
Rubin LSST Informatics and Statistics Science Collaboration Charter

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The Rubin LSST Informatics and Statistics Science Collaboration Charter

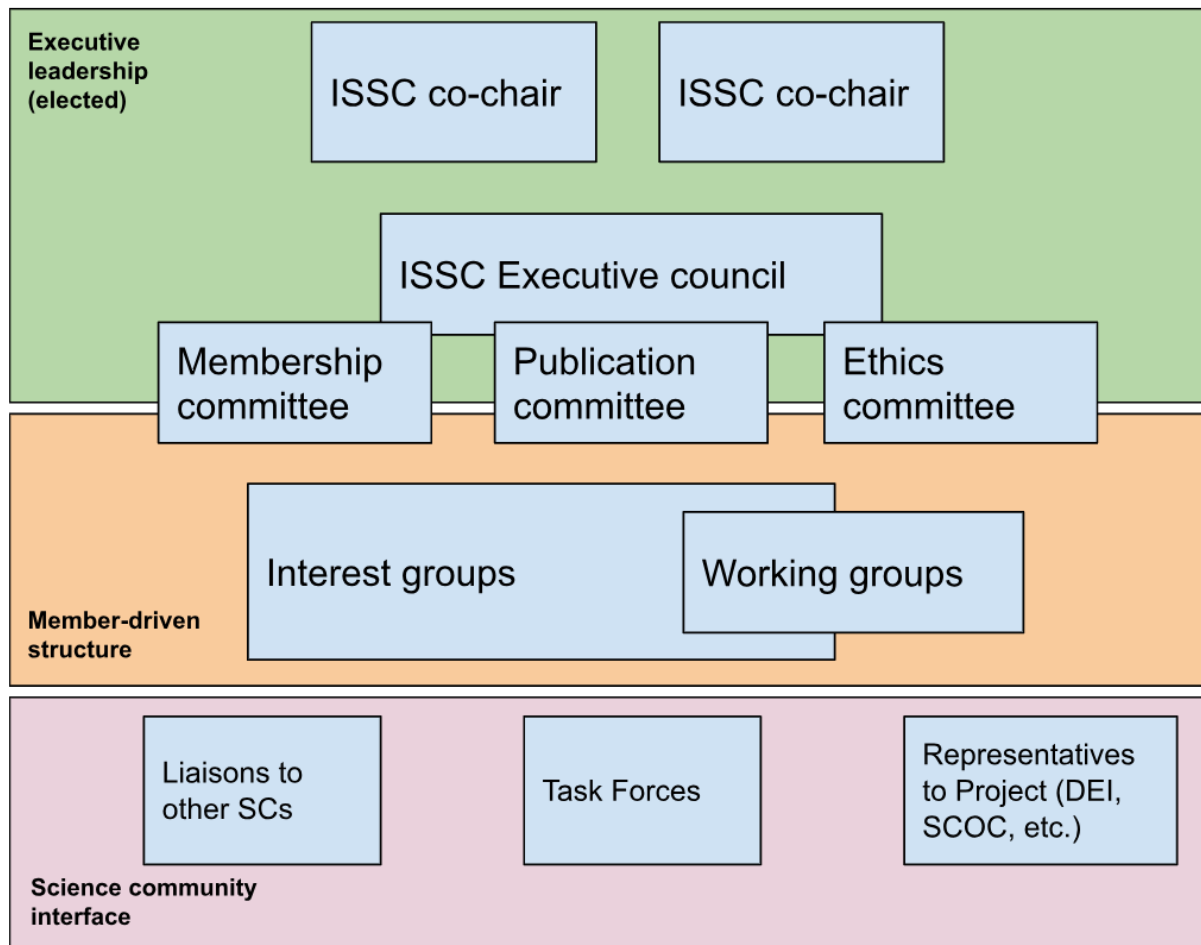
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This document describes the governance and management structure of the Vera C. Rubin Observatory Legacy Survey of Space and Time (LSST) Informatics and Statistics Science Collaboration (ISSC, also referred to here as “the Collaboration”).

