

CEDAR Bylaws

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1 Who we are

The Coupling, Energetics and Dynamics of Atmospheric Regions (CEDAR) Program is a terrestrial aeronomy research program established by the USA's National Science Foundation (NSF). CEDAR is a broad-based program with the goal of understanding the behavior of atmospheric regions from the Earth's middle atmosphere upward through the thermosphere and ionosphere into the exosphere in terms of coupling, energetics, chemistry, and dynamics on regional and global scales. These processes are related to the sources of perturbations that propagate upward from the lower atmosphere as well as inputs from above. The activities within this program include observations from ground-based and space-based platforms, theory, and modeling. CEDAR strives to include and equitably serve all members of this community, including people from different research focuses, institutions, and demographic groups. We have a Code of Conduct that lays out expectations of professional behavior for members of the CEDAR community.

2 Purpose

The purpose of CEDAR is to:

1. Advance the science objectives of the CEDAR program.
2. Provide a forum for exchanging ideas among CEDAR scientists, students, and other parties interested in CEDAR science.
3. Promote CEDAR science and interests to the public, wider scientific community, and other stakeholders (e.g., GEM, MIST, SHINE, *et cetera*).
4. Conduct workshops to advance the state of knowledge of CEDAR related science and to promote and facilitate the sharing of ideas and techniques between members of the CEDAR community.
5. Promote discussion of programmatic issues relevant to the development of CEDAR-related science.

6. Provide a means for the CEDAR community to indicate scientific priorities to US and international government agencies and funding bodies.
7. Contribute to building a healthy scientific community.

3 Membership

Members of the CEDAR community includes anyone working, studying, or having worked in research areas that intersect the CEDAR research program, regardless of their eligibility to apply for funds from the NSF CEDAR program. This includes all those interested in our area of science, regardless of their current location, degree, or employment status. Active members are defined as those who are currently subscribed to the CEDAR mailing list. There is no cost associated with membership.

4 CEDAR Science Steering Committee

The CEDAR Science Steering Committee (CSSC), formally the CEDAR Steering Committee (CSC), oversees all CEDAR activities, except funding.

4.1 CSSC Purpose

The primary role of the CSSC is to facilitate the implementation of the CEDAR communities scientific priorities. The CSSC is responsible for periodic checks on the community science progress and direction, as well as liaising between the CEDAR community and funding agencies, in coordination with the CEDAR community. It also supports the development of CEDAR strategic documents. The CSSC organizes the scientific content of the annual CEDAR Workshop and ensures the sessions represent the variety of research in the CEDAR community. The CSSC is responsible for monitoring the health of the CEDAR community, encouraging the entire CEDAR community to participate, remove barriers that prevent participation, and advance the research in the CEDAR domain.

4.2 Make-up of the CEDAR Science Steering Committee

The CSSC consists of the Chair and Vice-Chair, the NSF-CEDAR liaison (NCL), the NSF aeronomy ex-officio representatives (NRs), two student representatives (SR), the GEM liaison (GL), the International liaison (IL), and 9 other committee members (CMs). All members except the NRs and NCL are voting members of the CSSC.

The demographics of the CSSC are intended to minimally reflect the demographics of the CEDAR community. To ensure this stays up-to-date, the CSSC will measure the demographics of the CEDAR membership through an annual survey. Demographics should reflect the demographic balance of our community. The areas that the CSSC shall strive to represent in its committee

membership will be informed by the annual CEDAR demographics survey and include: research background (modelling, ground-based observations, and space-based observations), institutional background (research universities, teaching universities, civilian government laboratories, military government laboratories, and research companies), gender/orientation, and race. While the CSSC in any specific year may not be able to represent all of these different backgrounds, they should do so when averaged over several appointment cycles. In the event that this is not the case, nominations should be sought to correct the existing imbalance.

