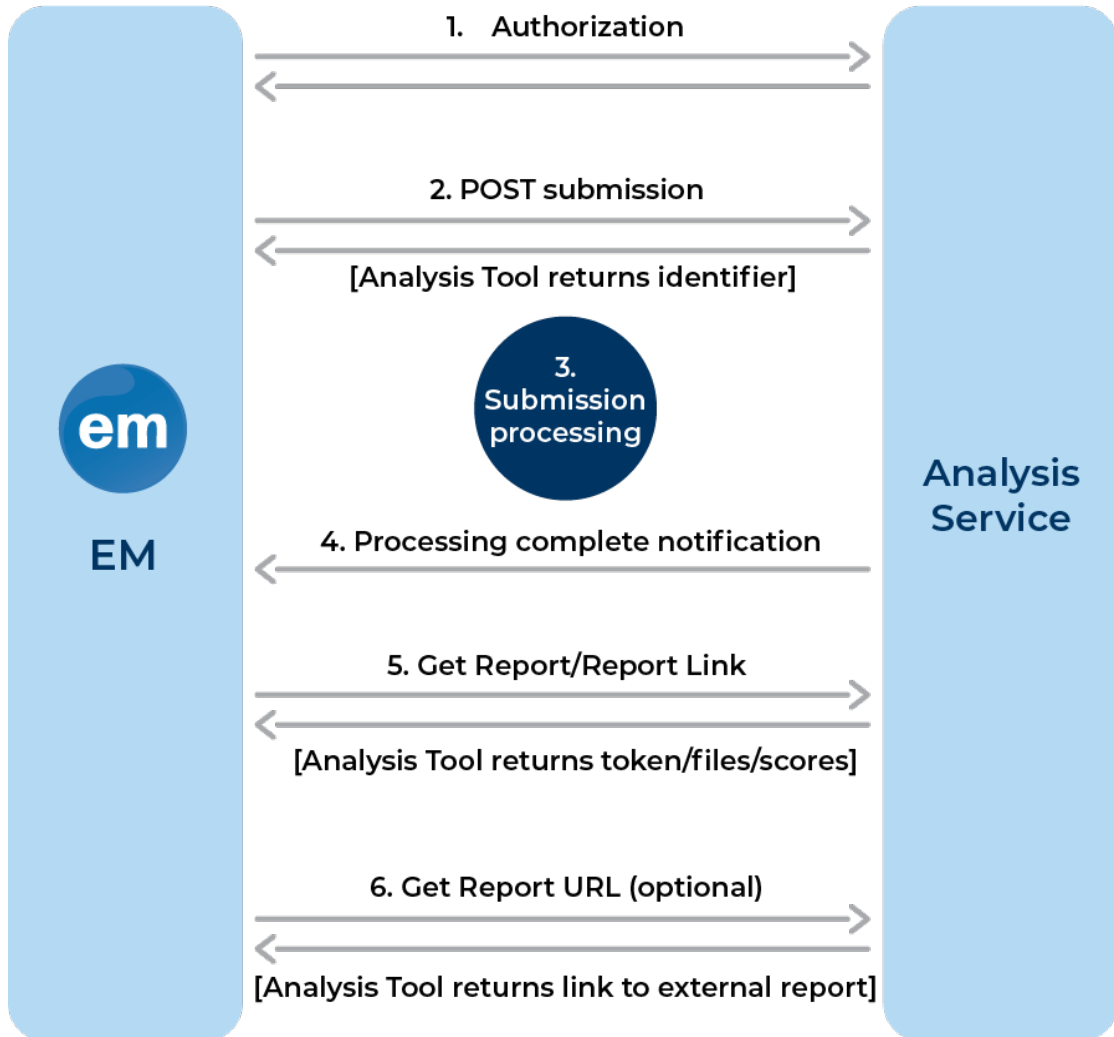
Papermill detection tool goes live

1 September 2023

First third-party integration with Clear Skies Papermill Alarm



How Does it Work?



- Publisher works with Aries' Account Coordinator to set up endpoints for the STM Integrity Hub through EM
- Publisher configures what data is sent, per the STM Integrity Hub's requirements
 - Configured in Policy Manager -> Edit Article Type and Edit Submission Item
- A manuscript is submitted by an Author, which triggers the API push to the Hub
- The Hub returns a report that shares whether a duplicate submission exists, based on their corpus of data – available as an Action Link to Editors with permissions



Configuring STM Integrity Hub in EM

Article Type:
Maximum Article Type name is 75 characters.
Warning: changing the Article Type name will apply the name change to all submissions of this type, including previously submitted manuscripts/submissions.

