

Scientific and Computational Challenges of the Fusion Simulation Program



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Seminar Series

Presented by...

William M. Tang

- Princeton Plasma Physics Laboratory
- Princeton University



Abstract Professor Tang will discuss the scientific and computational challenges facing Fusion Energy Sciences research.

Reliable modeling capabilities in Fusion Energy Sciences are expected to require computing resources at the petascale (10^{15} floating point operations per second) range and beyond to address ITER burning plasma issues.

This provides the key motivation for the Fusion Simulation Program (FSP) – a new U.S. Department of Energy initiative supported by its Offices of Fusion Energy Science and Advanced Scientific Computing Research – that is currently in the program definition/planning phase.

The primary objective of the FSP is to enable scientific discovery of important new plasma phenomena. 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.

More info

<http://www.pppl.gov/>

June 8, 2011

**BSF 1007
Darwin Room**

1:00 – 2:00 pm