4.3 CSSC Responsibilities

4.3.1 Committee Chair and Vice-Chair

The CSSC chair and vice-chair are CMs each with 2-year terms, and are responsible for overseeing the smooth and beneficial operation of the steering committee and the CEDAR community as a whole. A new vice-chair is elected every other year to a 2-year term that then rotates into the chair position for another 2-year term. Vice-chair duties are the same as the chair, but in a supportive role. Specific responsibilities include:

1. Acting as Chair for all CSSC meetings. This includes polling participants beforehand to identify a suitable time and venue, preparing and distributing the agenda, and inviting outside presenters if necessary. During meetings, the Chair is responsible for leading discussion to ensure that all topics are covered, all viewpoints are heard, necessary action items are assigned, any voting is conducted appropriately, and that key outcomes are recorded.
2. Acting as the Convener/Presiding Officer for the annual CEDAR Workshop. During preparation for the workshop, this includes taking overall responsibility for ensuring the smooth planning and organization of the workshop, working with the CEDAR support contractors to identify dates and to secure a suitable venue, ensuring that CSSC members are assigned to cover all roles that required for running the meeting, facilitating resolution of any incongruities during meeting planning, and assisting to resolve any special requests from potential meeting attendees. During the meeting itself, the Chair gives a Welcome/Introduction presentation at the opening, the Chair and vice-Chair introduce/chair/participate in other sessions as appropriate, and the Chair provides an overall summary and “thank you” presentation at the end. The Chair and vice-Chair will also work actively with other assigned CSSC members and CEDAR Support Contractors to ensure that the meeting runs smoothly, that any issues are resolved, and that all attendees are aware of the workshop’s Code of Conduct. Allegations will immediately lead to a thorough and robust response from the CSSC.

3. Responsible for ensuring behavior during CSSC and Workshop meetings follows the CEDAR Code of Conduct.
4. Leading responses from the CSSC to any ad-hoc CEDAR-related issues that arise during the year. This may include interaction with other scientific bodies, responses to policy changes by funding agencies, approaches from international bodies, responding to unforeseen opportunities for the CEDAR community, or even responding to CEDAR-relevant news events - for example, a major space weather event.
5. Leading discussion within the CSSC and wider CEDAR community of new initiatives that CEDAR may wish to adopt. This could include updating CEDAR strategic planning documents, development of large community-wide scientific proposals, or significant changes of emphasis for the overall CEDAR program.
6. Leading interactions between CEDAR (through the CSSC) and NSF. One of the purposes of CEDAR is to inform NSF on the CEDAR community's scientific priorities which may, at times, require the CSSC to approach NSF to discuss changes or new initiatives in NSF's support for CEDAR.
7. Monitor and respond to the CSSC email.

4.3.2 CMs: Committee Members

CMs serve for 3-year terms. While serving their responsibilities include:

- Attend the CSSC meetings, including the annual CEDAR workshop
- Lead and serve in committee efforts designed to support the CEDAR community. These include:
 - The Lecture Awards Committee
 - The Grand Challenge Committee
 - The Student Poster Committee
 - Workshop Session Selection Committee
- Identify new ways to support the people and science in the CEDAR community
- Promote CEDAR activities and maintain active communication with the CEDAR community

4.3.3 SRs: Student Representatives

The primary duty of SRs is to serve as voting members on the CSSC, with the distinction that the term length is only two years. During this time, student representatives are expected to aid in discussions brought to the committee,

vote on matters as needed, and hold subcommittee positions if applicable. SRs also serve the community by voicing undergraduate and graduate perspectives on the CEDAR Merit and Training for Research, Innovation, and eXcellence (MATRIX) Working Group. In these roles, student representatives provide input from the perspective of newer community members to guide the CSSC in its decision-making regarding the science progress and direction and the well-being of the community at large.

In addition to the above, student representatives are also expected to plan and host the first day of the yearly CEDAR Workshop known as “Student Day.” This time is dedicated to fostering the future generation of community members by addressing key science topics with experts in the field and providing students in attendance with the personal and professional tools to navigate their careers. Furthermore, Student Day serves attendees by providing opportunities for networking and establishing lasting relationships among new and existing members.

The qualifications recommended to be a SR are:

1. Be a graduate student in good standing at a US-based institution of higher learning at the time of appointment to the CSSC.
2. Have successfully passed the exams needed to propose a dissertation topic at their home university.
3. Have no plans to graduate within the first year of their term as SR.

