Applied Mathematics
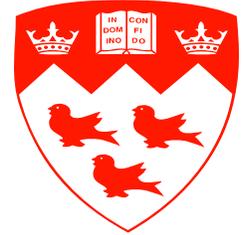
McGill Applied Mathematics Seminar Series

Monday 29 September 2003

Prof Chris Paige (joint work with Zdeněk Strakoš)
Computer Science
McGill University

Title: "Accuracy and Effectiveness of Krylov Space Methods"
Time: 2:35 pm   Room: Burnside 1205

Coffee and refreshments will be served after the seminar

Abstract: The finite precision behaviours of the closely related Lanczos and Conjugate Gradients algorithms are quite different from what was expected mathematically. Even so, intelligent use of them still provides accurate and meaningful results, and today they are the basic tools of choice for many problems involving large matrices.

We give a brief history illustrating the above, and indicate how our understanding of these algorithms has developed over the last 53 years.

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Krylov & Lanczos