The Colorado State University Computer Science Department presents:

Two Topics in Computer Science, One Numerical and One Curricular

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11:00-11:50, October 27, 2008, 118 Shepardson, Colorado State University

Abstract

Part 1: Memory efficient linear algebra software

While competing linear algebra algorithms have traditionally been compared in terms of floating-point operation costs, it has long been known that the reduction of memory access costs is essential to attaining good performance. How to achieve such a reduction is becoming increasingly difficult. Improvements in microprocessors and in the numerical algorithms themselves mean that the arithmetic costs are decreasing and that memory costs can predominate. We will give an overview of our work on algorithm and tool development for reducing memory costs in linear algebra computations.

Part 2: Bringing more women to the study of computer science

Many social scientists conduct research on increasing the participation of women in computing. In the academic world, however, it is the computer science faculty who must find ways of implementing their findings. We have carried out a study of the computer science course offerings at the University of Colorado at Boulder, identifying courses that consistently have higher than average female enrollment. We will describe the features of those courses that contribute to their success in bringing women into the department.

After a stint as department chair and a year’s sabbatical, Liz is back in the regular saddle and is happy to have conversations about joint research interests.