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EMUG 2024

Revere Hotel Boston Common

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EMUG 2024

Trust, Transparency, and Integrity

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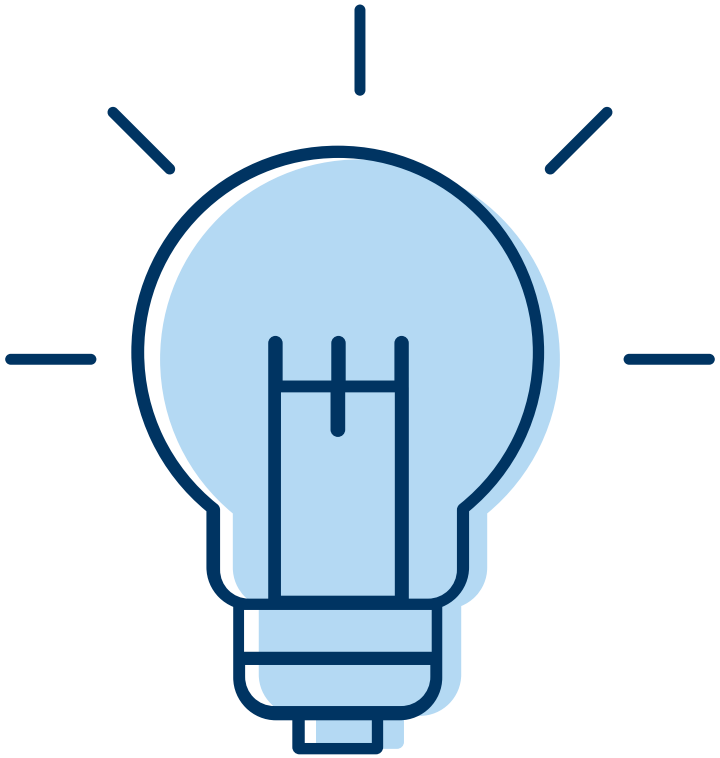
Agenda

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

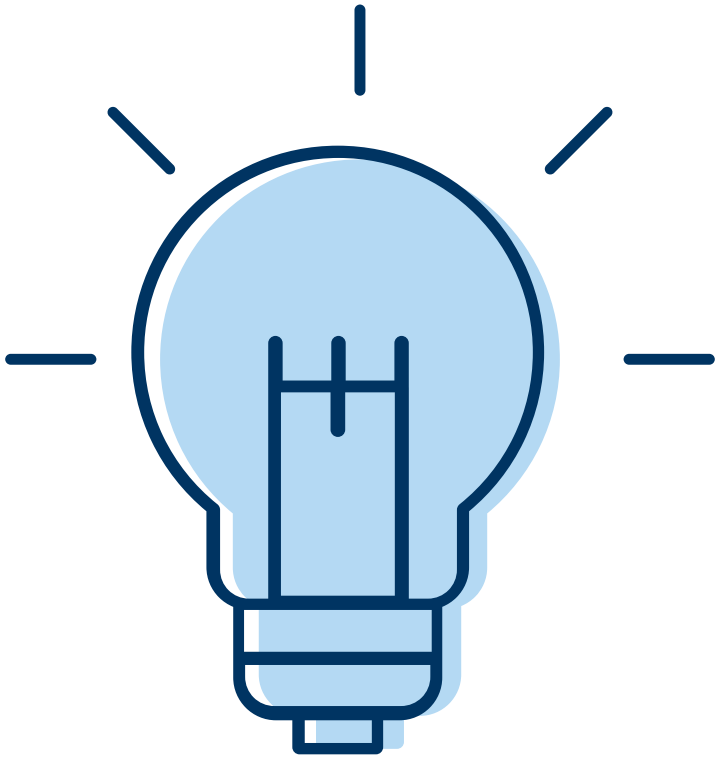
Why Trust, Transparency and Integrity?

