

What is a GC and How Can Students Get Involved?

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What is a GC?

- Grand Challenge (GC) workshops address urgent, overarching questions which require a multiyear effort and are of high importance to the CEDAR community.
- 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 & 3rd, and a summary after year 3.





What are the Current Grand Challenges?

Year 3: Interhemispheric asymmetries (IHA) and impact on the global I-T system

Conveners: Yue Deng, Lynn Harvey, Astrid Maute, Qingyu Zhu, Yun-Ju Chen, Rich Collins, Aaron Ridley, Guiping Liu, Sevag Derghazarian

Year 2: The role of gravity waves in the mesosphere, thermosphere and ionosphere cross-scale coupling and irregularities: Observations and numerical simulations

Conveners: Titus Yuan, Mike Taylor, Sharon Vadas, Erich Becker, Hanli Liu, Jonathan Makela, Brian Harding, Jonathan Snively, Christopher Heale, Cesar Valladares

Year 1: Impact of Terrestrial Weather on the Space Weather of the Ionosphere-Thermosphere-Mesosphere

Conveners: Jens Oberheide, Shantanab Debchoudhury, Larisa Goncharenko, Guiping Liu, Sarah McDonald, Fabrizio Sassi, Jiarong Zhang, Deepali Aggarwal, Bjoern Bergsson, Mack Jones, Zishun Qiao



How is a GC selected?

- Each year one new grand challenge workshop is selected by the NSF CEDAR Science Steering Committee (CSSC) by voting
 - We usually have 3 to 4 submissions
 - Conveners on a GC and CSSC cannot vote
- Current 2024 CSSC Members:
Mark Conde (Chair), Angeline Burrell, Federico Gasperini, Tzu-Wei Fang, Nathaniel Frissel, Lindsay Goodwin, Katelynn Greer, Kristina Lynch, Andrew Pepper (student representative), Sophie Phillips (student representative), Danny Scipion, Titus Yuan, Jia Yue, Matthew Zettergren, Ying Zou (GEM liaison)





How can I participate in a GC this year?

- Attend the Grand Challenge Workshops (see Meeting Agenda)
 - **ASK QUESTIONS!**
 - Contact a convener at the session or through email
 - Volunteer to take notes!





How can I participate in a GC next year?

- Contact the conveners of a current GC and volunteer to assist
 - Planning the next workshop
 - Running the sessions next year (note-taking, virtual components, timing, managing microphones for discussions)
- Contact the conveners and volunteer to give a relevant presentation
 - Make a unique contribution to the session
 - Be prepared for lively discussion
- **Propose a Grand Challenge!**





How do I propose a GC?

- Recruit a diverse group of conveners
 - Students, early career scientists, senior scientists, specialist, and related topic scientists
 - 4-10 conveners
- Develop a Proposal (3-5 pages)
 - Articulate a challenge, its significance, and fit with the Decadal Survey or Strategic Plan
 - Duration in years and Timeline for your Grand Challenge Workshop with objectives
 - Suggested Tutorial Speakers and Topics for your Grand Challenge Workshop
- Submit through CEDAR Workshop Website by deadline

Questions?

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