LIGO SCIENTIFIC COLLABORATION
VIRGO COLLABORATION
KAGRA COLLABORATION

Technical Document	LIGO-T2200382-v1
	VIR-1175A-22
	JGW-T2214589
	The LSC Standards and Services **White Paper (Autumn 2023 edition)**
	The LSC-Virgo-KAGRA Standards and Services Working Groups

Contents

Overview and Executive Summary

This *LSC Governance, Collaboration Standards and Services White Paper* describes roles associated with governance, management, and the Collaboration Standards and Services Division of the LIGO Scientific Collaboration (LSC). All of the activities described here are associated with §2 of the (LSC) Program 2022-2023, LIGO-M2100100.

CSS-1　LSC Governance Activities

CSS-1.1　Membership

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-1.1-A-**InfraOps**: LSC GROUP MANAGEMENT

The LSC Principal Investigator (LSC-PI) is responsible for ensuring that all individuals in their Group understand and comply with the rules of the LSC, is responsible for the Group's performance against the commitments delineated in the Group's annual work plan, and manages their group members accordingly.

ACTIVITY CSS-1.1-B-**Other**: EMERITUS MEMBER

Emeritus members of the LSC are approved by the LSC Council and maintain certain access privileges to proprietary information.

CSS-1.2　Governance

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-1.2-A-**InfraOps**: COUNCIL CHAIR

The LSC Council Chair has the responsibility and authority to facilitate the governance process of the Council. The Chair's responsibilities include all aspects of planning and conducting Council meetings in consultation with the Spokesperson and documenting the Council decisions.

ACTIVITY CSS-1.2-B-**InfraOps**: SPOKESPERSON

The Spokesperson leads the LSC, and is empowered to represent the LSC to the public and to the broader scientific community.

ACTIVITY CSS-1.2-C-**InfraOps**: DEPUTY SPOKESPERSON

The Deputy Spokesperson works with the Spokesperson to lead the LSC.

ACTIVITY CSS-1.2-D-**InfraOps**: ASSISTANT SPOKESPERSON

The Assistant Spokesperson supports the Spokesperson and the Deputy Spokesperson.

ACTIVITY CSS-1.2-E-**INFRAOPS**: OMBUDSPERSON

The LSC Ombudsperson provides confidential, informal, independent, and neutral dispute resolution advisory services for all members of the LIGO Scientific Collaboration.

ACTIVITY CSS-1.2-F-**INFRAOPS**: MANAGEMENT TEAM MEMBER

The Management Team is the group that implements the policies created by the Council and coordinates the activities of the LSC.

ACTIVITY CSS-1.2-G-**INFRAOPS**: PROGRAM COMMITTEE MEMBER

The Program Committee is charged with formulating the Science Program of the LSC.

ACTIVITY CSS-1.2-H-**INFRAOPS**: AD-HOC COMMITTEE MEMBER

Membership, including the role of chair, of ad-hoc committees that are not covered by other working group or committee membership. These committees will usually be formed and charged by the LSC Spokesperson as needed.

CSS-2   Collaboration Standards and Services Division (CSS)

The Collaboration Standards and Services Division addresses tasks and topics related to the climate within the LSC, equitable share of visibility, Collaboration organization issues, and Collaboration administrative functions.

CSS-2.1   Coordinating the CSS division

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-2.1-A-**INFRAOPS**: COLLABORATION STANDARDS AND SERVICES DIVISION CHAIR

TASK CSS-2.1-A(i)-**INFRAOPS**: COLLABORATION STANDARDS AND SERVICES DIVISION CHAIR
The Collaboration Standards and Services Division Chair coordinates the activities of the Division.

CSS-3   Diversity, Equity, and Inclusion (DEI) Committee

The LSC recognizes the importance of Diversity, Equity, and Inclusion (DEI) in carrying out its scientific mission, and has established a DEI Committee to provide guidance and advice to the LSC on, for example, selection of members for leadership roles or for representing the LSC in external presentations. The responsibilites of the DEI committee are stated in Section 8.2 of the LSC Policies and Procedures [1].

The DEI Committee membership is chosen as follows:

- The committee Chair is appointed by the LSC Spokesperson for a term of two years.

- Members of the Committee are appointed by the committee Chair, with approval of the LSC Spokesperson, for terms of two years. Terms are staggered for continuity.

- One member shall also be a member of the Speakers and Awards Committee, see Sec. CSS-7.

- There will be a liaison appointed to the LAAC, see Sec. CSS-4.