- **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



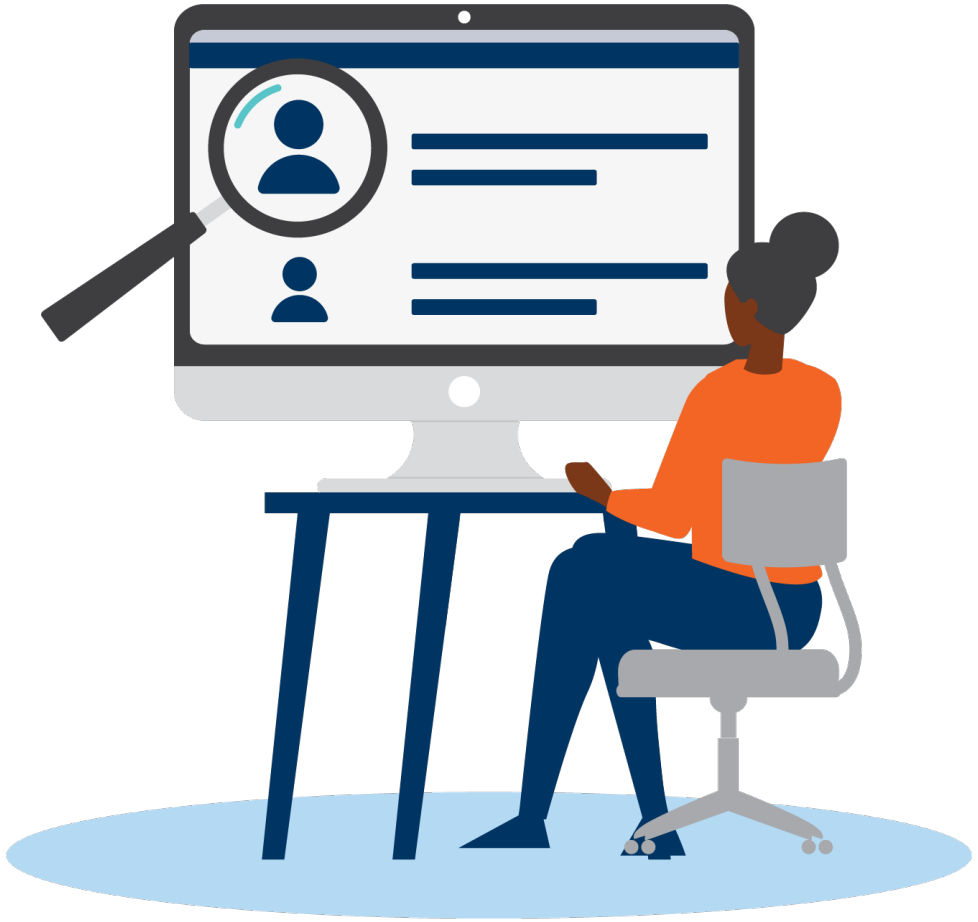
Researcher Identity Working Group

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**

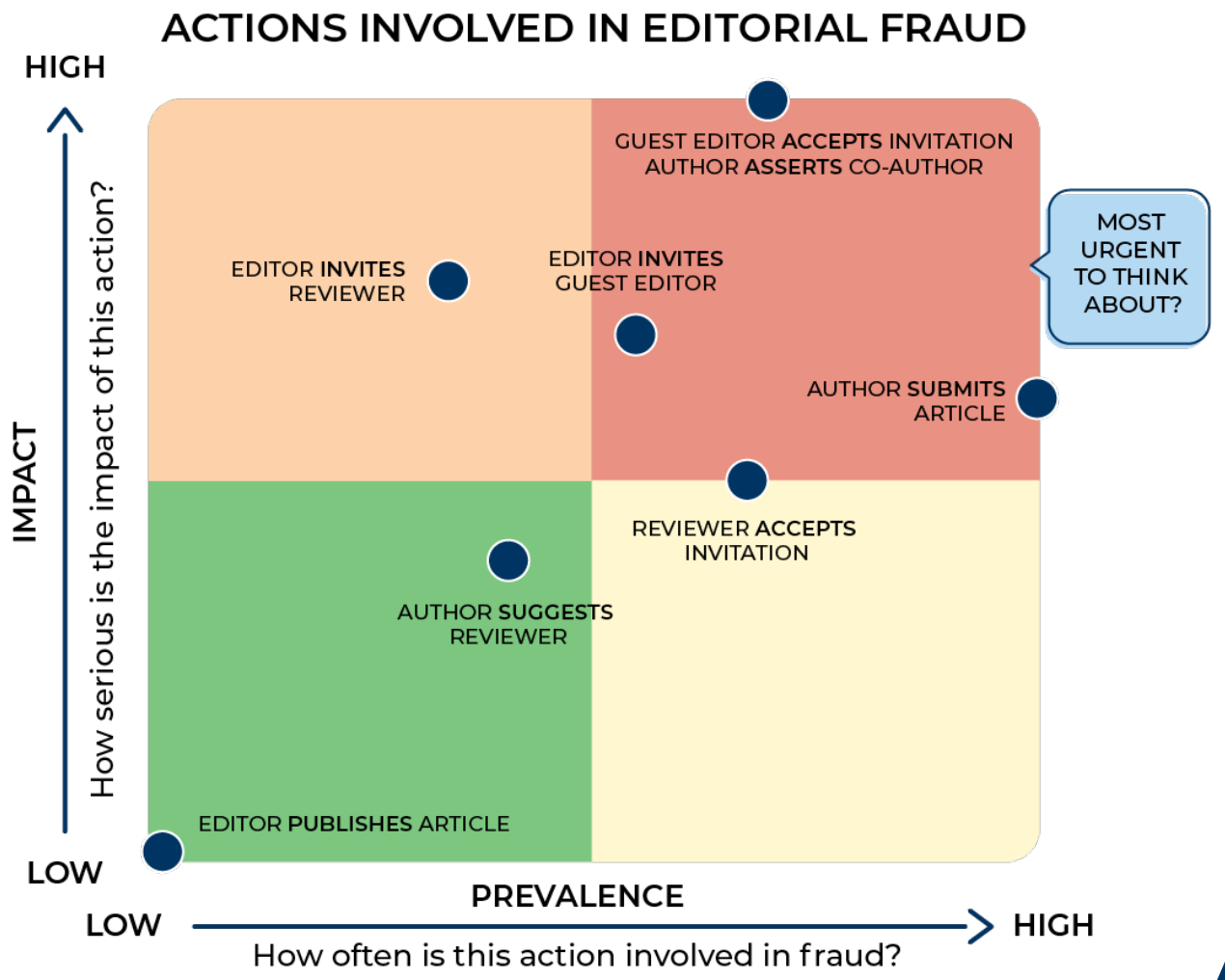
As a "papermill" owner

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



