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SEMINAR OF NUMERICAL ANALYSIS

➤ **WEDNESDAY 24 FEBRUARY 2016 - ROOM CM09 - 16h15**

Dr. John PEARSON (University of Kent, UK) will present a seminar entitled:

“Fast interior point solvers for PDE-constrained optimization problems”

Abstract:

In this talk we consider the effective numerical solution of PDE-constrained optimization problems. Upon discretization, these may give rise to problems of quadratic or nonlinear programming form: a sensible solution strategy is to apply an interior point method, provided one can solve the large and structured matrix systems that arise at each Newton step. We therefore consider fast and robust preconditioned iterative methods for these systems. Having motivated and derived our recommended preconditioners, and shown some theoretical results on saddle point systems, we present numerical results demonstrating the potency of our solvers.

Lausanne, 19 January 2016/DK/cr