CSS-3.1   Conducting the tasks of the DEI committee

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-3.1-A-**INFRAOPS**: CHAIR OF THE DIVERSITY, EQUITY AND INCLUSION COMMITTEE

> TASK CSS-3.1-A(i)-**INFRAOPS**: CHAIR OF THE DIVERSITY, EQUITY AND INCLUSION COMMITTEE

ACTIVITY CSS-3.1-B-**INFRAOPS**: MAINTAIN THE DEI BEST PRACTICES GUIDE

The Best Practices Guide (BPG) will provide LSC members with DEI-based guidance for a number of collaboration practices. These include, but are not limited to, the following:

- Provide advice for LSC leadership and/or management positions.
- Provide advice for membership of Paper Writing Teams, or equivalent collaboration products.
- Work with the Speakers and Awards Committee, see Sec. CSS-7, to provide advice on opportunities for members to present at conferences or workshops, or other opportunities to gain external recognition.
- Provide advice on how to write letters of recommendation (or similar) for other members.
- Provide advice for LSC working group leaders for management of group members.
- Provide advice for mentoring of students or postdocs.

After the initial release, the BPG will be reviewed and updated annually.

> TASK CSS-3.1-B(i)-**INFRAOPS**: REVIEW AND UPDATE THE DEI BEST PRACTICES GUIDE

ACTIVITY CSS-3.1-C-**INFRAOPS**: INTEGRATE TARGETS FOR DEI ACTIVITIES WITH THE VIRGO AND KAGRA DEI GROUPS

This should include, but not be limited to, the selection of content for the DEI segments at collaboration meetings. The primary responsible groups for leading this effort are currently the LSC for the March LVK meetings, and Virgo for the September LVK meetings.

> TASK CSS-3.1-C(i)-**INFRAOPS**: INTEGRATE DEI TARGETS FOR ACTIVITIES

CSS-3.2   Produce and release initial version of DEI best practices guide

Start date: 2023-12-01
Estimated due date: 2024-03-15

The Best Practices Guide (BPG) should provide LSC members with DEI-based guidance for a number of collaboration practices. These include, but are not limited to, the following:

- Provide advice for LSC leadership and/or management positions.

- Provide advice for membership of Paper Writing Teams, or equivalent collaboration products.

- Work with the Speakers and Awards Committee, see Sec. CSS-7, to provide advice on opportunities for members to present at conferences or workshops, or other opportunities to gain external recognition.

- Provide advice on how to write letters of recommendation (or similar) for other members.

- Provide advice for LSC working group leaders for management of group members.

- Provide advice for mentoring of students or postdocs.

ACTIVITY CSS-3.2-A-**INFRAOPS**: PRODUCE THE INITIAL VERSION OF THE DEI BEST PRACTICES GUIDE

CSS-3.3   Collection and analysis of information about Collaboration demographics and climate

Start date: 2023-12-01
Estimated due date: 2024-12-31

The LSC (LVK) stopped collecting demographic information following the adoption of GDPR legislation in Europe. This has made it very difficult to determine progress, or lack of it, in areas of DEI, collaboration climate, etc. It is a high-priority to continuously collect demographic information.

ACTIVITY CSS-3.3-A-**INFRAOPS**: REVIEW, RECOMMEND AND IMPLEMENT COLLECTION OF COLLABORATION DEI INFORMATION

CSS-4   LSC Academic Advisory Committee (LAAC)

The LSC Academic Advisory Committee (LAAC) is responsible for overseeing and documenting the Collaboration's activities in representing and protecting the interests of students and postdocs. This Committee has eight elected members: two co-chairs, two PhD representatives, two postdoc representatives and two senior members, see Sec.8.3 in [1]. The members of the LIGO Directorate (LSC spokesperson, LIGO Laboratory Executive Director, LIGO Laboratory Deputy Director) are ex-officio members of the LAAC.

All LSC members are invited to join and support LAAC activities listed under CSS-4.1-B.

CSS-4.1 Conducting LAAC activites

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-4.1-A-**INFRAOPS**: SERVE AS ELECTED MEMBER OF LAAC

- Managing the mentoring program: sorting applications, connecting mentors and mentees, maintaining contact with the pairs, sending regular announcement about the program and collecting feedback
- Organize the LAAC Corner magazine articles: choose a topic, keep track of time lines, identify LAAC or non-LAAC authors
- Organize LVK meeting activities for ECS groups in coordination with local meeting organizers:
  - Organize poster sessions (online or in person) at LVK meetings. This includes finding poster judges, announcing the winners, and organizing the poster sparkler sessions.
  - Arrange LAAC tutorials and panel sessions at LVK meetings.
  - Arrange social events at LVK meetings.
- Correspond and coordinate with other early career scientist (ECS) groups across GW field (e.g. VECS, LECS).
- Maintain the LAAC website and wiki page: maintain the up-to-date list of LAAC members and activities, update the tutorial list and other resources pages, post LVK-meeting related announcements, etc.
- Maintain and coordinate the LSC Recognition Program.
- Maintain LSC Beginner's Guide.