The ISSC’s mission is to pursue research and provide consultation to the Rubin community on challenging astrophysics and astrostatistics problems that arise in addressing LSST’s diverse science goals. In support of this mission:

- The ISSC focuses special effort on classes of problems that are cross-cutting, arising in multiple astrophysical application areas.
- The ISSC helps coordinate interdisciplinary interactions and pursue data analysis methodology research and development in collaboration with other Science Collaborations (SCs) and the broader LSST community.
- The ISSC recruits and maintains an interdisciplinary collaboration comprising astronomers with significant research expertise in astrophysics and astrostatistics, and data scientists (including but not limited to statisticians, computer scientists, engineers, applied mathematicians, operations researchers), to provide LSST researchers access to a pool of expertise that will help astronomers apply and adapt cutting-edge developments in data science to the needs of LSST data analysis.

Overview of Organizational Structure



ISSC organizational chart: The ISSC governance structure is made of three primary layers. The executive layer (green) includes the co-chairs and executive council, including the chairs of the committees. The member-driven structure layer (orange) includes the interest groups, working groups, and task forces that comprise the research activities of ISSC, as well as the appointed membership of committees that work closely with the executive layer. The interface layer (pink) encompasses activities with other SCs and with LSST-wide entities. Leadership roles in the green area are elected, whereas other named roles are appointed.

ISSC Membership

All ISSC members are entitled to access to ISSC-specific public/private communication channels (e.g., the LSSTC Slack workspace, the [Rubin Observatory LSST Community forum](#), and the ISSC's main mailing list); access to any available Collaboration-generated resources including data products (which

do not require Project data rights) and software; access to LSST-specific events; and the potential to interact and engage with other members of the broader LSST ecosystem. All members are able to vote for elected positions. However, additional membership tiers provide additional rights and privileges, as detailed below.

Criteria for membership

Those with an academic or professional interest in ISSC-related activities are eligible to apply for ISSC membership at the Associate level. This includes but is not limited to astronomers, statisticians, information scientists, software engineers, and computing specialists, encompassing both established professionals and those in training. Associate-level applicants need to submit a statement about their expertise and research interests which are in alignment with the ISSC. Applications will be reviewed by the Membership Committee on a rolling basis. ***A condition for membership is agreement to adhere to the ISSC Publication Policy and Code of Conduct as part of the initial application process.***

Membership Tiers

Recognizing that members have a range of commitments that may change over time, and that members may contribute at different levels during this time, the ISSC recognizes two types of membership: associate and full.

Associate: All successful ISSC applicants will be admitted at the Associate level and may participate in the ISSC as contributors to interest groups and working groups and may be co-authors on ISSC products to which they directly contributed. Associate members are encouraged to increase their involvement whenever they wish. Associate members may vote in all collaboration-wide elections and may volunteer for certain service roles. Associate members are eligible to co-author official products (publications, software) for which they have made direct contributions.

Full: Full membership reflects ongoing, active contribution to the activities of one or more of the interest groups, working groups, task forces and/or committees with which the member is affiliated. Full members are eligible to chair committees, working groups, and task forces. Full members may also be members of the Executive Council and serve as Liaisons. Those who wish to serve in any of these roles qualify for consideration for Full Membership and should apply when expressing interest in serving if they are not already Full Members.

Full members are eligible to co-author official products (publications, software) of the ISSC, consistent with data rights restrictions. Full members' votes in ISSC elections will count for twice that of Associate members.

Note on Rubin LSST data rights: Rubin LSST data rights are granted via affiliation with a US or Chilean institution or through the In-kind Contribution Program but are not required for either tier of ISSC membership. However, some roles and activities in the Rubin ecosystem may have requirements based on data rights, such as private Slack channels where data is shared and LSSTC funding opportunities.