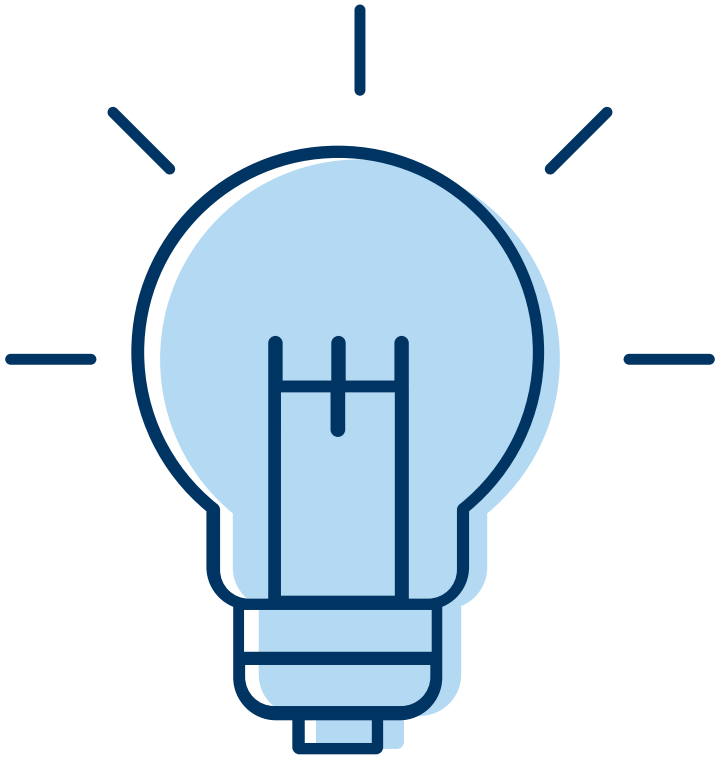
User Perspective

- 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

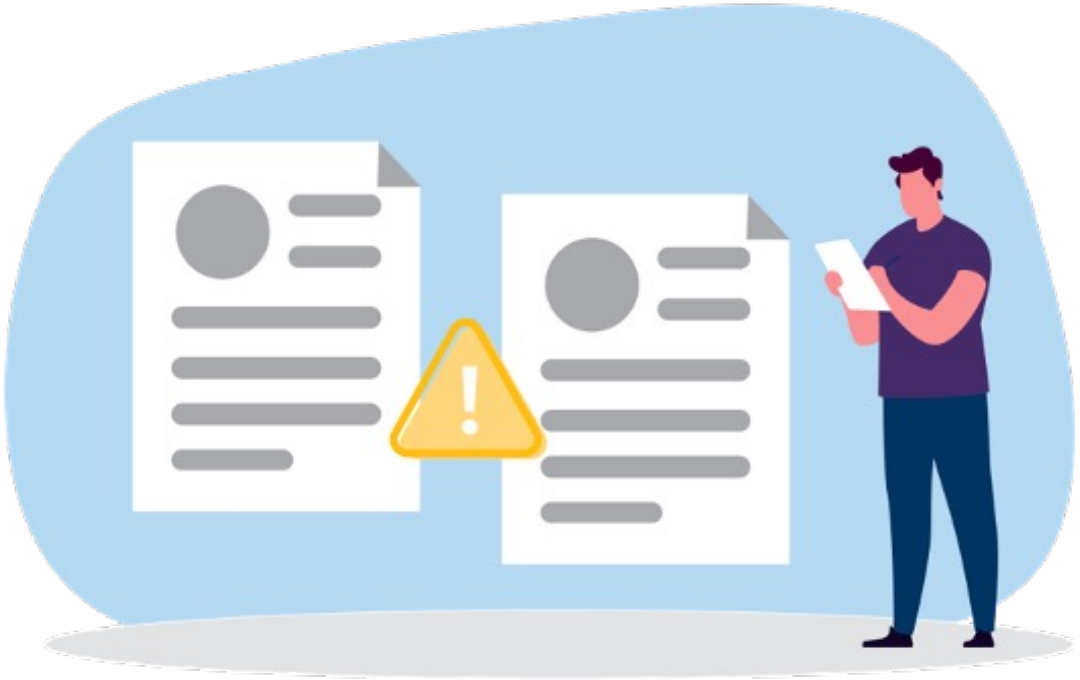


The STM Integrity Hub

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

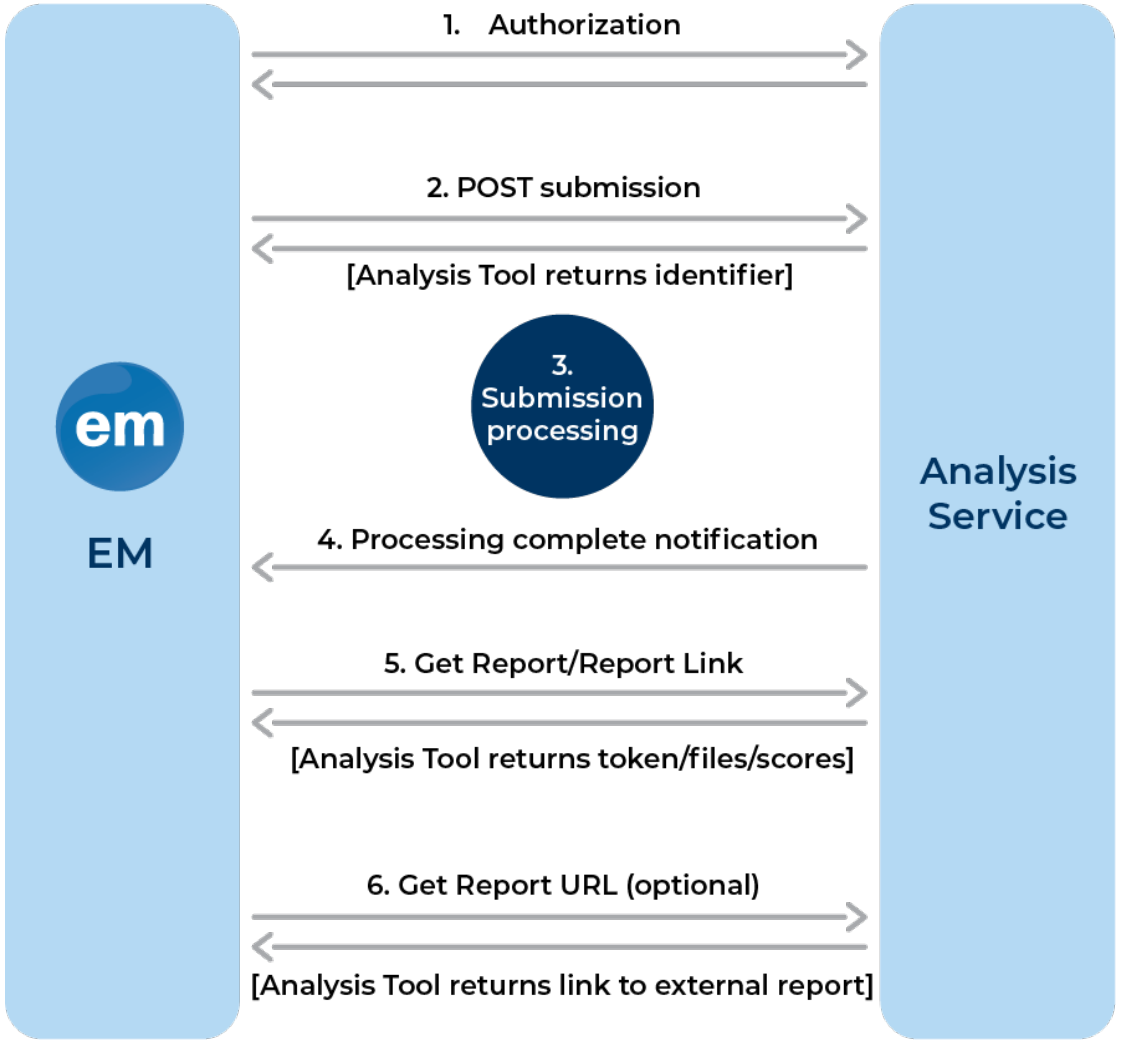
13 April 2023

Papermill detection tool goes live

1 September 2023