TASK CSS-4.1-A(i)-**INFRAOPS**: CHAIR THE LAAC
  The LAAC co-chairs organize and lead biweekly telecons, report to the CSS division chair about progress on LAAC tasks and activities, take the lead and responsibility for all LAAC activities listed under CSS-4.1-A and CSS-4.1-B, and are members of the LVK meeting committee CSS-5 and as such are involved in planning of the LVK meetings.

TASK CSS-4.1-A(ii)-**INFRAOPS**: LAAC MEMBER: CONTRIBUTE TO LAAC ACTIVITES

TASK CSS-4.1-A(iii)-**INFRAOPS**: LAAC MEMBER: ACT AS LSC ECS REPRESENTATIVE IN GWECS.

TASK CSS-4.1-A(iv)-**INFRAOPS**: ACT AS LAAC LIAISON WITH THE DEI COMMITTEE CSS-3.

ACTIVITY CSS-4.1-B-**INFRAOPS**: CONTRIBUTE TO LAAC ACTIVITIES (NON-COMMITTEE-MEMBERS)

  All LSC members are invited to contribute to the tasks listed below. Such contributions have to be agreed on with the LAAC.

TASK CSS-4.1-B(i)-**INFRAOPS**: LSC MEMBER: ACT AS LSC ECS REPRESENTATIVE IN GWECS.

TASK CSS-4.1-B(ii)-**INFRAOPS**: MANAGE THE MENTORING PROGRAM
  This task involves sorting applications, connecting mentors and mentees, maintaining contact with the pairs, sending regular announcement about the program and collecting feedback.

TASK CSS-4.1-B(iii)-**INFRAOPS**: SERVE AS A MENTOR IN THE LSC THE MENTORING PROGRAM

TASK CSS-4.1-B(iv)-**INFRAOPS**: SUPPORT LVK MEETING ACTIVITIES
- Serve as a poster judge.
- Give LAAC tutorials or serve as panel member at LVK meetings.
- Organize social events at LVK meetings.

TASK CSS-4.1-B(v)-**INFRAOPS**: WRITE A LAAC CORNER MAGAZINE ARTICLE
This task involves writing an article about a topic which was agreed on with the LAAC.

TASK CSS-4.1-B(vi)-**INFRAOPS**: MAINTAIN AND COORDINATE THE LSC RECOGNITION PRO-GRAM

TASK CSS-4.1-B(vii)-**INFRAOPS**: MAINTAIN LSC BEGINNER'S GUIDE

CSS-5 Meetings Committee

The Meetings Committee is responsible for organizing and coordination of the collaboration's meetings. This Committee consists of chairs of local organising committees (LOCs) of recent meetings and has one LSC co-chair in addition to co-chairs representing other collaborations, see Sec. 7.4 of the LSC bylaws [2].

CSS-5.1 Organizing the LIGO-Virgo-Kagra (LVK) collaboration meetings

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-5.1-A-**INFRAOPS**: SERVE AS MEETING COMMITTEE CO-CHAIR.

- Solicit hosts for future collaboration meetings.
- Coordinate with Virgo and KAGRA co-chairs to select date and hosts of future collaboration meetings.
- Liaise with collaboration spokespersons regarding future collaboration meeting organisation.
- Kick off organisation of collaboration meetings and, where relevant, contribute to organisation of the plenary agenda.
- Set up LVK meeting organisation website.
- Where necessary, coordinate with division or working group chairs and local organisers on room allocation.

TASK CSS-5.1-A(i)-**INFRAOPS**: CHAIR THE MEETING COMMITTEE

ACTIVITY CSS-5.1-B-**INFRAOPS**: SERVE AS MEETING COMMITTEE MEMBER

- Contribute to organisation of future meetings by sharing their experiences.
- Contribute to the selection of future meeting hosts.

