New York University, Courant Institute of Mathematical Sciences, participated in the “Fusion Simulation Program (FSP) Planning Activities” [http://www.pppl.gov/fsp], with C.S. Chang as the institutional PI. FSP’s mission was to enable scientific discovery of important new plasma phenomena with associated understanding that emerges only upon integration. This requires developing a predictive integrated simulation capability for magnetically-confined fusion plasmas that are properly validated against experiments in regimes relevant for producing practical fusion energy.

The specific institutional goal of the New York University was to participate in the planning of the edge integrated simulation, with emphasis on the usage of large scale HPCs, in connection with the SciDAC CPES project which the PI was leading. New York University successfully completed its mission by participating in the various planning activities, including the edge physics integration, the edge science drivers, and the mathematical verification. The activity resulted in the combined report that can be found in http://www.pppl.gov/fsp/Overview.html. Participation and presentations as part of this project are listed in a separate file.
Attachment I - Presentations at Conferences:


C.S. Chang, “Anticipated XGC1 capability in 3-5 years,” FSP Workshop, General Atomics, San Diego, CA, February 8-11, 2011


C.S. Chang, Extreme Scale Computing with the Fusion Particle Code XGC1,” Fall Creek Falls Conference, The University of Tennessee, October 24-27, 2010


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