Mem. S.A.It. Suppl. Vol. 1, 220

Memorie della
Supplementi

Issues in Advanced Computing: A US Perspective

Robert Rosner[123] ⋆

[1] Enrico Fermi Institute, The University of Chicago

[2] Departments of Astronomy & Astrophysics and Physics, The University of Chicago

[3] Argonne National Laboratory

Abstract. I give a review of the situation in USA in the field of supercomputing. After the necessary distinction between advanced- and high-performance computing, I sketch both the various program areas (networking, grid computing, scalable numerical tools, etc.) and the major advanced computing science initiatives, from the data-intensive science (virtual observatories, digital sky surveys, bioinformatics, etc.) to complex systems science (multi-physics/multi-scale numerical simulations with related problems of code verification and validation).

Key words. Advanced and high-performance computing

⋆ Contact email address: rrosner@flash.uchicago.edu