

The Beams and Applications Seminar Series

Supercomputing in Beam Physics

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Lawrence Berkeley National Laboratory

Bldg. 401, room E1100/1200

Monday, Mar. 8, 1:30 pm

Host: K.-J Kim, ASD

The SciDAC Accelerator Modeling Project is a DOE Office of Science project sponsored by the Office of High Energy Physics and performed in collaboration with the Office of Advanced Scientific Computing Research. The goal of this multi-institutional, multi-disciplinary effort is to develop a new generation of terascale accelerator design codes, targeted to parallel computing platforms, and to apply them to accelerator projects of national importance. In this talk I will first give an overview of the project, describing the primary focus areas of beam dynamics, electromagnetics, and advanced (laser/plasma) accelerator modeling. Next I will describe in greater depth the progress in terascale beam dynamics simulation, including new capabilities for modeling colliding beams and modeling intense beams in linear and circular accelerators. Lastly I will discuss future prospects in "ultrascale" computing, where computers will have peak performances of 100 TFLOP to a petaFLOP.

For more information visit

<http://www.aps.anl.gov/asd/physics/seminar.html>

Visitors from off-site please contact Yuelin Li

(ylli@aps.anl.gov, 630-252-7863) to arrange for a gate pass.

This ANL seminar series is a CARA activity and focuses on the physics, technology and applications of particle and photon beams. It is sponsored jointly by the ASD Division, the AWA group of the HEP Division, and the ATLAS group of the PHY Division.