Family: Regular **Editor Use Only**

Hide When you **Hide** an Article Type, the Article Type will be deactivated (not available for new manuscripts).

Custom Metadata ID: [i](#)

[Select Custom Metadata ID](#)

Allow file uploads from arXiv.org server

Manuscript Analysis Services:

Send submissions with this Article Type to the following Manuscript Analysis Services at the selected events.

STM Integrity Hub:

- New Submission
- Technical Check Completion
- First Editor Assignment
- First Revision
- All Revisions
- Editor Decision - Revise



How is it Going?

Pilot program currently transitioning to production with positive reception from pilot customers

Ongoing Challenges:

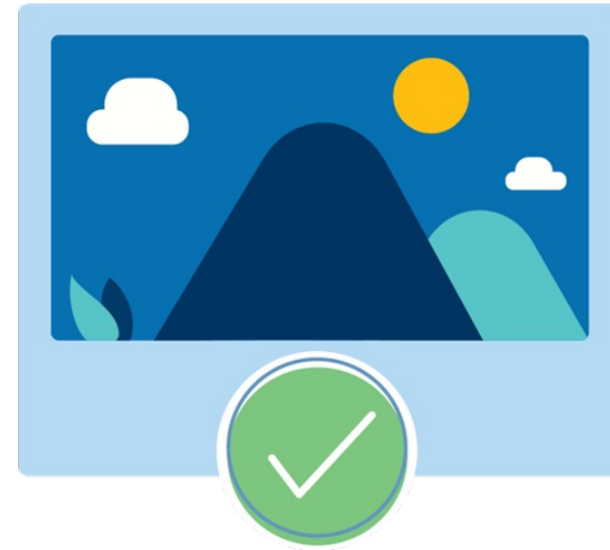
- Operational
 - Scaling difficulties due to increasing number of duplicate submissions
 - Lack of consistent guidance for handling duplicates across publishers
 - Cost to upscale ethics teams
- Legal
 - Developing a unified contract for all publishers
- Technical
 - Data usage restrictions make it difficult to build a corpus without retaining data

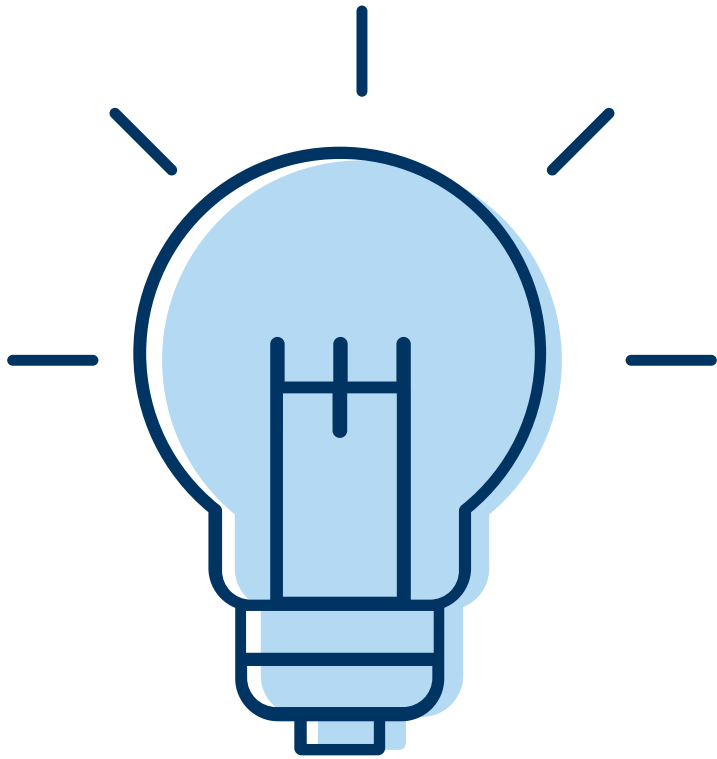


Next Steps for the Integrity Hub

Image Manipulation:

- Increasing allegations
- Role of generative AI
- Policy
- Technological solutions
- Recent webinar: Latest Trends in Image Alteration and Duplication webinar recording: <https://youtu.be/lz80K2My4uQ?si=x9pS7hY-Go4EcCsd>





