

# The Beams and Applications Seminar Series

## *Simulations and Studies of Collective Beam effects at Fermilab*

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**Bldg. 401, rm B2100**

**Friday, October 21, 1:30 pm**

Host: Kwang-Je Kim, ASD

In the last several years, the computational accelerator physics group at Fermilab has developed Synergia, a beam dynamics framework which emphasizes modeling of collective beam effects. In my talk I will discuss the computing and physics implementation aspects of Synergia, and present a few example applications to the Fermilab Booster. These examples include beam width evolution, halo formation, and coherent tune shifts due to space charge, and comparisons of the simulation results with experimental data.

### **For more information visit**

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

Visitors from off-site please contact Chun-xi Wang  
(wangcx@aps.anl.gov, 630-252-4968) to arrange for a gate pass.

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