

US Muon Collider Collaboration

The United States Muon Collider Collaboration (USMCC) is an organization of individuals interested in bolstering the science case, designing, and promoting the construction of a multi-TeV muon collider in the United States. The organization will focus on bringing accelerator, experimental, and theoretical physicists together, integrating new collaborators into the muon collider effort, and organizing work toward maximal impact. The USMCC will also work closely with the International Muon Collider Collaboration (IMCC) in realizing a muon collider, wherever it is built in the world.

The USMCC will be hosted by the Fermi National Accelerator Laboratory, which will support the collaboration.

Membership

The USMCC is open to all members of the high energy physics community: accelerator physicists, theoretical and experimental particle physicists and professionals with relevant technical expertise working at universities, laboratories, and participating industry partners. Student members of the USMCC must have approval of their faculty supervisors. The USMCC will maintain a database of its membership, including pertinent information about the members, which shall be publicly viewable, in compliance with the host lab policies.

Administrative Institutional Contacts

Each member of the USMCC should identify their academic status, professional title in their organization, the department and the institution that they belong to, and the fraction of their research time devoted to the USMCC. The administrative contacts are each responsible for keeping it updated in the USMCC database as their professional status changes. All members of the same department are required to keep up-to-date information regarding their administrative institutional contact. The Administrative Institutional Contact should be able to verify that the person concerned is authorized to engage in the USMCC work, but the person need not have a scientific leadership role.

USMCC Leadership Council

The leadership council is an elected body of the USMCC. It comprises a Chair, a Vice Chair (VC), a Theory Community Representative (TCR), an Accelerator Community Representative (ACR), a Experimental Community Representative (XCR), a Communications Coordinator (CC)

and a Diversity, Equity, Inclusion, & Access Coordinator (DEIAC). Together these seven elected members form the Leadership Council of the USMCC.

These leaders will be responsible for the overall mission of the USMCC, i.e., the development of the science case, designing and promoting the construction of a multi-TeV muon collider in the United States. They are also responsible for ensuring that the software and computing resources are available in a timely manner for the collaboration to produce the required results for all foreseen technical reviews. The sub-area representatives will also advocate for their community interest and organize work in their areas. They may appoint other members of USMCC to assist them as needed. The Leadership Council is responsible for ensuring that any such appointments made adhere to the collaboration goals of broad diversity, equity, inclusion, and access. The Leadership Council should report progress to the USMCC monthly electronically, and annually in a collaboration-wide meeting.

Chair of the USMCC Leadership Council

The Chair of the Collaboration Leadership Council, together with the rest of the Leadership Council, will identify the overall direction for the USMCC to take, in order to realize the vision of a multi-TeV muon collider in the United States. The Chair represents the USMCC interests to the host laboratory, the high-energy physics community and the public at large. The Chair will also liaise with the funding agencies until sub-projects are formed and funded. It is the duty of the Chair to keep the broader USMCC collaboration informed of important news and the directions taken. The Chair shall collect information from all members of the Leadership Council monthly and prepare a report to the USMCC. The Chair, with the help of the council, shall also organize an annual meeting of the full USMCC. The Chair will also serve as the chief liaison to the IMCC leadership.

Vice Chair of the USMCC Leadership Council (VC)

The Vice Chair (VC) will assist the Chair in discharging all USMCC duties, by participating in all aspects of the USMCC work. The VC is also charged with keeping notes of all important meetings and making their excerpts available broadly to all of the USMCC. The VC also serves in the Chair capacity when the Chair is unavailable temporarily.

Theory Community Representative (TCR)

The elected USMCC theory community representative (TCR) will help organize US theory efforts of the collaboration to continue to grow the physics case. The TCR will also interface with the XCR and ACR to maximize the scientific opportunities presented in all aspects of demonstrators, collider experiments, and auxiliary experiments. The TCR should promote the muon collider science case to funding agencies, and scientists at large and also in outreach to the public. The TCR also serves as an interface with the IMCC, making sure that US theory efforts are represented within the IMCC physics coordination committee. The TCR will also

strive to increase participation and expand the expertise of the US muon collider theory community, including the physics case beyond high energy collisions.

Accelerator Community Representative (ACR)

The elected USMCC accelerator community representative (ACR) will organize the efforts of the collaboration towards designing multi-TeV accelerator options, with sufficient luminosity, for hosting in the USA. The ACR will also help define the US accelerator contributions to the IMCC-led activities. The ACR will review the status of the accelerator subsystems regularly, including recent technical developments and inventions, to manage potential changes in directions. The ACR will overview the Demonstrator development efforts in the US and coordinate with the IMCC to avoid overlaps. The ACR will coordinate the efforts at all national accelerator laboratories, and will also bring in the participation of university scientists and students.

Experimental Community Representative (XCR)

The elected USMCC experimental community representative (XCR) will organize the efforts of the collaboration in designing detector options suitable for the environment of the muon collider and work with the TCR to understand the impact on physics potential. The XCR will also help define the US contributions to any IMCC-led detector and performance activities. Development of simulation programs to qualify the detector subsystems are part of the XCR's responsibility. The XCR will review the status of the detector subsystems regularly, including recent technical developments and inventions, to manage potential changes in directions.

Communications Coordinator (CC)

The elected USMCC communications coordinator (CC) will organize communications with the HEP community, the broader physics community, and the public at large. The CC will also be responsible for maintenance of outreach materials for each case, and organize opportunities for the USMCC personnel to present the collaboration's case in presentations at various events, conferences, colloquia and seminars. The CC will also coordinate with other agencies regarding the annual visits to Washington to promote the case for a muon collider in the US.