Elsevier Integrity Initiatives

Specific Integrity Signals

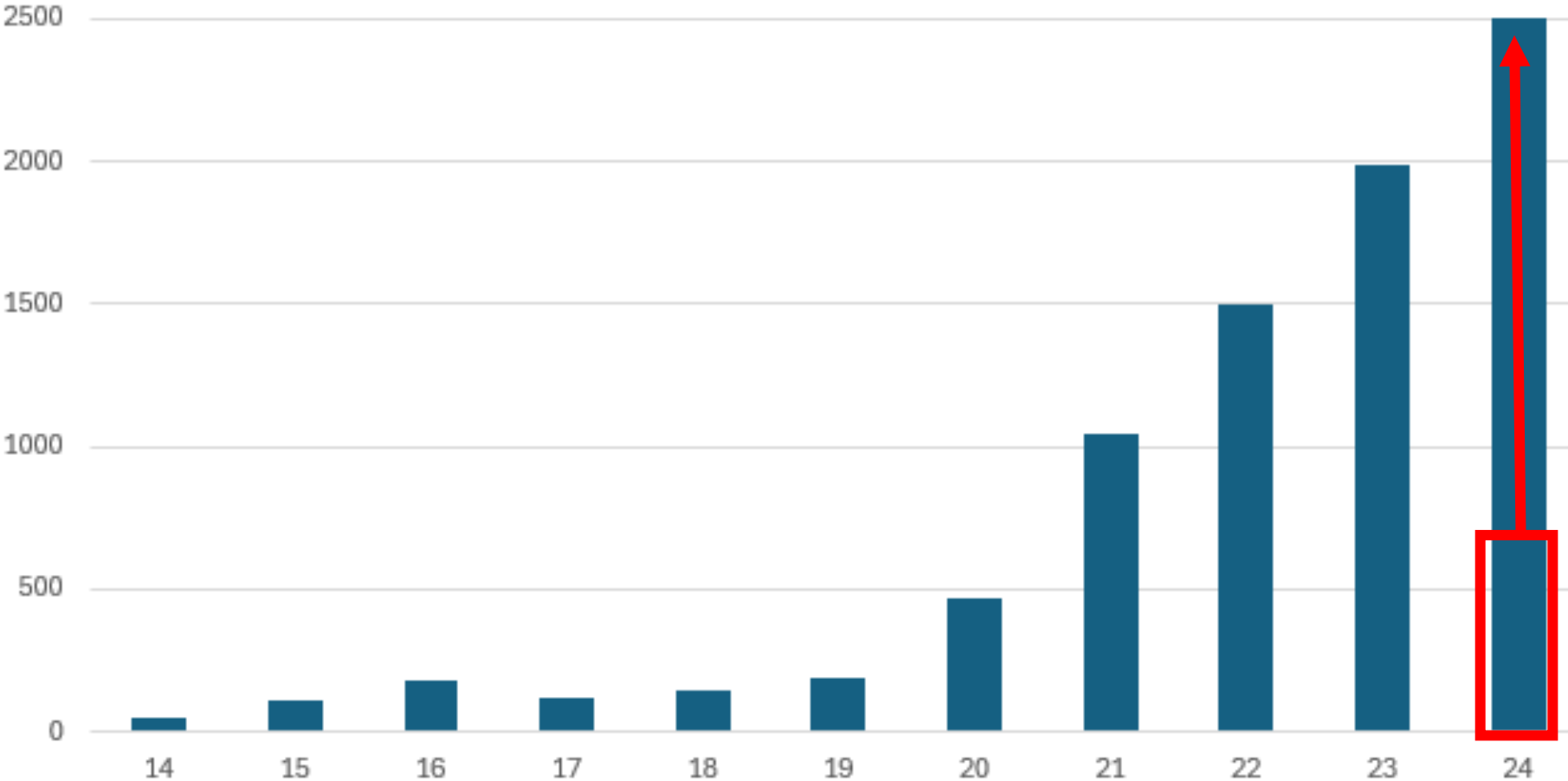


Why these Signals?