TASK CSS-5.1-B(i)-**INFRAOPS**: MEMBER OF THE MEETING COMMITTEE

ACTIVITY CSS-5.1-C-**INFRAOPS**: SERVE ON LOCAL ORGANIZING COMMITTEE FOR LVK MEETING

- Identify venue with suitable number of meeting rooms.
- Set up registration and manage payment of registration fees.
- Set up local meeting website with information on meeting venue and accommodation.
- Set up and support audio-visual equipment for local and remote participants.
- Ensure sufficient internet capacity to accomodate local and remote participant needs.
- Organise on-site catering for lunches.
- Organise meeting banquet.
- Where applicable, organise LSC Council meeting (lunch and/or dinner).
- Coordinate with relevant division or working group chairs on room allocations.
- Coordinate with LAAC chairs regarding the organisation of LAAC events during LVK meetings such as tutorials and poster session(s).

TASK CSS-5.1-C(i)-**INFRAOPS**: LOCAL ORGANIZATION OF COLLABORATION MEETINGS

CSS-6   Elections and Membership Committee

The Election and Membership Committee organizes and oversees all elections processes, including setting dates for elections, soliciting nominations, carrying out the elections, and informing the collaboration of results. It also generates and maintains the LSC, LVC and LVK author lists. This Committee has two co-chairs and approximately six other members, see Sec. 8.5 in LSC Policies and Procedures [1].

CSS-6.1   Organizing and overseeing LSC elections

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-6.1-A-**INFRAOPS**: COORDINATE LSC ELECTIONS (E&M CO-CHAIR)

TASK CSS-6.1-A(i)-**INFRAOPS**: COORDINATE ADMINISTRATION OF ELECTIONS

ACTIVITY CSS-6.1-B-**INFRAOPS**: ADMINISTER LSC ELECTIONS (E&M MEMBER)

- Administer elections of working group chairs and co-chairs
- Administer the election of the LSC Spokesperson (every other year)
- Formulate and propose modifications to LSC election procedures (as appropriate)

TASK CSS-6.1-B(i)-**INFRAOPS**: MEMBER (NOT CHAIR) OF THE ELECTIONS AND MEMBERSHIP COMMITTEE

CSS-6.2   Generating and maintaining author lists

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-6.2-A-**INFRAOPS**: MAINTAIN AND PUBLISH (TWICE YEARLY) THE LSC, LVC AND LVK AUTHOR LISTS

CSS-7   Speakers and Awards Committee

The Speakers and Awards Committee (SAC) is responsible for promoting LSC scientific accomplishments by actively cultivating opportunities for LSC members to present LSC results to the broader scientific community through invited talks at conferences and meetings, see Sec. 8.6 in the LSC Plicies and Procedures [1]. This Committee has one chair and six members, representing different LSC geographical and scientific areas. One of the members of this committee is also a member of the LSC Diversity, Equity and Inclusion Committee, to promote diversity in speakers representing the LSC.

CSS-7.1   Coordination of LSC presentations at conferences and meetings

Start date: ongoing
Estimated due date: ongoing
In 2023-24, the SAC will work on the following:

ACTIVITY CSS-7.1-A-**INFRAOPS**: SERVE ON THE SPEAKERS AND AWARDS COMMITTEE

- maintain a list of requests and responses for invited speakers making presentations on behalf of the LSC, coordinating with Virgo and KAGRA collaborations;
- create and maintain a list of upcoming standing conferences related to gravitational wave astronomy;
- advertise to scientific organizing committees of standing conferences the availability of this committee to offer recommendations;
- create and maintain a list of LSC members who have delivered invited talks at past conferences;
- create and advertise periodically list of awards related to gravitational wave astronomy;
- work with with group PIs and working group leaders as well as the general LSC membership to create a list of potential speakers on behalf on the LSC.

The Committee will follow the policies and procedures document and update it as needed.

TASK CSS-7.1-A(i)-**INFRAOPS**: CHAIR OF THE SPEAKERS AND AWARDS COMMITTEE

TASK CSS-7.1-A(ii)-**INFRAOPS**: MEMBER OF SPEAKERS AND AWARDS COMMITTEE

CSS-8 Editorial Board

The LSC Editorial Board (part of a joint LVK Editorial Board) is responsible for maintaining adherence to the LSC Publications and Presentations policy. The Editorial Board has two co-chairs and six additional members, see Section 7.8 of the LSC Bylaws [2]. In broad strokes, the Editorial Board is responsible for:

- Shepherding papers about LSC scientific results through the publication process, including circulation to the Collaboration, reviewing by assigned Editorial Board members for appropriate scientific scope and presentation quality, attaching the final author list, and approving submission of the paper to the journal and the archive.

- Managing the circulation and review of proposed technical publications and listing any required changes.