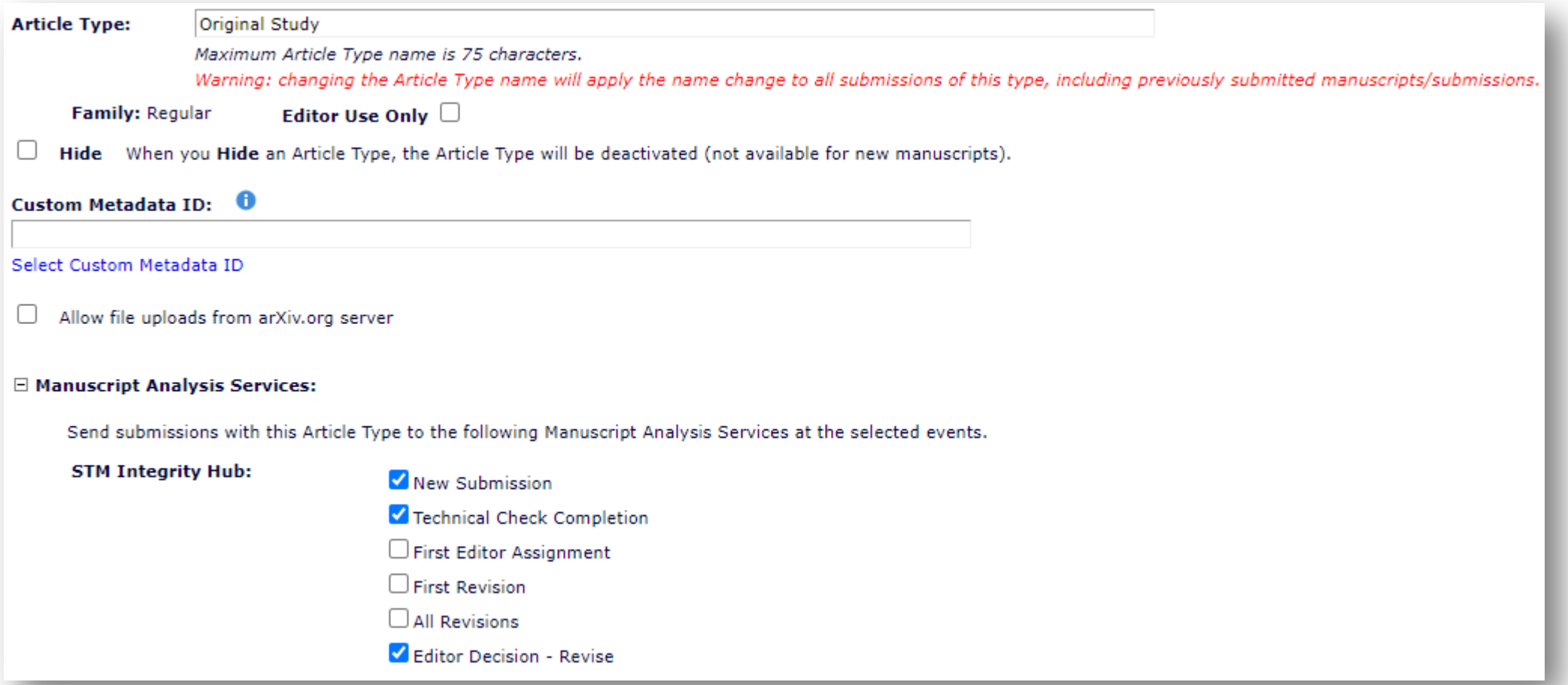
First third-party integration with Clear Skies Papermill Alarm

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



How is it Going?

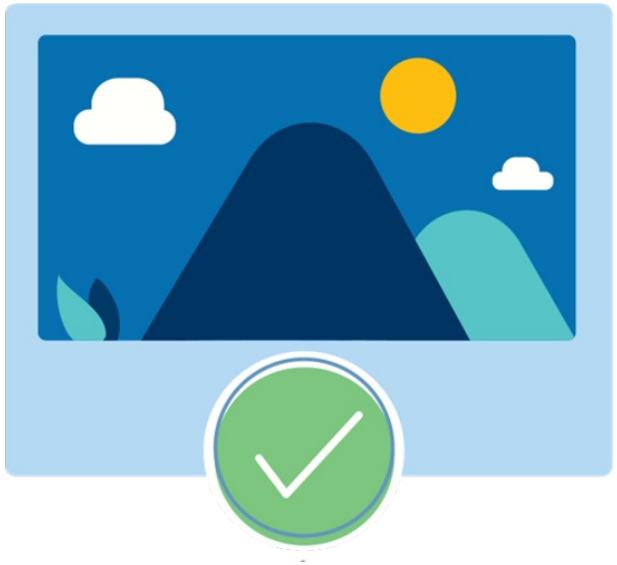
Pilot program currently transitioning to production with positive reception from pilot customers

Ongoing Challenges:

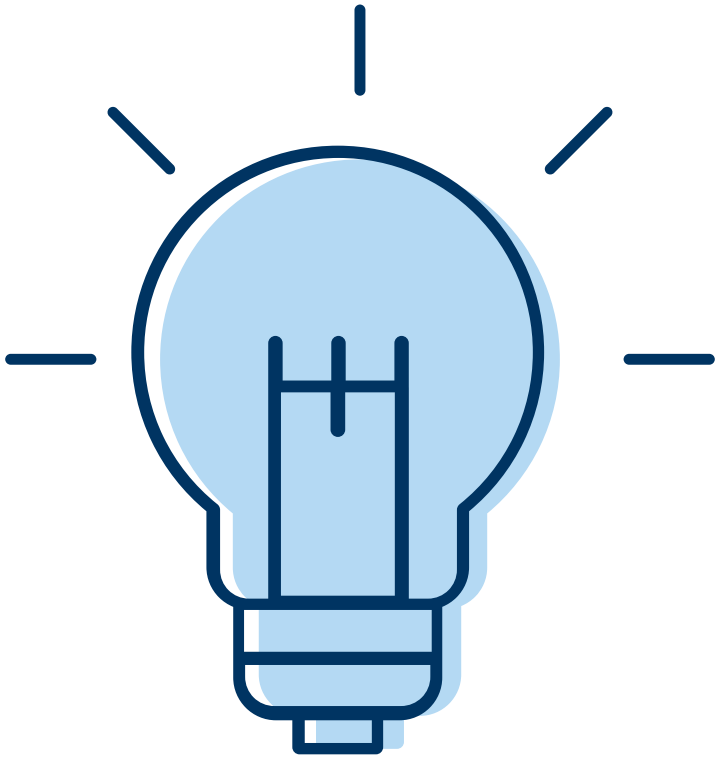
- Operational
  - Scaling difficulties due to increasing number of duplicate submissions
  - Lack of consistent guidance for handling duplicates across publishers
  - Cost to upscale ethics teams
- Legal
  - Developing a unified contract for all publishers
- Technical
  - Data usage restrictions make 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