- Authorship changes
 - Pervasive use by paper mills
- Fake peer review or manipulation
 - Many kinds and types
- Citation manipulation
 - Emerging sign

Authorship as a Reason for Retraction

Authorship as a Reason for Retraction



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Source is Retraction Watch database



Authorship Changes as an Integrity Signal

- Policy is a must have
- Authorship changes should be infrequent/uncommon
 - Any changes justified to and approved by Editor
 - Changes should be checked at all revisions
 - Papers with changes of 3+ should be given very thorough review on ALL aspects of the submission
- EM mechanism to aid in identifying changes
 - Author changes feature



Authorship Changes – Signals in EM

Details for Manuscript Number: DEMOEW-2021-000001R1 "Beets in the 21st Century"

Cancel

Save

Save and Close

[Abstract](#) [Manuscript Notes](#) [Production Notes](#) [Editors](#) [Reviewers](#) [Alternate Reviewers](#) [Reviewers Proposed by Editors](#) [Additional Information](#)

Additional Manuscript Details: [Add/Edit Additional Manuscript Details](#)

Corresponding Author:  Dwight Schrute  
UNITED STATES Proxy

Corresponding Author E-Mail: trash1003@ariessys.com

Author Comments:

Other Authors:  Mose Schrute 
[Author Status](#)  Check authorship changes

Author Questionnaire Summary: [View Author Questionnaire Summary](#)



Authorship Changes - CRedit Statements

Insert Special C

Your Given/First Name* John

Middle Name


Your Family/Last Name* Doe



Academic Degree(s)

Affiliation

Your E-mail Address* jdoe@ariessys.com

ORCID 0000-0003-4787-3063 

Contributor Roles*  [Click here to select roles](#) 

Contributor Roles*   [Instructions](#)

Conceptualization

Data curation Supporting

Formal analysis

Funding acquisition

Investigation

Methodology

Project administration Lead

Resources

Software

Supervision

Validation Equal

Visualization

Writing - original draft

Writing - review & editing

Other:

CRedit Statements - Configuration

Configure Contributor Roles

Contributor Roles can be attributed to each Author of a submission. On this page, you may choose your version of the taxonomy, specify the metadata to be collected, and define the custom instructions to be displayed to users when attributing roles. Then on the *Set Other Author Parameters* page, you can specify whether to collect Contributor Roles for your publication (along with the other parameters for Authors). Then on the *Edit Article Type* page, you can specify whether Contributor Roles are Required or Optional for an Article Type.

For more information on Contributor Roles and Project CRedit, click here: <http://credit.niso.org>

Set Taxonomy Version

Select a version of the CRedit Taxonomy's Contributor Roles from the dropdown menu.

Choose Taxonomy: [View Taxonomy](#)

- Version 0
- None
- Version 0

Select Additional Metadata to be Collected

The following options allow you to specify whether to collect a Degree of Contribution for each Contributor Role assigned to an Author, and whether to display a text box to allow the Corresponding Author to enter a name or description of a role that is not in the taxonomy.

- Collect 'Degrees of Contribution'
- Display 'Other' field for free-text entry of a role name

PolicyManager > Submission Policies >
Configure Contributor Roles

All Authors Parameters

Contributor Roles:

Set Other Author Parameters

You may request additional information about Other Authors entered on the **Add/Edit/Remove Authors** manuscript submission step. Information gathered here is stored with the submission. Fields can be set as 'Hidden', 'Optional', or 'Required'. If your Publication chooses to require Other Author verification or registration for any Article Type, you may want to select E-mail or other address fields as required for all Other Authors so that you will have a means of contacting Other Authors. ([more...](#))

Other Author Parameters

Include in Merge Field?

Set "Contributor Roles" Preference:

