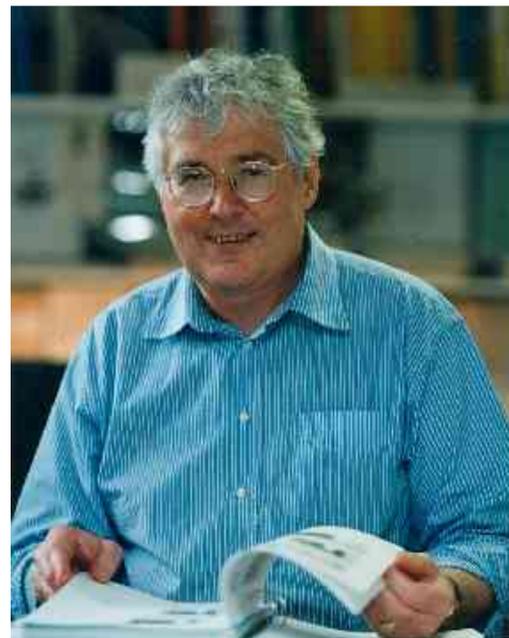


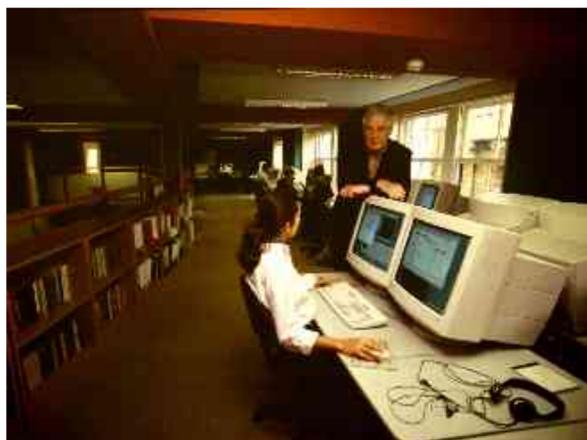
Michael Dempster

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Michael Dempster's contributions to Stochastic Programming date back to his doctoral dissertation entitled "On Stochastic Programming," written under the supervision of M. H. De Groot and M.M. Rao at Carnegie Mellon University (1965). Over the past four decades, Michael has worked on Stochastic Programming (SP), and its applications in scheduling, finance, and other areas. Among his early contributions to SP, he studied the solvability of 2-stage stochastic programs and provided a bridge between stochastic programming and related statistical decision problems. Subsequently (also in the late 1960's), he also introduced the use of interval arithmetic to SP. While this summary focuses on his contributions in stochastic programming, Michael has very broad interests, ranging from optimal control and linear complementarity, to mathematical biology and telecommunications.

Michael Dempster has played a leading role in SP in a variety of ways: he was the organizer of the First International Conference on Stochastic Programming at Oxford in 1974; in collaboration with John Birge, Gus Gassman, Eldon Gunn, Alan King, and Stein Wallace, Michael Dempster participated in the creation of the SMPS standard, the most widely-used data format for SP instances; he edited several conference proceedings, and journals, including his most recent editorial position as the co-editor-in-chief of *Quantitative Finance*. Michael Dempster has been the recipient of several awards, including the 1999 D.E. Shaw best paper award for a paper on Computational Finance, entitled "LP valuation of exotic American options" (with J. P. Hutton & D. G. Richards).



Selected Contributions

- Solvability of 2-stage SP and related statistical decision problems using positive order and generalised matrix inverses, *J. Mathematical Analysis & Applns* (1968)
- *Stochastic Programming (1980)*, Edited proceedings of the 1974 Oxford Conference treating theory, numerical methods and a broad range of applications
- Asymptotic theory of 2 and 3-stage SP problems of hierarchical planning and scheduling with M. L. Fisher, J. L. Lenstra and A. H. G. Rinnooy Kan, *Operations Research* (1981), *Math of OR* (1983)
- Dynamic SP (DSP) models for asset-liability management: MIDAS debt management model with A. M. Ireland and H. I. Gassmann, Watson Wyatt pension fund model with X. Corvera & D. Wilkie, *Decision Support Systems* (1991)
- Provided an axiomatic theory of rates of convergence for numerical algorithms with J. Barzilai, *J. Optimization Theory and Applns* (1993)
- Established linear convergence of the Kelly cutting plane algorithm with R.R. Merkovsky, *SIAM J. Numerical Analysis* (1995)
- LP valuation of exotic American options with J. P. Hutton & D G Richards, *Computational Finance* (1998) (D. E. Shaw best paper award (1999)).