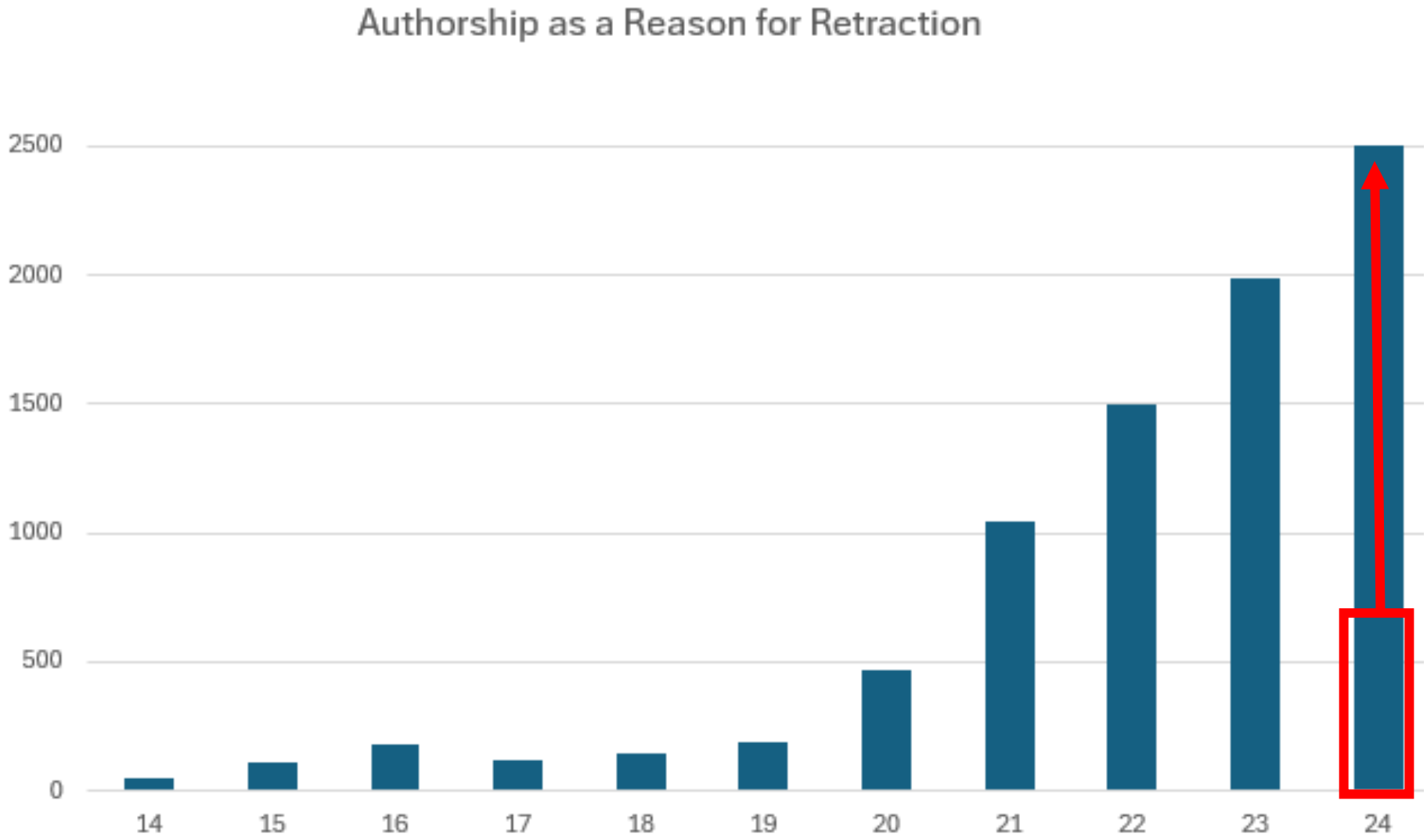
Elsevier Integrity Initiatives

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



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

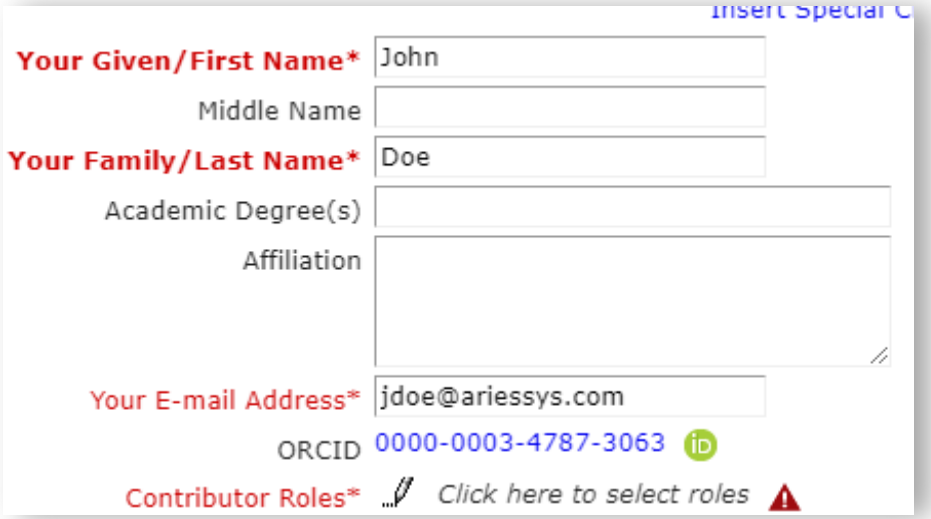
Details for Manuscript Number: DEMOEW-2021-000001R1 "Beets in the 21st Century"

Cancel | Save | Save and Close

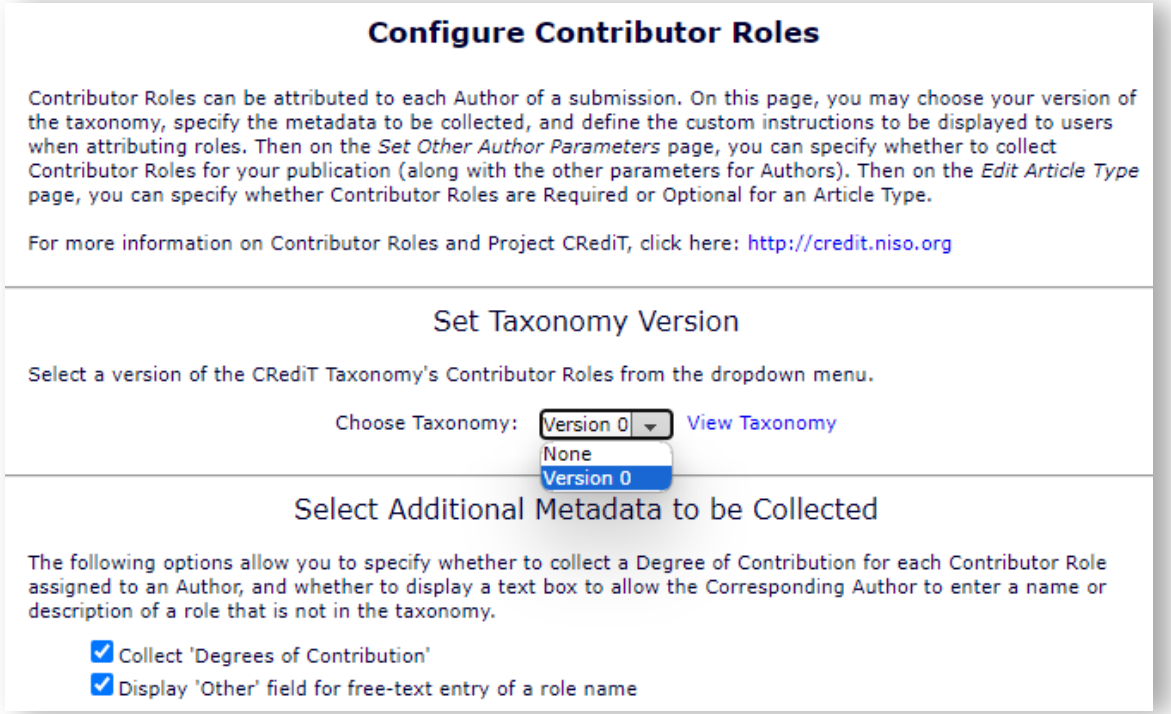
Abstract | Manuscript Notes | Production Notes | Editors | Reviewers | Alternate Reviewers | Reviewers Proposed by Editors | Additional Information

Additional Manuscript Details:	Add/Edit Additional Manuscript Details
Corresponding Author:	Dwight Schrute M 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