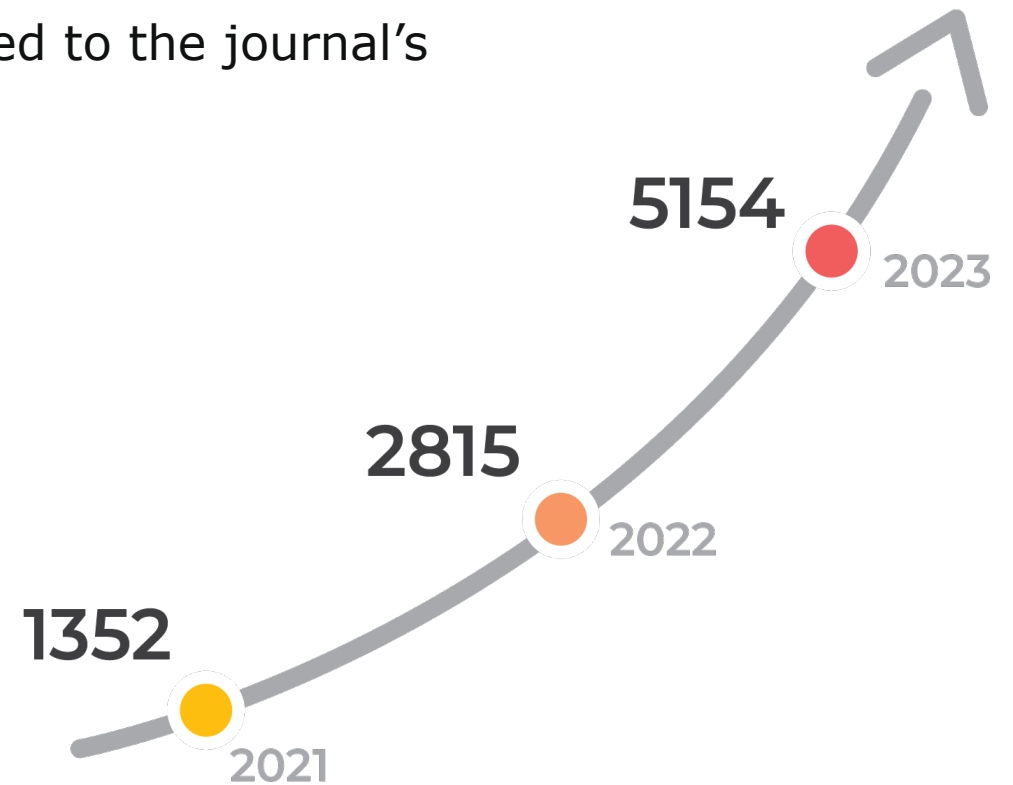
PolicyManager > Submission Policies > Set
Other Author Parameters

PolicyManager > Submission
Policies > Edit Article Types







Fake Peer Review

- What is Fake Peer Review?
 - Peer review was intentionally not performed to the journal's guidelines or ethical standards
- Signals
 - Author as reviewer
 - Speed
 - Volume
 - Length of review at R1
 - Duplication of report across journals
 - Discipline matching



Identity Confidence Check

Factor	Level of Importance 1 = lowest 5 = highest	Corresponding Author	Co-Authors	Suggested Reviewers **	
Email Domain	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Configure
Institution *	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Configure
Country or Region	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Configure
EM Activity	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Configure
ORCID Activity	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Configure

Other Author Status			
Order ▲ ▼	Author Name ▲ ▼	Added in Revision ▲ ▼	Contributor Roles
2	Dwight Schrote 	R0	Data curation (Lead)
3	Michael Scott 	R0	Formal analysis (Lead) Resources (Supporting) Writing – review & editing (Equal)
4	Jim Halpert 	R0	Software (Supporting)
5	Joffrey Baratheon 	R0	Resources (Equal)



Citation Manipulation as an Integrity Signal



Author

Excessive citations

Self-citations

Citations to retracted or
withdrawn works

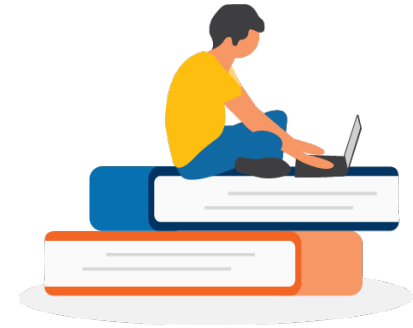
DOI and/or Title Mismatch



Reviewer

Suggesting citations to
their own works

Suggesting citations to
irrelevant works



Editor

Suggesting citations to
their own works

Suggesting citations to
their own journals

Flagging Citation Manipulation



Analyze manuscript references

Do all facial emojis communicate emotion? The impact of facial emojis on perceived sender emotion and

Valeria A. Pfelfer, Emma L. Armstrong, Vicky TzuyIn Lal

Filter [Clear All](#)

YEAR PUBLISHED

- 2014 (2)
- 2002 (1)
- 2001 (1)
- 2000 (1)
- 1993 (1)

DOCUMENT TYPE

- Article (3)
- Conference Paper (1)
- Review (1)
- Short Survey (1)

PUBLICATION

- Frontiers In Psychology (2)
- Computers In Human Behavior (1)
- International Journal of Psychophysiology (1)
- Journal of Cognitive Neuroscience (1)
- Psychological Science In the Public Interest (1)

Showing 6 of 6 References

- Short Survey • [Open Access](#)
- 1** An integrated review of emoticons in computer-mediated communication
N. Aldunate, R. Gonzalez-Ibanez
Frontiers In Psychology 9 November 2014
[View at Publisher](#)
 - 2** A Systematic Review of Emoji: Current Research and Future Perspectives
Q. Bai, Q. Dan, Z. Mu, M. Yang
Frontiers In Psychology 1 December 2002
[View at Publisher](#)
 - 3** Emotional Expressions Reconsidered: Challenges to Inferring Emotion From
L.F. Barrett, R. Adolphs, S. Marsella, A.M. Martinez, S.D. Pollak
Psychological Science In the Public Interest April 2001

