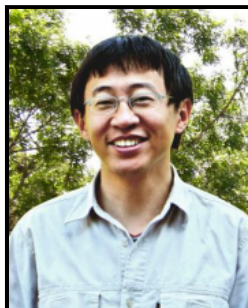




## Events

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## Computational Mathematics Seminar Series

**An Adaptive Preconditioned Nonlinear Conjugate Gradient Method with Limited Memory****Hongchao Zhang, LSU**

Assistant Professor, Department of Mathematics

Johnston Hall 338

November 29, 2011 - 03:30 pm

**Abstract:**

Nonlinear conjugate gradient methods are an important class of methods for solving large-scale unconstrained nonlinear optimization. However, their performance is often severely affected when the problem is very ill-conditioned. In the talk, efficient techniques for adaptively preconditioning the nonlinear conjugate method in the subspace spanned by a small number of previous searching directions will be discussed. The new method could take advantages of both nonlinear conjugate methods and limited-memory BFGS quasi-Newton methods, and achieves significant performance improvement compared with CG\_DESCENT conjugate gradient method and L-BFGS quasi-Newton method.

**Speaker's Bio:**

Hongchao Zhang is an Assistant Professor jointly in the Mathematics Department and the Center for Computation & Technology (CCT) at Louisiana State University. He received a Ph.D. degree in the Department of Mathematics from the University of Florida. His research interests are nonlinear optimization theory, algorithms and application.

**Refreshments will be served.****This lecture has a reception.**