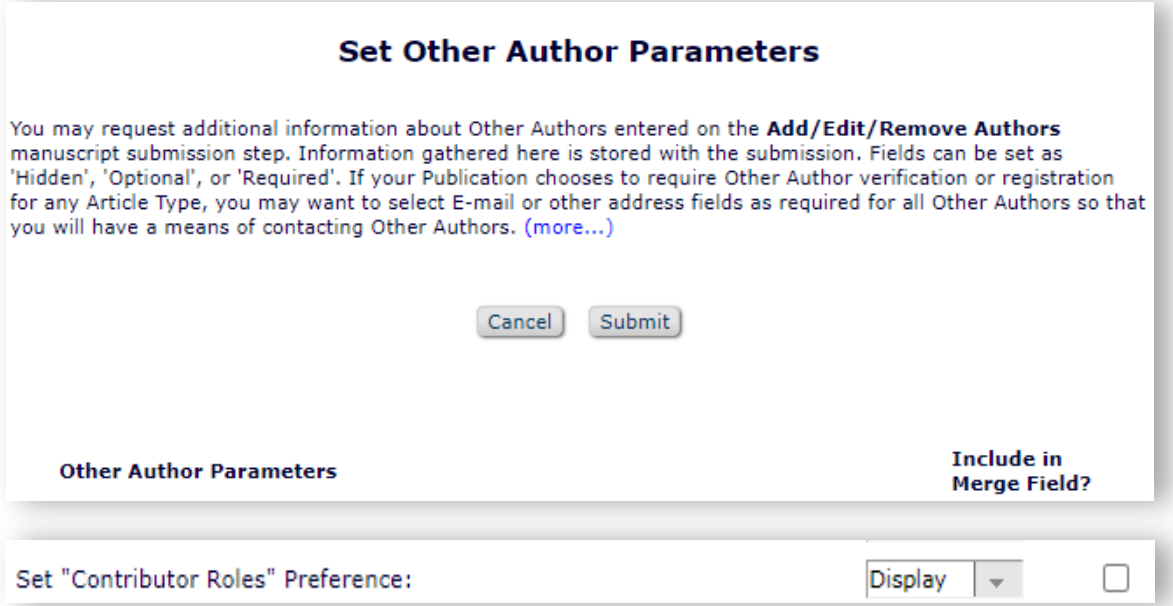
Authorship Changes - CRediT Statements



CRediT Statements - Configuration



PolicyManager > Submission Policies > Configure Contributor Roles

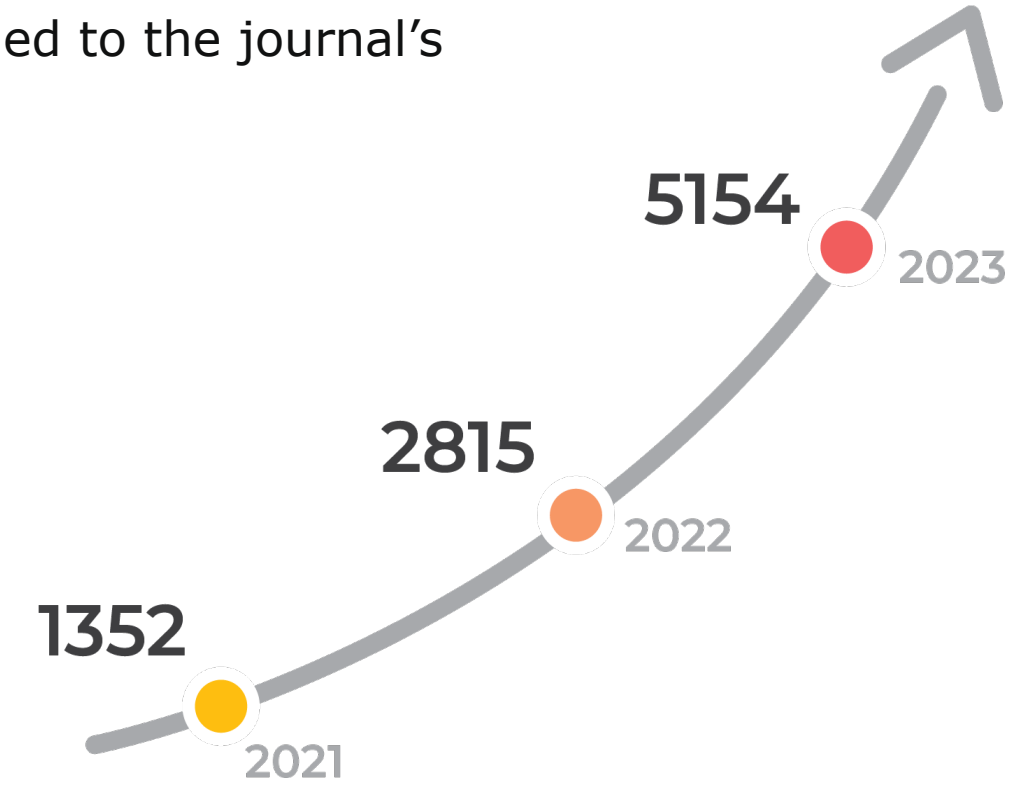


PolicyManager > Submission Policies > Set Other Author Parameters

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	☑	☑	☑	Configure
Institution *	3	☑	☑	☐	Configure
Country or Region	2	☑	☑	☐	Configure
EM Activity	5	☑	☑	☑	Configure
ORCID Activity	1	☑	☑	☐	Configure

Other Author Status

Order	Author Name	Added in Revision	Contributor Roles
2	Dwight Schrute	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

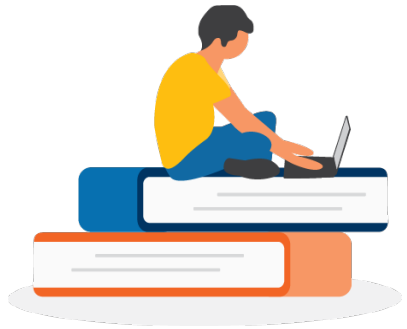
Citations to retracted or withdrawn works

