Monte Carlo Network (MCnet) Agreement

December 2021

Context

Monte Carlo Event Generators (MCEGs), capable of simulating the full final state of particle interactions, are a key component of particle physics research. They are usually written within the theory community, but are widely used in both theory and experiment, and crucial in the dialogue between the two. Independent collaborations exist to develop and maintain these MCEGs, but MCEG share many common challenges, and benefit from common software tools, technologies and standards. There is also a high degree of exchange of personnel and expertise between MCEG collaborations, and with experiments, and common challenges in training and career development, within and beyond academic research. These features have been recognised and supported by three Marie Sklodowska-Curie training grants to the "MCnet consortium" as well as several associated individual and/or national grants, over several years. The need for such support, and particularly the collaborative efforts it facilitates, is demonstrated and will continue for the foreseeable future.

Purpose of the network

This agreement establishes a network, independent of any particular funding source, to:

- Facilitate collaboration and sharing of expertise between widely-used general purpose MCEGs and associated tools.
- Facilitate training and career progression for those working in the areas of MCEGs and associated tools
- Where appropriate, provide support and coordination for funding applications for individual or collaborative projects within the area
- Serve as a point of contact to MCEG community, e.g. for experimental collaborations or conference organisers, provide a platform to form and express coordinated voice from MCEG developers

Projects

An MCnet Project is a MCEG or related software tool, with a designated lead developer or management structure, recognised by the MCnet Collaboration Board.

Membership

Individual membership continues from the membership of the current MCnetITN3 and/or the subsequent (currently unfunded) MCnext proposal. Members may be added by their own existing MCnet institute or project by informing the Collaboration Board.

Institutional membership continues from the membership of the current MCnetITN3 and/or the subsequent (currently unfunded) MCnext proposal. Institutes or projects may join MCnet by application to the Collaboration Board.

Management and Governance

The governing body of MCnet is the Collaboration Board (CB), consisting of one representative per member Institute, one representative per recognised project, and representatives elected by early career and student members. A chair of the CB is elected every two years by and from within its membership.

Management groups can be set up and/or endorsed by the CB for specific purposes, for example running a school, or coordinating a funding application.

Decisions are made by a simple majority vote of CB membership.

Duties of Membership

- Active, regular engagement with MCnet activities is expected
- Code intended for general use should be Open Source and should respect the MCnet guidelines for Event Generator Authors and Users
- Open standards should be developed and respected where appropriate and as far as possible
- The CB should be informed in advance of funding applications or other activities in which MCnet is expected to play a role, and have the opportunity to comment
- Training opportunities should be shared where possible
- Collegiate, collaborative and inclusive conduct is expected at all times
- The role and contribution of MCnet to outputs should be acknowledged, and MCnet preprint numbers should be assigned to publications where appropriate.

Any member (individual or institution) deemed by the CB not to be fulfilling these duties may be removed from the network.