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Computational Mathematics Seminar Series

A Fast Algorithm for Polyhedral Projection**Hongchao Zhang, Louisiana State University**

Associate Professor

Digital Media Center 1034
March 10, 2015 - 03:30 pm**Abstract:**

In this talk, we discuss a very efficient algorithm for projecting a point onto a polyhedron. This algorithm solves the projection problem through its dual and fully exploits the sparsity. The SpaRSA (Sparse Reconstruction by Separable Approximation) is used to approximately identify active constraints in the polyhedron, and the Dual Active Set Algorithm (DASA) is used to compute a high precision solution. Some interesting convergence properties and very promising numerical results compared with the state-of-the-art software IPOPT and CPLEX will be discussed in this talk.

Speaker's Bio:

Hongchao is an Associate Professor in the Department of Mathematics and the Center for Computation and Technology at Louisiana State University. His research focuses on nonlinear optimization theory, algorithms and its broad applications.