4.3.4 Liasons

Liasons are members of the CSSC that are drawn from communities that are related to CEDAR. Their purpose is to facilitate communication and collaboration between CEDAR and their represented community. Whilst serving on the CSSC, Liasons are expected to attend the annual CEDAR workshop in person for at least two of the three years of their term. Attendance at other CSSC meetings may be in-person or virtual, as deemed appropriate by the Liason. Otherwise, the roles and responsibilities of the Liasons overlap with the roles and responsibilities of CMs. Community Liasons will include:

- International
- NSF
- GEM

Non-voting Liasons from funding agencies other than NSF (e.g., NASA and AFOSR) may be invited at the discretion of the CSSC. These Funding Agency Liasons (FALs) would be serve as a point of contact between their agency and the CEDAR community. There would be no implication of funding, but the presence of a FAL would allow for discussions pertaining to the coordination of

research efforts and to facilitate the flow of information between the CEDAR community and the funding agency. All FAL are non-voting CSSC members.

IL: International Liason: The International Liason represents the interests of CEDAR members who live and work outside of the United States of America and provides a line of communication between other communities whose interests and science intersect with those of the CEDAR community. They are a voting member. To balance international representation, the IL should cycle between representatives from Africa, the Americas (non-USA), Asia, Europe, and Oceania. When choosing a new IL, preference will be given to nominations from geographic regions who have not been represented by the prior two ILs.

NCL: NSF-CEDAR Liason: Coordinate between CEDAR and the contracted conference organizer. This primarily encompasses coordinating the CEDAR workshop and the CSSC meetings, and will include providing details about the available financial resources to run activities such as student day and community support events, and how funds for community support (e.g., registration wavers, dependent care) are distributed. They also assist with the website, mailing list, and maintain a list of members.

NRs: NSF Representatives: As all NSF representatives sitting on the CSSC are ex officio, they are present as a courtesy to the CSSC. The NRs do not vote, their role is primarily to answer NSF-related questions and provide NSF's perspective on potential workshop and research funding questions.

4.4 CSSC Meetings

The CSSC will meet in person or virtually outside of the annual CEDAR workshop at least twice a year. The CSSC meetings are not open to the public, but the CSSC welcomes community input through communication with one of the CSSC members or the general CSSC email.

4.5 Voting procedures

When voting, a quorum requires responses from at least two thirds of the voting CSSC membership. Votes may be cast in person (through show of hands or secret ballot) or electronically (through email or in the chat section of an online meeting platform). When choosing between two options, the plurality method will be used. When choosing between three or more options, a ranked choice voting method that is capable of producing a sorted list of candidates will be used (e.g., the Borda or Dowdell system).

Normally the Chair and vice-Chair vote like regular CMs. However, in the event of a tie the Chair's vote breaks the tie. The Chair may instead choose to call for further discussion followed by another round of voting, in an effort to achieve greater consensus.

4.6 Term limits

Under normal circumstances the following term limits apply to ensure a healthy level of new community contribution. Under extraordinary circumstances, exceptions may be made.

Chairs, Vice-Chairs, and SRs serve two-year terms, while the IL, GL, and CMs serve three-year terms. CMs, Chairs, Vice-Chairs, and GL may serve a maximum of three terms, none of which may be consecutive. SRs may serve once in this capacity, and this term does not count against any future terms on the CSSC as a CM, Chair, Vice-Chair, IL, or GL.

The NCL and NRs are selected by NSF, and so their terms are not governed by this charter.

CMs, SRs, Chairs, Vice-Chairs, IL, and GL may resign at any time by writing to the Chair stating their intention to resign. The CSSC will then select a new person to fill this role, as outlined in Section 4.7. If the Chair or Vice-Chair needs to resign, they may do so by writing to all voting members of the CSSC and the selection of a new Chair or Vice-Chair will take place as outlined in Section 4.7. If a person chooses to resign, the entirety of their original intended term will be counted against their lifetime term length and they will be able to serve again at a later date (unless they resigned from their last term).

If a CM, SR, Chair, Vice-Chair, IL, or GL has a period of absence (e.g., for parental leave, family leave, ill-health, sabbatical, *et cetera*) during their term that prevents them from serving part of their term, they will be invited (but not obligated) to extend their current term by the appropriate amount. The person serving in their absence, for any period less than 75% of a full term, will not have that service count against their potential life-time service to the CSSC.