DOI and/or Title Mismatch

Reviewer

Suggesting citations to their own works

Suggesting citations to irrelevant works

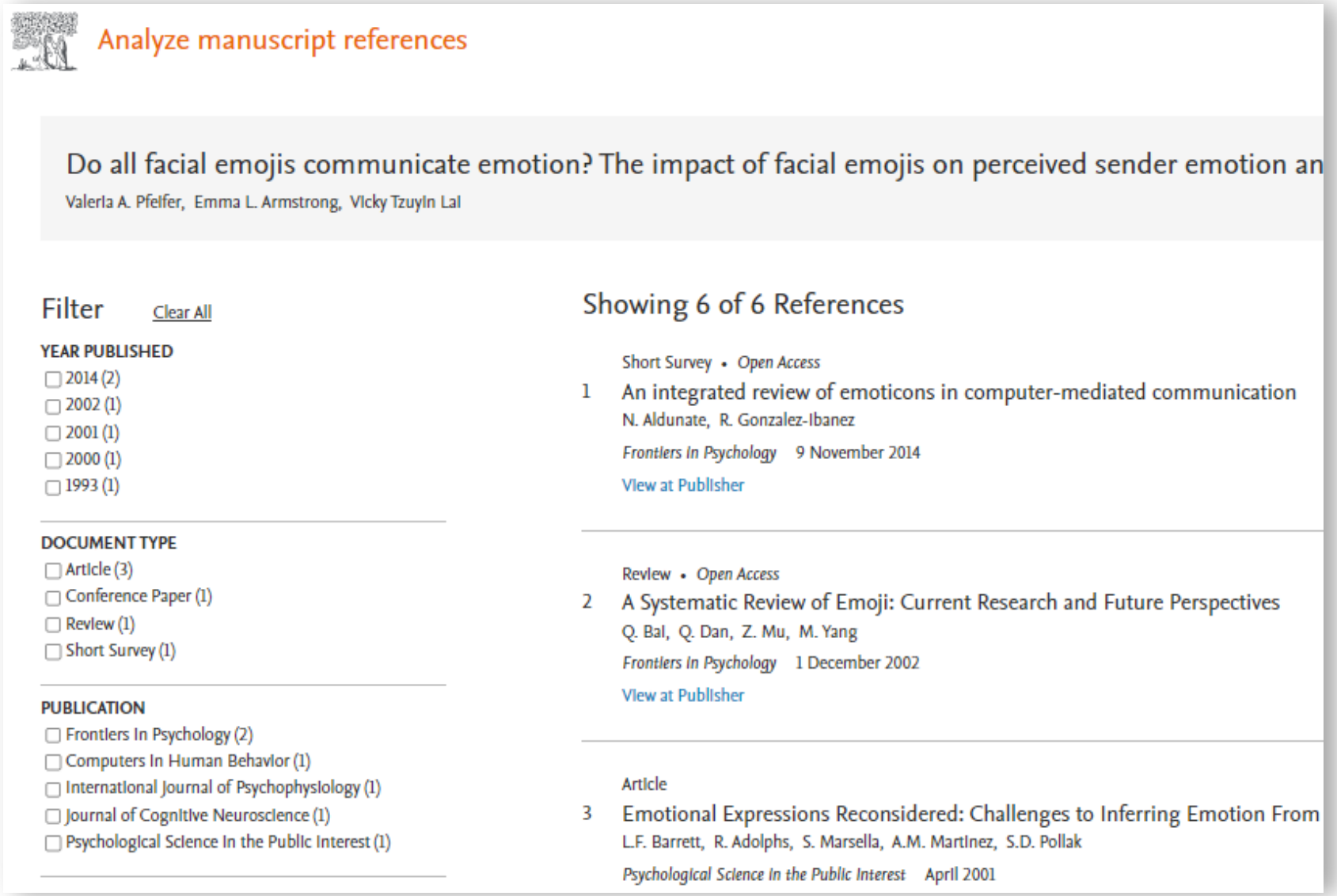


Editor

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 an

Valeria A. Pfeifer, Emma L. Armstrong, Vicky Tzuyin Lai

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

Review • *Open Access*

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

Article

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

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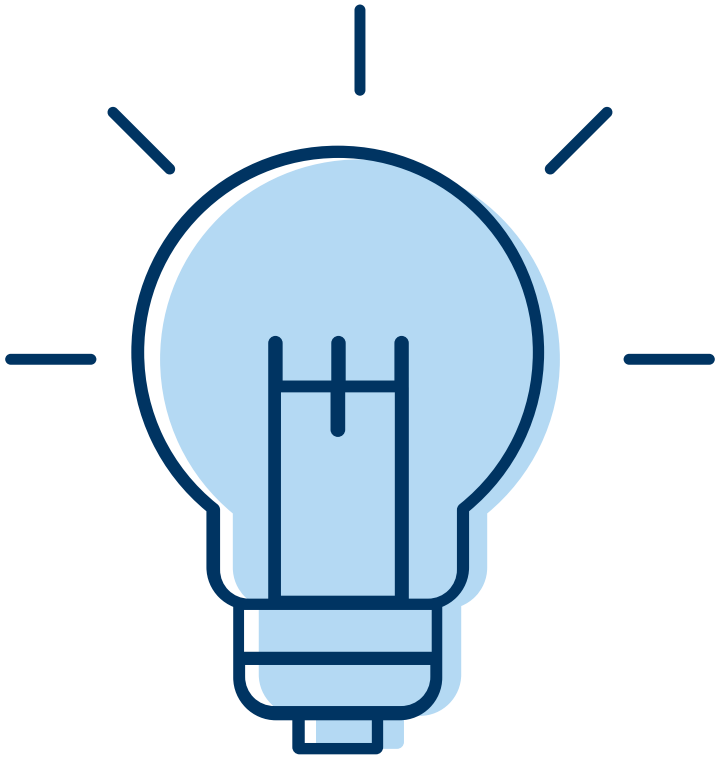
- Psychological Science in the Public Interest (1)

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

See more

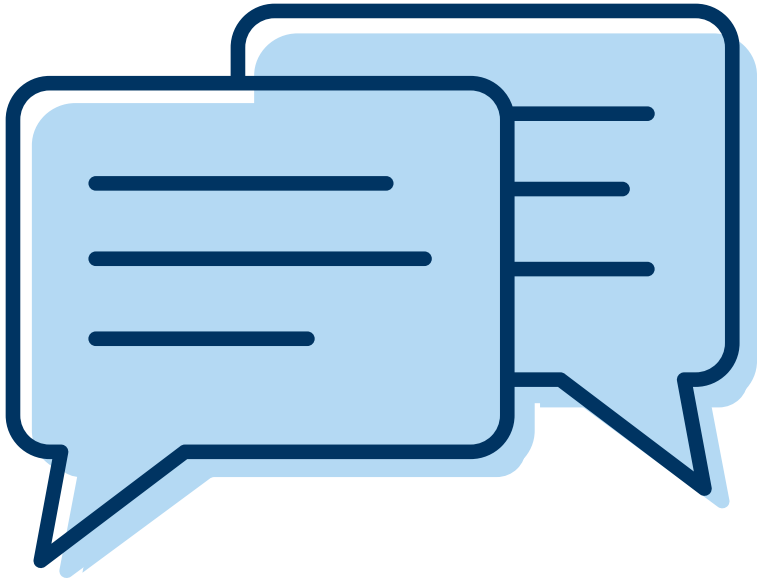
RELATIONSHIP
- Independent (5)
- Self-cite (1)



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

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