Executive Leadership

Collaboration Chair Roles and Responsibilities

The Collaboration is governed by two co-Chairs. The broad role of the co-chairs is to oversee the collaboration's collective efforts to contribute data science expertise to the success of the Rubin Observatory LSST enterprise. The co-Chairs are the public spokespeople for the Collaboration and a conduit for communication; they communicate information from and to the LSST Project and Corporation and from and to the Collaboration. When appropriate, they are responsible for responding to requests from LSSTC. They represent the ISSC in structured roles established by LSST Project and Corporation and serve as liaisons between the ISSC and official entities in the Rubin Observatory LSST ecosystem; when opportunities for feedback arise, they will solicit it from the ISSC and communicate it to those entities.

In their capacity as conveners, they are responsible for organizing and presiding over monthly collaboration-wide telecons and collaboration-wide meetings. They oversee the work of the ISSC Committees (see below), but they do not overrule the Committee decisions. The co-Chairs are also responsible for addressing requests and complaints of members of the Collaboration if they wish to communicate them directly to the Chairs, rather than to interest/working group or Committee Chairs. They are additionally responsible for ensuring the maintenance of common-use infrastructure such as the GitHub organization and the Collaboration website, and responsible for establishing administration of the elections. When appropriate, the co-Chairs can delegate representation and liaison responsibilities to ISSC members.

Executive Council

The Executive Council shall support the work of the co-Chairs and Collaboration. The Executive Council shall be responsible for approving interest group and working group proposals and organizing turnover of their leadership, as well as making appointments of appointable (as outlined in this Charter as not elected) committee members and interest/working group leadership. The Executive Council may ratify changes to this charter and/or the Membership/Publication/Ethics policies should the need arise; the Executive Council may also create ad-hoc committees as necessary, e.g. to propose revisions to policies or to organize a collaboration meeting.

The Council will comprise seven individuals: both co-Chairs and five elected members. All members of the Executive Council will serve for two years. The ISSC co-Chairs will serve as chairs of the Council, who will be responsible for scheduling regular meetings, including setting agendas, and communicating minutes to the Collaboration when appropriate.

Committees

Three permanent committees shall support the work of the Collaboration:

- Membership Committee,
- Publication Committee, and
- Ethics Committee.

Each committee shall have one Chair elected by the Collaboration and at least one other member, appointed by the Executive Council following a public call for nominations, with a goal of ensuring diversity along multiple axes.

Membership Committee

The Membership Committee reviews new membership applications and status changes in accordance with the Membership Policy. The Membership Committee shall also be responsible for the mandatory periodic review of membership status and a regularly scheduled census.

Publication Committee

The Publication Committee shall review ISSC publications to assure that they comply with the ISSC Publication Policy, in accordance with the timeline for this review as defined in the Publication Policy document.

Ethics Committee

The Ethics Committee examines cases of alleged violations of the ISSC or the [LSST Code of Conduct](#). Such cases may concern membership removal, conduct during meetings, communication between ISSC members, authorship, and more. The cases are handled confidentially. Full and associate ISSC members are eligible to file cases or concerns to the committee.

The Ethics Committee chair will receive complaints and concerns from the ISSC members, will lead the discussions, and will communicate the conclusions and process to the relevant ISSC members. When needed, the process and conclusions will be communicated to the ISSC co-Chairs.

Elections

Full members have the right to be nominated as candidates for elections (by nomination or self-nomination). All (Associate/Full) members may vote in all ISSC elections including:

1. The election of co-Chairs,
2. The election of the other five members of the Executive Council

All terms for elected positions are for two years, staggered to the greatest possible extent. Re-election is limited to no more than three consecutive terms. The vote of each Full member will count for twice that of each Associate member.

A single election for all elected positions will take place annually in May and will be administered by the Coordinator of the SC Federation. The terms of all elected positions will nominally be two years. The co-Chairs are responsible for establishing administration of the elections each year, in consultation with the Science Collaboration Coordinator. ___Nominations for elected positions will be solicited publicly, no later than one month before the election. Specific election strategies can be determined by the co-Chairs and Coordinator, but the process must be open, transparent and clearly communicated.