4.7 Committee selection

All CSSC members except for the IL must reside in the USA and/or work for a USA institution. This is overseen by a CSSC subcommittee. CSSC members are selected through a four-step process:

1. Potential candidates are solicited prior to the annual CEDAR workshop, and may be self nominated
2. The CSSC verifies the eligibility of all nominated candidates, as well as their willingness to serve
3. An online survey is used to solicit input on the nominees from the CEDAR community. The poll is set up to separately track input from student and non-student members of the CEDAR community. Solicited inputs are not published openly.
4. The CSSC votes to select new CMs, SRs, GLs, and ILs based, in part, on the community nominations and rankings. The CSSC's discussion and voting on new members should be strongly guided by this community input. However, the final selections are at the discretion of the CSSC and

should be balanced by the need to ensure appropriate community representation and by any other information that the CSSC deems relevant.

As discussed in Section 4.3.4, stronger preference will be given to IL candidates from regions that have not been represented by the last two ILs.

CSSC Vice-Chairs are selected through an internal nomination and voting process. CSSC Vice-chair nominees must have prior experience on the CSSC as a CM, IL, or SR.

The NCL and NRs are selected by NSF, and so their selection is not governed by this charter.

5 CEDAR Mailing List

The CEDAR mailing list is currently supported through NSF resources. It is moderated by human intervention to ensure posts are on topic and not spam. Email addresses that send spam (e.g., advertising commercial products) may be blocked as a submitter, but may still participate as subscribers to the mailing list.

6 CEDAR Workshops

CEDAR will hold an annual workshop. Traditionally, this workshop is held in mid- to late June, to avoid conflicts with other major terrestrial astronomy meetings. This workshop may be virtual, in person, or hybrid. Logistics of conducting the workshop are handled by a conference management contractor through an award from NSF.

6.1 Student Support

Student support to attend the annual CEDAR workshop (if an in person option is available) will be extended to only students based at educational institutions within the USA (including all US states and territories). This support includes registration fees, airfare (up to a potential maximum limit that may vary by year), and housing. In exchange, students are required to present a poster and are encouraged to participate fully in other areas of the workshop. Top priority will be given to funding the two SRs before all other students, to ensure their in-person support of Student Day.

6.2 Student Tutorial

The day prior to the first day of the CEDAR annual workshop shall be used to present workshop content chosen by the SR in consultation with the CEDAR student members, for the benefit of students. These are open to attendance by any CEDAR workshop attendee and will be arranged by the CSSC SRs, with support provided by all other CSSC members. To ensure the CSSC SRs are

meeting the needs of the CEDAR students, feedback from the CEDAR student membership will be solicited at least once every two years.

6.3 Grand Challenges

Grand Challenge (GC) workshops address urgent, overarching questions that require a multi-year effort and are of high importance to the CEDAR community. The intent of the GC is to allow groups with particular scientific interest to have increased exposure and reach a wide audience. This provides opportunities to increase participation (especially from people not currently involved in that scientific topic) and encourage off-shoot discussions and research efforts.

GC workshops are 3 year efforts and should be organized by a diverse team of conveners with a clear schedule and specific goals and topics for the 3 years. Each GC workshop will introduce the topic to the CEDAR community in the plenary session in the first year and provide updates in the 2nd and 3rd, and a summary after year 3. GCs are required to provide a quantitative assessment of community engagement each year, such as how many people joined the GC effort over the course of the project. GCs do need to submit workshop proposals each year, but are guaranteed two time slots.

Each year, one new grand challenge workshop is selected by the CSSC. The selection is performed by voting between compliant GC proposals after a group discussion within the CSSC. The selection considers:

- the relationship to the CEDAR Science Plan,
- the timeliness of the proposed topic,
- the uniqueness of the proposed topic when compared to past GC topics,
- whether or not the conveners have been involved in past GC topics (with preference going to those who have not led a GC previously),
- appropriateness of the GC timeline, and
- appropriateness and variety of the suggested tutorial speakers.

6.4 CEDAR Programmatics

The annual CEDAR workshop will provide a forum for all community members to participate in the programmatics by allocating time for:

1. the major funding organizations to provide reports to and take questions from the community.
2. national and international agencies or networks to present on major initiatives relevant to the CEDAR community.
3. the CEDAR MATRIX Working Group to present on efforts made during the year and present a highlight talk from an invited speaker.

