Rubin LSST Informatics and Statistics Science Collaboration Publication Policy

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LSST - ISSC Publication Policy

Version 1.0, ratified May 7, 2025, Authored by The Publication Committee (Chair: Hermine Landt, Members: Mariano Dominguez, Alex Malz, Josh Speagle) in July 2024

Purpose

This document describes the Publication Policy of the Informatics and Statistics Science Collaboration (ISSC, also referred to here as "the Collaboration") within the Rubin Observatory/Legacy Survey of Space and Time (LSST). The Publication Procedure is described in a separate document.

The primary objectives of this policy are to:

1. Define, organise and coordinate the publication rules and processes within the ISSC;
2. Promote and support the production of scientific and technical scholarly works by the ISSC to benefit the larger LSST community;
3. Recognize the contributions of the individuals leading and enabling ISSC publications regardless of their profession, career type and stage, or background;
4. Ensure the quality and correctness of ISSC publications;
5. Ensure efficiency and timeliness in submitting results for publication.

This policy is a living document that ISSC members of the Publication Committee (PubCom) will amend and revise before, during, and after LSST's ten-year survey. As described in the ISSC Charter, reading and agreeing to the ISSC Publication Policy is a condition for membership. All members should review it regularly, and the Publication Policy should be reviewed by all those applying for membership before submitting their application.

ISSC publications represent the Collaboration as a whole with the ISSC as an author. This implicit endorsement thus reflects the approval of the Collaboration overall.

Scope

The policy set out in this document will apply to all types of published scholarly works produced by one or more ISSC members on topics discussed and developed within the LSST research environment.

We define the following general classes of publications that will be subject to varying degrees to the ISSC internal review process described in short in Section 5 and in detail in a separate document. The PubCom will assign the class of submission upon receipt.

1. **Mandatory**: This class comprises all publication classes listed in the following and that have **more than 60% of their content** within the ISSC remit as defined by the ISSC Charter:

    a. *Papers*, including but not limited to peer-reviewed academic journal articles, non-peer-reviewed white papers and Research Notes (i.e. anything that could end up on arXiv).

    b. *Peer-reviewed conference contributions*, including but not limited to proceedings or special papers (which are common in machine learning conferences).

    c. *Scholarly materials uploaded to official LSST web resources (i.e. the ISSC blog/website)_*, including but not limited to best-practices documents,paedagogical posts, and tutorial videos.

All publications assigned to this category must complete the ISSC internal review process.

2. **Encouraged**: This class comprises all publication classes listed in the category "1. Mandatory" but with **less than 60% of their content** within the ISSC remit as defined by the ISSC Charter. In addition, the following publication classes fall within this category if significant content is within the ISSC remit:

    a. *Significant scientific reports*, including but not limited to dissertations, theses, and projects (i.e. anything that could still end up in searchable databases).

    b. *Significant data/software-related deliverables*, including but not limited to released/versioned software tools, data releases, and documentation relating to Vera C. Rubin Observatory data products and software.

All publications assigned to this category should complete the ISSC internal review process.

3. **Optional**: This class comprises all publications that do not fall in either category "1. Mandatory" or "2. Encouraged". Examples include:

    a. *Other forms of publicly accessible scholarly materials on third-party sources*, including but not limited to best-practices documents, blog posts, and tutorial videos.

    b. *Non-peer-reviewed conference contributions*, including oral and poster presentations.

The publications assigned to this category do not need to undergo the ISSC internal review process but this possibility is offered as a service. Upon completion, the authors have to include acknowledgement of this process in the final version of their published materials.

The ISSC Publication Committee and its responsibilities

The ISSC Publication Committee (PubCom) is responsible for implementing and overseeing the implementation of the ISSC Publication Policy. This responsibility includes arbitrating and resolving disputes arising from the internal review process described in Section 5. As established in the ISSC Charter, the PubCom should at any time have at least two members, including the committee chair, and report directly to the ISSC Executive Council (ExCon). PubCom members will act as "Paper Handler" and

thus share responsibility for shepherding publications through the internal review process. In order to ensure that the workload is distributed fairly, the PubCom Chair can seek approval from the ExCon to increase the number of PubCom members.

ISSC publications are a concern to all ISSC members, and, therefore, will undergo an "Open" internal review process during which all can comment within a specified time limit. If a publication has not generated sufficient interest and less than three ISSC members have reviewed it, the PubCom reserves the right to draw on ISSC members as additional expert reviewers. The nomination of a particular expert reviewer within the ISSC will be provided also as an option to the authors during the submission process.

