

Advanced Cyberinfrastructure Training for Modeling Physical Systems at Rensselaer Polytechnic Institute

Boot Camp: June 23 – 25, 2021

Summer School: June 28 – July 16, 2021

- ❖ The summer school focuses on modeling physical systems using high performance computing.
- ❖ Applications that will be discussed include lattice gauge theory, which can be used to model quarks and gluons, and first principles condensed matter physics.
- ❖ We will also have extensive coverage of numerical methods for doing linear algebra on computers, solving differential equations, finding roots, multiscale methods and other common tasks.
- ❖ The boot camp focuses on basic computer skills that are needed for the more advanced material and methods that are to be covered in the summer school, including linux, logging in to remote systems, C/C++, FORTRAN, and MPI.
- ❖ Methods for developing and improving codes for newer architectures, such as GPUs, will be included.
- ❖ The summer school will feature lectures by experts in the application of computational methods to physical problems, as well as hands-on activities.
- ❖ Students will be given access to high performance computing systems for some of the exercises.
- ❖ The summer school will open up horizons for participants in terms of possible career paths.
- ❖ Students who come from colleges and physics programs where adoption of cyberinfrastructure, computational methods and data-intensive computing is only at a minimal level are strongly encouraged to apply.
- ❖ We also strongly encourage applications from women and underrepresented minorities.
- ❖ DUE TO COVID-19 CAMPUS CLOSURE, THE BOOT CAMP AND SUMMER SCHOOL WILL BE OFFERED AS AN ON-LINE PROGRAM.

To apply, visit:

<https://webforms2.rpi.edu/physics-summer-program>

Deadline: April 15, 2021

Rensselaer Polytechnic Institute is located in Troy, New York. It is the oldest science and engineering school in the country, founded in 1824.

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