4. Science Highlights from Grand Challenge organizers (see Section 6.3) and CEDAR career awards (see Section 6.5).

6.5 Science Highlights

The CSSC will choose several timely CEDAR science topics each year to highlight what the CEDAR community has achieved in this field and is currently working to discover. The invitation to present these talks honors the speakers' knowledge and expertise in this field. The talk should be aimed at a level that new students and CEDAR scientists outside of this sub-discipline can learn from the lecture. It may take one of two forms: a topic review or a career-focused topic review. By presenting a topic review paired with current problems, the CSSC hopes that these science highlights will drive collaborations between the CEDAR scientists within and adjacent to this sub-discipline.

6.6 Community Science

The annual CEDAR workshop will consist of at least 50% community-driven sessions. If the community submits more sessions than can be accommodated in the annual meeting, the CSSC will select from the submitted session proposals using the following criteria.

1. Related to the CEDAR Science Plan.
2. Suitability of the topic for the broader CEDAR audience.
3. Uniqueness of the proposed topic compared to other proposals for that workshop.
4. Uniqueness of the conveners.

7 Awards

CEDAR provides awards to honor outstanding science at every career stage: the Early-Career Prize Lectures, Prize Lectures, Distinguished Lectures, and Student Poster Prizes. The details of the criteria for these Prizes, their nomination procedure, selection process, and the nature of the awards are described in Sections 7.1 and 7.2. One or more prizes may be awarded in each category.

7.1 Prize Lectures

The Early-Career CEDAR Prize Lecture, CEDAR Prize Lecture, and Distinguished CEDAR Prize Lecture are solicited every year before the annual CEDAR workshop. The nomination criteria for each award shall be included in the solicitation and be made available on the CEDAR webpage. CSSC members may not nominate themselves or other current CSSC members for science highlights or Prize lectures. The evaluation process is decided by the Prize Lecture task force leader and voting is performed by all voting members of the CSSC.

7.1.1 Early-Career CEDAR Prize Lecture

The Early-Career CEDAR Prize Lecture (adapted from the more informal Early Career Science Highlight) honors recent outstanding scientific contributions of importance to the CEDAR community from Early-Career scientists. The recipient of this award presents an invited plenary lecture at the annual CEDAR workshop on the research contribution for which they were nominated. This award is open to CEDAR members of any nationality and institution, and defines the early-career stage as students, post-docs, and those at any employment position but within 5-years of completion of their terminal degree. The nomination should be based off of significant research reported in a peer-reviewed publication(s) within any period of the nominees career.

7.1.2 CEDAR Prize Lecture

The CEDAR Prize Lecture honors a recent outstanding scientific contribution of importance to the CEDAR community. The recipient of the award presents an invited plenary lecture at the annual CEDAR workshop on the research contribution for which they were nominated.

The CEDAR Prize Lecture is open to CEDAR members of any nationality and institution. The nomination should be based on significant research reported in a peer-reviewed publication(s) within the four years prior to the annual CEDAR workshop.

7.1.3 Distinguished Lecture

The CEDAR Distinguished Lecture recognizes members within the CEDAR community (US-based or International) that have made sustained professional contributions to CEDAR. This award refers to a long-term, sustained body of work over a period greater than 10 years that has helped shape the CEDAR program through research and service. The recipient of the award presents an invited plenary lecture at the annual CEDAR workshop on a topic of their choice.

7.2 Student Poster Prizes

The student poster prizes are determined from the posters presented remotely (if the conference is fully remote) or in person (if the conference is virtual or hybrid) and divided into four categories. Scientifically, they are divided into the Mesosphere and Lower Thermosphere (MLT) and Ionosphere Thermosphere (IT) regions. They are also divided into career levels, with undergraduate and graduate students considered separately. There is one award for undergraduate students in each science division, while graduate students are ranked with awards for first and second place, along with an honorable mention for third place in each scientific division.

7.2.1 Poster Qualification Criteria

To compete in the student poster competition, students are required to:

1. register to participate when submitting their abstract,
2. upload an electronic copy of their poster by the stated deadline,
3. have a physical copy of their poster mounted in the designated space by the designated time (when the meeting is not entirely virtual),
4. be at their poster for the required period during the formal poster session, with that time indicated on or next to the poster at the time the poster is mounted.