The PubCom is intended to be a useful resource for all ISSC members. Authors are encouraged to contact them for advice before preparing materials for publication in order to later ensure conformity with the Publication Policy outlined in this document. The PubCom will maintain records of all communications.

Authorship, the ISSC contribution and collaborations outside the ISSC

The author list of all ISSC publications in the categories "1. Mandatory" or "2. Encouraged" as described in Section 2 are required to include "and the LSST Informatics and Statistics Scientific Collaboration (ISSC)" after the named author list in order to identify that the publication has been produced and reviewed by the ISSC.

Authorship privileges must be extended to all contributors to a publication. It is the responsibility of the author contacts (see Section 5) to ensure that all contributors are invited to join the author list. The authorship and citation policy for the ISSC follows common ethical practices as outlined, e.g. by the American Astronomical Society (AAS) and the American Physical Society (APS) in their AAS Publication and Authorship Practices. The phrase "significant contribution" refers to one without which an analysis would be incomplete or inaccurate or one that improved the quality of the resulting paper. This may include volunteer reviewers who contributed during the review process. The author list and contribution statements may thus be modified at any time before publication. Potential contributing authors should be engaged in the review of the content of the publication as early in the production of the paper as is practical. All co-authors must have reviewed and accepted the manuscript before its submission to the PubCom for the ISSC internal review process.

No one should be listed as a co-author on an ISSC publication without their explicit consent. This means that authorship of ISSC publications is an opt-in, not an opt-out, process. All co-authors are responsible for determining the co-author list and the order in which authors appear in the publication.

In the rare event that current and/or potential authors of a publication are unable to agree upon the scope of "significant contributions", the PubCom can be solicited to provide feedback and recommend

courses of action in order to facilitate resolution of the disagreement. If no resolution can be achieved, the PubCom will follow the procedure discussed in Section 5.

Most, if not all, work conducted within the ISSC is anticipated to be performed in collaboration with other Rubin Science Collaborations (SCs). Publications resulting from such work must comply with the policies of both the ISSC and the other collaboration(s). While other SCs often require inter-collaboration agreements (ICAs) that authors should be aware of prior to commencing work on an ISSC publication, the ISSC does not require an ICA. All efforts will be made to synchronize collaboration-wide review periods where applicable.

ISSC publications should be regarded as non-exclusive; contributors to a publication must be offered authorship regardless of their ISSC membership status or data rights (see below). The last affiliations on the affiliation list will be used to indicate membership in the ISSC, membership in other LSST SCs, or non-Rubin ("external") collaborator status. Potential authors who are not members of any LSST SCs must go through an approval process for external collaborator (EC) status, which should be initiated when the project is initiated. The process will be defined in coordination with the Membership and Ethics Committees of the ISSC.

Author lists may include individuals who do not have LSST data rights. In accordance with the Vera C. Rubin Observatory's Data Policy, contributors to ISSC publications who do not have LSST data rights must not be given direct access to LSST data during the course of their work on the publication. However, they can make contributions to analysis software and the publication text, and be rewarded with authorship as defined above. This may include, but is not limited to, individuals who contributedtheoretical, computational, or simulation results, executed related analyses of non- LSST data, and/or developed or implemented statistical methods for use with LSST data.

External authors are permitted to be the lead author of an ISSC publication, although this is expected to be the exception rather than the norm.

The ISSC Internal Review Process

Publications subject to the ISSC review process (as defined in Section 2) must complete the internal review, which is detailed below. Authors of class 1. Mandatory publications may not submit this work to be considered by a publisher until the process has been marked as successfully concluded by the PubCom. Authors of class "2. Encouraged" and class "3. Optional" publications may not submit their work to be considered by a publisher or self-publish with the ISSC as an author or acknowledging the ISSC review process until the process has been marked as successfully concluded by the PubCom.

All submissions must have at least one and up to three nominated "author contacts" at all times between the initiation of the project and the conclusion of the review. The author contact(s) must

include at least one ISSC member and may include authors who are not ISSC members. The author contact(s) can change during the review process.

The full internal review process involves the following steps. The description of the software infrastructure to support this process and the detailed procedure for submission and review is described in a separate document.

