Remembrances and Reflections on Supercomputing

David R. Kincaid
Computer Sciences Department
University of Texas at Austin
kincaid@cs.utexas.edu

Abstract

Reflections on a career in the Center for Numerical Analysis at The University of Texas at Austin. Under the directorship of Professor David M. Young, our research was concerned with the development of iterative algorithms and software for solving large sparse systems of linear algebraic equations of the type that typically arise in the numerical solution of partial differential equations. My work resulted in the development of several software packages such as the Basic Linear Algebra Subprogram (BLAS 1.0), Symmetric Iterative Methods Package (ITPACK 1A to 2D), ELLPACK, and the Non-symmetric Preconditioned Conjugate Gradient Package (NSPCG). Remembrance of modifying code and adapting algorithms for use o on supercomputers as they evolved from serial to vector to parallel to parallel-vector to clusters on machines such as the CDC6600, Cray 1, XMP, YMP and IBM Power 5 as well as the present day Dell Linux cluster.