Each years requirements will be set by the CSSC poster organizing committee, and may include additional requirements, such as:

1. a plain-language summary of the work,
2. an explanation of the student's specific contribution to the work, and
3. an explanation of why the work is important and relevant CEDAR.

Failure to abide by any of these rules may be grounds for automatic disqualification from the competition, as announced by the CSSC poster organizing committee for a given year.

7.2.2 Poster Evaluation Criteria

Poster judging will consist of two rounds of judging to ensure that the prizes are awarded to posters that best present the results of high-quality research. Both rounds evaluate scientific content, with round one focusing on effective poster presentation and round two focusing on the oral presentation. Round one will take place before the start of the formal poster session and is based on the judges' reading of the poster. Only posters that effectively communicate significant research results and a high-quality research effort, without the benefit of an oral presentation, will advance to the second round of competition. The second round of judging takes place during the formal poster session. Students with competitive posters are evaluated further on the scientific significance and quality of the research efforts, and are also judged on the effectiveness of their complementary oral presentation. Students should strive to:

- coherently summarize the poster to the current audience,
- logically and clearly explain the scientific issues, objectives, methodology, and conclusions, and
- make an independent presentation, without soliciting input from advisors except for help with highly advanced questions.

Examples of the ballots for the first and second rounds shall be made available on the CEDAR webpage, to allow students to understand the judging process.

7.3 Venue

The venue is selected by the CSSC in collaboration with the CEDAR support contractors, who are tasked with providing a short list of potential venues. The CSSC will select from amongst the short list including the following criteria in their consideration:

1. a reasonable expectation of health and safety for all community members,
2. the cost, size, and suitability of the venue,
3. ease of travel for the entire US community, and
4. student access to resources (e.g., food, health supplies) during the conference.

8 Resources

The CSSC will ensure valuable resources that impact scientific collaboration and access to scientific tools within the CEDAR community are made available. The sections below describe those resources that will be curated and published by the CSSC.

8.1 Webpage

The CEDAR NSF program has provided funding to build and maintain a webpage with resources for the CEDAR community. At a minimum, this will contain:

1. An overview of the CEDAR community's science
2. A record of current and past CSSC members
3. The CEDAR governing documents
4. MATRIX related community resources
5. CEDAR Workshop records - including recordings of past presentations, and archives of uploaded poster and presentation files
6. Upcoming CEDAR Workshop links
7. Links to CEDAR science resources
8. Links to CEDAR student resources
9. Information about and records of CEDAR awards

8.2 Demographics Survey

The CEDAR demographics survey is performed a minimum of biannually in conjunction with the CEDAR workshop. The entire CEDAR community will be given the opportunity to participate, whether or not they are attending the workshop, but participation will be voluntary. The demographics survey is designed to measure the demographics of the CEDAR community, which includes career stage, research area, institution, current country of residence, gender, race, and disability status. These demographics will be used as a metric to inform the CEDAR membership, the CSSC, and relative funding agencies regarding the composition of the CEDAR community. The anonymized results of each years demographics survey will be made publicly available, with links on the website, within six months of the close of the survey. To ensure researchers have access to a citable data set, the data will be published with a DOI using a service such as Zenodo. The anonymized results of the demographic survey will be presented in either the appropriate open literature journal or reported directly to the CEDAR community at least every 2 years

8.3 Community Discussion Forum

The CSSC strives to encourage collaboration and solidarity within the CEDAR community. To this end, the CSSC will maintain a virtual discussion forum(s) apart from the CEDAR mailing list where CEDAR members can share resources, connect with collaborators, and lead discussions. The forum platform should aim to be accessible, simple to maintain, and moderate. Potential platforms include Slack and Facebook.

9 Amendments of the Bylaws

These bylaws may be modified following consideration by the CSSC. Any member of the CEDAR community may offer a suggestion to amend the CEDAR bylaws. Any suggested amendment must include the proposed text of the amendment. Suggested amendments must first be put to the CSSC, who will vote on whether to put the motion to amend the bylaws to the CEDAR community. If amendments pass within the CSSC, it must be put to the CEDAR community via electronic mail or an online poll. If greater than 10% of the CEDAR community (defined as the average number of people who attended the last 5 years of CEDAR workshops) vote against the motion to amend, the motion is not carried.