Diversity Equity Inclusion and Access Coordinator (DEIAC)

The elected USMCC Diversity, Equity, Inclusion and Access Coordinator (DEIAC) shall be responsible for ensuring that there is diversity, equity, inclusion and access for all USMCC members. The DEIAC shall be responsible for monitoring the status of DEIA in the collaboration and using this to inform their work proactively building policies, programs, and structures to support increased DEIA. The DEIAC is charged with reporting the findings over the year at the annual collaboration meeting.

Leadership Strategy Group (LSG)

The leadership strategy group is a body appointed by the Chair in agreement with the rest of the council. The strategy group must be consulted regularly in the planning process to ensure broad consideration of all relevant issues. It includes representatives from the national laboratories, prominent members of the community, DOE liaisons, and experts in various relevant aspects of the muon collider technologies and science. The nominal appointments begin and end with the Leadership Council term.

Elections

The voting members of the USMCC constitute those PhD physicists and professionals who intend to devote 10% or more of their time in the USMCC efforts and are affiliated with a US institution. Each member receives one vote in all USMCC elections. The voting members select the members of the Leadership Council. The winner is required to have 50% or more of the votes cast in favor, excluding those who abstain. In cases where there is no winner, a run-off election of the top two is triggered. In case of a tie, the Leadership Council will cast the tie-breaker vote.

On occasion votes are also requested for the USMCC members to indicate their opinion on matters referred to them by the Leadership Council. The Leadership Council is required to go by the opinion of the collaboration if 50% or more votes are cast in favor of that opinion. If there is no option with over 50% votes in favor, a run-off election with top two options will be conducted. In case of a tie between the last two options, the leadership council can use their judgment to resolve the issue.

Election Coordinators

Two members of the USMCC, who do not wish to run for the leadership positions of the USMCC that year, will serve as the election coordinators for the year (ECs). The EC, the Chair, the Vice Chair and DEIAC together vet the membership database annually. The ECs conduct all coordinator elections, except for the EC selection vote itself, for that year, using electronic means. The ECs also keep track of the nomination statistics in a non-public database.

The election starts with a call for nominations for available positions with a minimum of a two-week nomination period. The EC contacts all those nominated to select the slate of candidates for the position to confirm their candidacy. The list of candidates nominated may be divulged to all candidates nominated for the position if asked by any one nominee.

Diversity in the choice of the leadership council is important. As such the ECs are charged to work with the DEIAC to ensure that there is sufficient diversity in the nominations to start with, and make efforts to persuade those who are nominated to run. For instance, the goal should be to balance the leaders from the universities, national laboratories and the host laboratory. If the

slate of candidates is deficient, an extension of the nominations call can be initiated at the discretion of the ECs.

The ECs are required to report to the USMCC, in an email, the nomination statistics, keeping their identities anonymous, before the election begins. The ECs should collect and provide 1-page write ups and 10-minute clips of video/audio recordings or a slide deck from each candidate, who agrees to stand, to the USMCC a minimum of 1 week prior to the start of the election.

Annually, the VC seeks nominations for the following year's ECs from the USMCC membership, and conducts an election to select the next year's ECs. The top two vote getters of the EC-election are chosen as the next year's ECs.

Eligibility

Any USMCC voting member is eligible for Leadership Council positions. It is expected that the nominees are able to devote 0.25 FTE effort to the USMCC activities.

Terms and Term limits

The leadership council positions have a nominal term of two years, starting in January, with a nominal limit of two terms, unless the person is elected to complete a term of less than 1.5 years.

An exceptional third consecutive term may be useful for the collaboration. In such an exceptional election, when a candidate is running for a third consecutive term, beyond the nominal two terms, a 67% majority is required for the candidate to be elected. If the 67% majority is not achieved, the election process for that position will restart with the call for nominations consistent with the nominal two consecutive terms policy .

Incomplete Terms

In case a person is unable to complete a term for whatever reason, a new election for the position is called. The term of the position can be the remainder of the term if more than 1 year remains, or otherwise remainder of the term plus the nominal 2-year term.

Recall of Officers

A recall of leadership council officers can be triggered upon the written request from 10% of the USMCC voter list to the ECs. The ECs will then conduct a recall poll. A recalled officer may no longer serve in the Leadership Council. A recall triggers a new election for the completion of the term for that position. The EC will then conduct a recall poll within two weeks.

Diversity, Equity, Inclusion and Access

Diversity of gender, sexual orientation, ethnicity, race, country-of-origin, ability, socioeconomic, immigrant status, etc., is paramount to the success of the US Muon Collider Collaboration. The collaboration is required to provide an equitable and inclusive access to all areas of the USMCC affairs, for their collective success. A code-of-conduct should be developed and ratified in the first year of the adoption of this constitution. A mechanism for routine monitoring of DEIA considerations to address any violations of the code-of-conduct should also be established by the elected DEIAC. The DEIAC shall attend the leadership council meetings regularly, and especially when discussing the appointments of unelected secondary officers in all areas, to advise on DEIA issues. All coordinators at any level in the collaboration are responsible for ensuring that the code of conduct and the principles of DEIA are upheld in their areas, and for bringing violations of the code of conduct to the DEIAC.

Projects & Project Managers

In the coming years, we anticipate that there will be several projects related to USMCC work, requiring line management and host-laboratory oversight. Such appointments are typically made by the Host Laboratory Director following the recommendation of the collaboration and endorsement of the funding agencies. We envision that the USMCC elected Leadership Council forms a Search Committee which seeks nominations, interviews the candidates and selects top two or three candidates and recommends them to the Host Laboratory Director.

Adoption of the Constitution

Adoption of the constitution and any future amendments require two-thirds majority of the votes cast, excluding abstentions.