Filter [Clear All](#)

YEAR PUBLISHED

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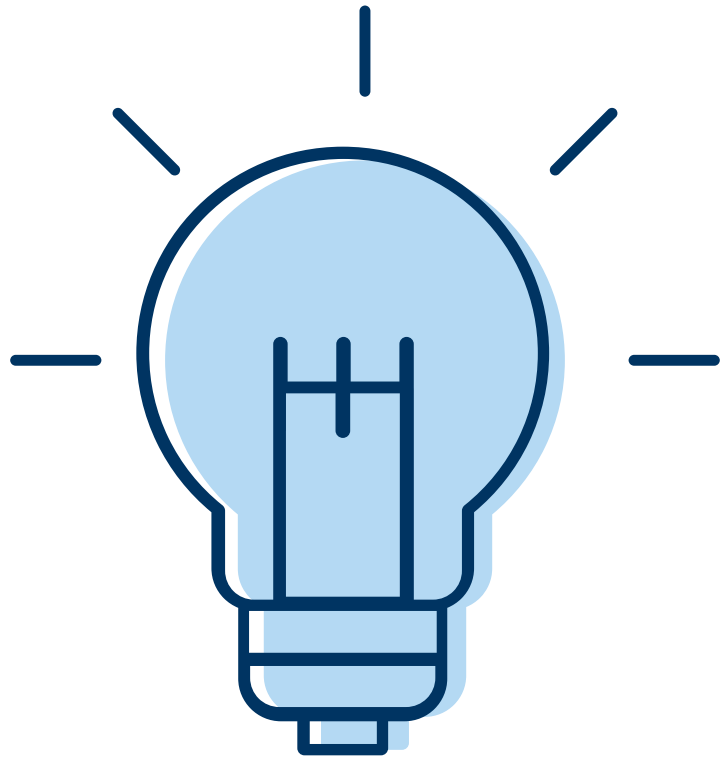
AUTHORS

- S.D. Pollak (2)
- A. Schaccht (1)
- A.M. Martinez (1)
- C. Brown (1)
- C.A. Collin (1)

[See more](#)

RELATIONSHIP

- Independent (5)
- Self-cite (1)

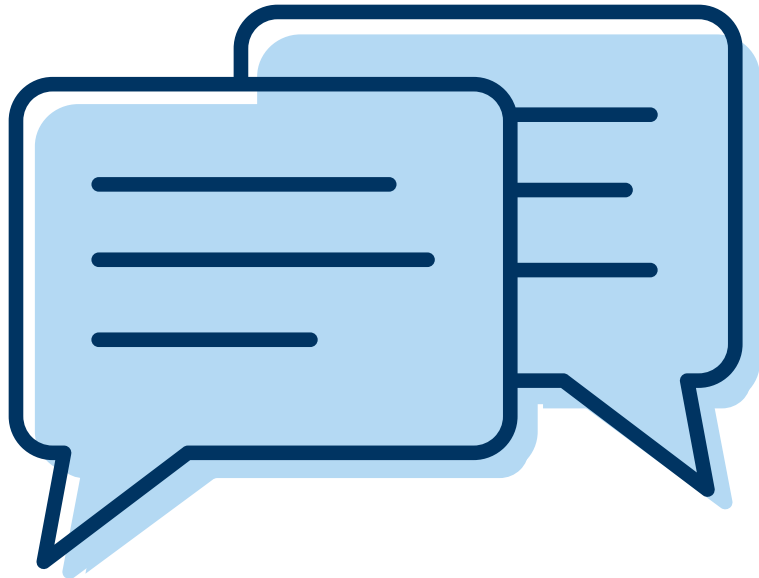


Aries Ecosystem

Additional Integrated Solutions

- Many in-house and third-party technologies supporting research integrity available in the Aries ecosystem!
- "Plug and play" add-on tools and services directly within workflow
- Visit Aries website to explore available integrity and transparency features
 - <https://www.ariessys.com/solutions/>





Questions?

Thank you!

Stay Connected

Elysia Williams

Sr. Account Manager

EWilliams@ariessys.com

Kevin Lawson

Product Manager

KLawson@ariessys.com

Darci Dubreuil, Esq.

Principal Product Manager

d.dubreuil@elsevier.com

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