- Maintaining a full and complete list of all Collaboration Publications in any medium and making that list accessible to the Collaboration and to the general scientific community.

- Reviewing proposed presentations and listing any required changes.

The involvement and responsibility of Editorial Board activities (see list below) can be divided into three groups of LSC members:

Editorial Board co-chairs: The co-chairs ensure appropriate review of full-collaboration papers, short-author-list papers and presentations on behalf of the collaboration. These duties include assigning and participating in reviewing tasks.

Other Editorial Board members: Additional Editorial Board members serve as a reviewing "pool" for collaboration papers, typically supplemented by reviewers from Virgo and/or KAGRA and sometimes supplemented by "guest" reviewers from the LSC.

Other LSC members: Any LSC member may be asked to assist in reviewing of collaboration papers, short-author-list papers or presentations.

CSS-8.1 Conducting Editorial Board activites

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-8.1-A-**INFRAOPS**: SERVE AS CO-CHAIR OF THE EDITORIAL BOARD

- Assigning reviewers to collaboration papers and ensuring review is carried out
- Assigning reviewers to short-author-list papers and ensuring review is carried out
- Assigning reviewers to presentations and ensuring review is carried out
- Resolving issues or disputes that arise during review
- Serving as reviewers of papers and presentations (sometimes reviewers of last resort)
- Arranging circulations of paper drafts to the collaboration

- Organizing full-collaboration presentations of collaboration paper drafts
- Maintaining documentation on publications and presentations policies and procedures (wiki and DCC documents)

TASK CSS-8.1-A(i)-**INFRAOPS**: CHAIR OF THE EDITORIAL BOARD

ACTIVITY CSS-8.1-B-**OTHER**: SERVE AS MEMBER OF THE EDITORIAL BOARD

- Serving as reviewers of collaboration papers
- Representing the Editorial Board at collaboration presentations of collaboration papers

TASK CSS-8.1-B(i)-**OTHER**: MEMBER (NOT CHAIR) OF THE EDITORIAL BOARD

ACTIVITY CSS-8.1-C-**OTHER**: ASSIST THE EDITORIAL BOARD WITH AD HOC TASKS

- Serving as assigned reviewers of full-collaboration papers ("guest reviewers")
- Serving as assigned reviewers of short-author-list papers
- Serving as assigned reviewers of presentations
- Providing unsolicited comments on papers and presentations

TASK CSS-8.1-C(i)-**OTHER**: NON-BOARD-MEMBER CONTRIBUTIONS TO THE EDITORIAL BOARD

CSS-9 MOU Review Panel

The MoU Review Panel evaluates the contribution of each LSC Group to the LSC program and how it applies to details in the relevant white papers. This Panel has one chair and membership is appointed by the LSC Spokesperson, see Section 7.8 in the LSC Bylaws [2].

CSS-9.1 MOU Review

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-9.1-A-**INFRAOPS**: SERVE ON THE MOU REVIEW PANEL

TASK CSS-9.1-A(i)-**INFRAOPS**: CHAIR OF THE MOU REVIEW PANEL

TASK CSS-9.1-A(ii)-**INFRAOPS**: MEMBER OF THE MOU REVIEW PANEL

CSS-10 Standards and Conduct Committee

The Standards and Conduct Committee, see Section 7.9 of the LSC Bylaws [2], is responsible for advising the spokesperson, Council, and Collaboration about issues involving the LSC Code of Conduct [3]. This Committee has one chair.

CSS-10.1   Advising the spokesperson, Council, and Collaboration about issues involving the LSC code of conduct

Start date: ongoing
Estimated due date: ongoing

ACTIVITY CSS-10.1-A-**INFRAOPS**: SERVE ON THE STANDARDS AND CONDUCT COMMITTEE

    TASK CSS-10.1-A(i)-**INFRAOPS**: CHAIR OF THE STANDARDS AND CONDUCT COMMITTEE

    TASK CSS-10.1-A(ii)-**INFRAOPS**: MEMBER OF THE STANDARDS AND CONDUCT COMMITTEE

References

[1] The LSC Bylaws Committee. Policies and Procedures of the LIGO Scientific Collaboration, 2023. LIGO-M1900139.

[2] LIGO Scientific Collaboration. Bylaws of the LIGO Scientific Collaboration, 2020. LIGO-M050172.

[3] The LIGO, Virgo and KAGRA Collaborations. LIGO-Virgo-KAGRA Code of Conduct, 2021. LIGO-M1900037.

List of Activities

List of Tasks