1. The publication is registered by the authors on the Review Portal and is assigned a class. The class will determine the estimated timeline for review, which will be in one of three streams:

   a. **Accelerated**: A 1-week long First Review with at least 3 days for each stage of follow-up review. Suitable for shorter publications that require a rapid turnaround (e.g., conference proceedings).
   b. **Standard**: A 2-week long First Review with at least 1 week for each stage of follow-up review. Suitable for most academic publications (e.g., peer-reviewed academic journal articles).
   c. **Extended**: A 3-week long First Review with at least 1 week for each stage of follow-up review. Suitable for longer publications that do not require a fast turnaround (e.g., dissertations).

2. The chair of PubCom assigns a "Paper Handler" (from the PubCom members).

3. The Paper Handler checks for procedural compliance of the submission, adjusts the stream/category selected by the authors, if needed, opens the ISSC-public review process of which all ISSC members are notified and contacts specific expert reviewers if they were requested by the authors.

4. Volunteer Reviewers (i.e. all ISSC Members) can post comments. All comments will include an "upvote" feature, with more upvoted comments being treated as more important to resolve following the initial review. Comments will be labelled as one of the following two categories:

   a. A comment should be classified as a **"suggestion"** if the feedback would improve the quality of a publication but does not affect the core results.
   b. A comment should be classified as a **"request"** if it is seen as a requirement for ensuring the publication's validity.

5. After the initial review period has passed, the Paper Handler closes the First Review.

6. Authors respond to all comments, offer co-authorship to any reviewers whose feedback has significantly improved the publication (see Section 4), and upload a revised version to the Review Portal.

7. The Paper Handler checks that the authors have satisfactorily responded to the review by taking into account that:

   a. comments, whether they are "suggestions" or "requests," need not necessarily result in revisions to the publication, so long as they are addressed in the authors' responses;

b. a "request" that is not addressed in the publication itself could be reclassified as a "suggestion" in light of a justification provided by the authors in their responses to all comments. If the original classification remains, the authors then must make the requested changes.

8. The Paper Handler repeats steps 4-7 as part of a follow-up review period and keeping the timeline associated with the original publication stream. This process may be repeated once more if additional "requests" are subsequently raised by Volunteer Reviewers that the Paper Handler agrees still need to be addressed.

9. After all follow-up reviews have concluded, the Paper Handler releases the publication and makes a recommendation to the Chair of the PubCom. The Chair of the PubCom makes the final decision.

10. The final decision of the Chair of the PubCom and the final version of the paper are published on the Review Portal. This final version of the paper needs to include the ISSC as a co-author and/or acknowledgement to the ISSC Review Process.

The Review Portal will have the option to add contributors, including the SC they represent if not all authors are ISSC members, and their contribution statements (see Section 6). It will also track who has data rights if the project touches real data, and/or liaison with the SC Federation ensuring that ISSC members should only need to abide by a normal ICA to contribute to publications that would otherwise require data rights.

Acknowledgments and Attribution

All ISSC publications are encouraged to include individual author contribution statements within the acknowledgement section, as is common practice for leading journals (e.g., Nature). These statements should have been written by each author and subsequently approved by all co-authors.

The acknowledgements section should also include the following items where applicable:

- a statement that the paper has completed the ISSC internal review process, with the participating internal reviewers named. Such a statement should be included regardless of ISSC authorship status and only if the publication was not prematurely retracted from the review process;
- a list of research contributions by people other than the authors, e.g., by a participant in the project who for some reason declined authorship. But approval needs to be sought first, since contributors to a paper who decline authorship may also decline to be named in the acknowledgments;
- all funding agencies;
- the telescopes used in the acquisition of the data not listed in a separate facilities section with facility keywords;

- external databases and tools used but not otherwise referenced in the paper (e.g. NASA/IPAC Extragalactic Database (NED));
- authors of software products used in the analysis if a direct citation for this product is not available;
- a statement regarding the use of AI in the research.

To ensure that the contributions of those responsible for the design, construction, and operation of the hardware, software, and other infrastructure of the LSST are recognized, all ISSC Publications based directly on products of the Rubin Observatory, including data products, simulations, and software, should acknowledge the Observatory for these contributions. See Rubin Doc-36075 for detailed guidance on acknowledgment text. As a guideline, it is envisaged that every science publication based on LSST data will cite at least the primary LSST technical overview paper and the data release paper that describes the data used in the analysis. Key LSST papers are listed on www.lsst.org/scientists/publications/citable.