Biographical Sketch, Jorge Nocedal

Education:

Ph.D. in Mathematical Sciences, Rice University, 1974–1978.
B. Sc. in Physics, National University of Mexico, 1970–1974.

Professional Experience:

EECS Department, Northwestern University:

Bette and Neison Harris Professor of Teaching Excellence 1998
Professor, 1992–present
– Associate Professor, 1986–1992
Assistant Professor, 1983–1985.

Courant Institute of Mathematical Sciences, NYU, Postdoc, 1981–1983.

IIMAS, National University of Mexico, Assistant Professor, 1978–1981.

Synergistic Activities:

Founding Director (with Steve Wright), Optimization Technology Center, 1994.

SIAM Review, Associate Editor 2006–present.

SIAM Journal on Optimization, Associate Editor, 1989–present.

Mathematical Programming, Associate Editor, 1989–present.

Author of the book "Numerical Optimization", 2nd edition, Springer, 2006.

Ten Publications Most Closely Related to the Proposed Project.
(Authors are listed in alphabetical order in all publications.)

1. Wedge Trust Region Methods for Derivative Free Optimization, *Mathematical Programming A*, vol 91, No. 2, pp. 289–305, with M. Marazzi, 2002.

2. An Interior Algorithm for Nonlinear Optimization that Combines Line Search and Trust Region Steps, *Mathematical Programming A*, vol. 102, pp. 391-408, with R. Waltz, J.L. Morales and D. Orban, 2006.

3. On the Convergence of Newton Iterations to Non-Stationary Points, *Mathematical Programming A*, vol 99. pp. 127–148, with M. Marazzi, 2004.

4. Interior Point Methods for Mathematical Programs with Complementarity Constraints, *SIAM. J. Optimization*, 17, 1, pp: 52-77, with G. Lopez-Calva and S. Leyffer, 2006.
5. On the Convergence of Successive Linear Programming Algorithms, *SIAM J. Optimization*, 16,2, pp.471-489, with R. Byrd, N. Gould and R. Waltz (2005).
6. An Active-Set Algorithm for Nonlinear Programming Using Linear Programming and Equality Constrained Subproblems, *Mathematical Programming B*, 100, 1, pp. 27-48, (2004).
7. A Trust Region Method Based on Interior Point Techniques for Nonlinear Programming, *Mathematical Programming A*, 89: 149-185 (2000) with R. Byrd and J.C. Gilbert.
8. PREQN: FORTRAN Routines for Preconditioning the Conjugate Gradient Method (1999), *ACM Transactions on Mathematical Software*, 27,1, pp.83-91, (2001), with J.L. Morales.
9. A Starting Point Strategy for Nonlinear Interior Methods, *Applied Math. Letters*, Vol 17, pp.945–952, with M. Gertz and A. Sartanaer, (2004).
10. An Interior Point Method for Large Scale Nonlinear Programming (1999), *SIAM J. Optimization*, 9,4, pp.877-900, with R. Byrd and M.B. Hribar.

Software: Developer of L-BFGS, LBFGS-B, KNITRO and WEDGE, four widely used optimization software packages.

Distinctions:

ISI Highly Cited Researcher (Mathematics category).

Invited speaker: International Congress of Mathematicians, Berlin 1998.

Research Collaborators:

Collaborators during the last 48 months: Richard Byrd (University of Colorado), Nick Gould (Oxford University), Sven Leyffer (Argonne), Stephen Wright (University of Wisconsin),

Graduate Students and Postdoctoral Associates:

The PI has supervised the following graduate students during the past five years: Richard Waltz, Gabriel Lopez, Long Hei, Frank Curtis. The following postdoctoral scholars have worked with him at Northwestern University: Michael Gertz, Jean Pierre Goux, and Dominique Orban

Thesis Advisor:

Richard Tapia, Rice University.