

# Stanford

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## Walter Murray

Professor (Research) of Management Science and Engineering, Emeritus

### Bio

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#### BIO

Professor Murray's research interests include numerical optimization, numerical linear algebra, sparse matrix methods, optimization software and applications of optimization. He has authored two books (Practical Optimization and Optimization and Numerical Linear Algebra) and over eighty papers. In addition to his University work he has extensive consulting experience with industry, government, and commerce.

#### ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Management Science and Engineering
- Member, Institute for Computational and Mathematical Engineering (ICME)

#### PROFESSIONAL EDUCATION

- PhD, London University (1969)

### Publications

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#### PUBLICATIONS

- **A local relaxation method for the cardinality constrained portfolio optimization problem** *COMPUTATIONAL OPTIMIZATION AND APPLICATIONS*  
Murray, W., Shek, H.  
2012; 53 (3): 681-709
- **Measurement of the jet fragmentation function and transverse profile in proton-proton collisions at a center-of-mass energy of 7 TeV with the ATLAS detector** *EUROPEAN PHYSICAL JOURNAL C*  
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- **Search for New Particles in Two-Jet Final States in 7 TeV Proton-Proton Collisions with the ATLAS Detector at the LHC** *PHYSICAL REVIEW LETTERS*  
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- **An algorithm for nonlinear optimization problems with binary variables** *COMPUTATIONAL OPTIMIZATION AND APPLICATIONS*  
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- **Charged-particle multiplicities in pp interactions at root s=900 GeV measured with the ATLAS detector at the LHC** *ATLAS Collaboration PHYSICS LETTERS B*  
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- **Muscle moment arms in the first dorsal extensor compartment after radial malunion. A cadaver study.** *journal of bone and joint surgery. American volume*  
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- **The ATLAS Experiment at the CERN Large Hadron Collider** *JOURNAL OF INSTRUMENTATION*  
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2008; 3
- **George B. Dantzig and systems optimization** *DISCRETE OPTIMIZATION*  
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- **A local relaxation approach for the siting of electrical substation** *COMPUTATIONAL OPTIMIZATION AND APPLICATIONS*  
Murray, W., Shanbhag, U. V.  
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- **The effect of percutaneous pin fixation of the interphalangeal joint on the thumb-tip force produced by the flexor pollicis longus: A Cadaver study** *JOURNAL OF HAND SURGERY-AMERICAN VOLUME*  
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- **UTERINE DEFENSE-MECHANISMS AND PYOMETRA IN MARES** *COMPENDIUM ON CONTINUING EDUCATION FOR THE PRACTICING VETERINARIAN*  
Murray, W. J., Peter, A. T.  
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- **INERTIA-CONTROLLING METHODS FOR GENERAL QUADRATIC-PROGRAMMING** *SIAM REVIEW*  
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