Monte Carlo ideas prototyping with SCONE

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This workshop aims to introduce attendees to the Monte Carlo code SCONE, with a particular emphasis on modifying it to investigate new ideas or algorithms. We will introduce the design logic of SCONE, how to compile and run it, and how to modify or add different components of the code. This will be showcased by attendees producing a new tally and a new surface and producing results using these new features.

The ideal audience should be familiar with Monte Carlo concepts and have some understanding of the basic algorithms, even if they have not implemented them in the past. Audience members will ideally have some coding experience in, e.g., C++, Python, or Fortran. Although SCONE is written in Fortran, Fortran-specific experience is not required.

Attendees need to have a laptop. They will be provided with access to source code and nuclear data through Docker.

The source code can be found here: https://github.com/CambridgeNuclear/SCONE