If an elected member of the Executive Council (not including co-Chairs) must leave their position early due to any unforeseen circumstances, the Executive Council may appoint an interim member who will serve in their place until the next election cycle.

Subgroups

The scientific activities of the ISSC are carried out by member-led subgroups, which shall hold their own meetings and have the opportunity to report regularly to the collaboration as a whole in monthly telecons. We define two kinds of subgroups.

Proposals for subgroups are reviewed on a rolling basis by the Executive Council. All leads of subgroups will be appointed by the Executive Council following an open call for nominations. These leads will nominally be appointed for a two-year position, although they may be nominated for subsequent (including consecutive) terms.

The activities of all subgroups will be reported regularly to the collaboration at collaboration-wide telecons and/or meetings, and will be reviewed by the Executive Council. Upon request of the Group leads or in the absence of leads, the Interest Group will be considered inactive and may be dissolved by the Executive Council.

Interest Groups

The Collaboration hosts Interest Groups organizing/undertaking work on different broad topic areas of scientific interest in the realm of data science. The leadership and members of these groups are responsible for organizing and contributing to activities organized by the Interest Group, which aligns with the overall mission of the ISSC.

ISSC Full members (with or without data rights) can submit a proposal for a new Interest Group for the Executive Council if the following criteria are met:

- The topic and scope of the proposed Interest Group is not already covered by any other Interest or Working Group.
- A minimum of 5 ISSC members have expressed interest in actively participating in the activities of the Interest Group.
- At least one Full Member of the ISSC has expressed interest in leading the Interest Group.

Working Groups

The Collaboration will support internal *Working Groups* which are responsible for *specific deliverables* for the ISSC, with the formal support of one or more Interest Groups. Specific deliverables include intended products, such as public codes, pedagogical or best-practices documents, open data challenges, and/or journal articles or other publications, whether or not they are peer-reviewed. The leadership and members of these groups are responsible for organizing their own meetings and contributing to activities organized by their host Interest Group(s), which aligns with the overall mission of the ISSC.

ISSC Full members (with or without data rights) can submit a proposal for a new Working Group to the Executive Council if the following criteria are met:

- The topic and scope of the proposed Working Group is not already covered by any other Interest or Working Group.
- A minimum of 3 ISSC members have expressed interest in actively participating in the activities of the Working Group.
- A clear set of deliverables and reasonable timelines are outlined in the proposal.
- At least one Full Member of the ISSC has expressed interest in leading the Working Group.

Appointed Roles

Appointed roles are created on an as-needed basis, so terms may be longer or shorter than one year at the discretion of the Executive Council depending on the nature of the role in question. Nominations will be continuously solicited through a web form that will be regularly recirculated.

Task Forces

ISSC Task Forces are groups of Full Members (with or without data rights) appointed by the Executive Council to execute specific tasks on behalf of the ISSC (e.g., addressing requests by the LSSTC). Task Forces can only be proposed by the Executive Council. Upon completion of the appointed task, the Task Force will be dissolved at the discretion of the Executive Council.

Liaisons

Liaisons are Full Members of the Collaboration appointed by the Executive Council to facilitate communication between the ISSC and outside entities in the Rubin ecosystem. In addition to entities associated with LSSTC/Project (e.g. DEI representative, SCOC representative, etc.), this document defines individual SC liaisons. One ISSC member shall serve as a point-person for facilitating interactions between the ISSC and each other SC, communicating resources, needs, and opportunities of mutual interest by participating in that SC's meetings and Slack channels/email lists as well as presenting brief updates to the ISSC on relevant developments. However, all members are encouraged to identify and initiate synergistic activities between the ISSC and other SCs. The co-Chairs and Executive Council may define and appoint additional liaisons at their discretion.