

Kenneth R. Baker

Education

A.B. Harvard College, 1965 (Engineering and Applied Physics)
Ph.D. Cornell University, 1969 (Operations Research)

Present Positions

Nathaniel Leverone Professor of Management, Tuck School of Business, Dartmouth College
Adjunct Professor of Engineering, Thayer School of Engineering, Dartmouth College

Previous Positions

Professor of Operations Management, Dartmouth College (1979-89)
Associate Professor of Business Administration, Duke University (1973- 79)
Assistant Professor of Industrial Engineering, University of Michigan (1969-72)

Visiting and/or Adjunct Faculty Positions

University of Arizona (2001, 2002)
Vermont Law School (1996, 1997)
Harvard University (1994)
University of Michigan (1993)
Eindhoven University of Technology, The Netherlands (1979-80)
University of Waterloo, Canada (1976)
North Carolina State University (1972-73, 1976)

Administrative Positions

Co-Director, MEM Program (2000-2011)
Associate Dean, The Amos Tuck School (1998-2000)
Associate Dean of Faculty, The Amos Tuck School (1990-1993)

MBA Courses Taught

Applications of Optimization
Quantitative Problem Solving
Decision Science
VBA Programming
Quality Management
Production Planning and Control
Environmentally Conscious Manufacturing

Textbooks

Optimization Modeling with Spreadsheets, Duxbury Press, (2006) Second edition, John Wiley & Sons (2011), Third edition (2016).

Management Science: The Art of Modeling with Spreadsheets (with Steve Powell), John Wiley and Sons (2004). Portuguese version, *A Arte da Modelagem com Planilhas*, LTC (2006). Second edition (2007), Update edition (2008), Third edition (2010), Fourth edition 2014.

Management Science: An Introduction to the Use of Decision Models, (with Dean Kropp), John Wiley and Sons (1985).

Introduction to Sequencing and Scheduling, John Wiley and Sons (1974). Revised as *Elements of Sequencing and Scheduling*, 1992, 1995. Revised and extended as *Principles of Sequencing and Scheduling*, with Dan Trietsch, 2009.

Editorial Positions

Founding Associate Editor, *International Journal of Planning and Scheduling* (2011-2015)

Associate Editor, *Journal of Scheduling* (1997-2004)

Senior Editor, *Manufacturing and Service Operations Management* (1996- 2002)

Editorial Board, *Journal of Manufacturing and Operations Management* (1987-92)

Associate Editor for Logistics, *Management Science* (1976-82)

Editorial Board, *IIE Transactions* (1970-76)

Editor, *OR Division Newsletter*, IIE (1970-73)

Awards

Fellow, Manufacturing and Service Operations Management (MSOM) Society, 2001.

Fellow, Institute for Operations Research and the Management Sciences (INFORMS), 2004.

Handbook Chapters

"Requirements Planning," Chapter 11 in *Logistics of Production and Inventory* (S. Graves, A. Rinnooy Kan and P. Zipkin, eds.), *Handbooks in Operations Research and Management Science*, Vol. 4, Elsevier, 1993.

"Sequencing: The Shortest Processing Time Rule," Chapter 1 in *Building Intuition: Insights from Basic Operations Management Models and Principles* (D. Chhajed and T. Lowe, eds.) *International Series in Operations Research and Management Science*, Springer, 2008.

Major Articles

"Priority Dispatching in the Single Channel Queue with Sequence-Dependent Setups," *Journal of Industrial Engineering* (April, 1968).

"An Experimental Comparison of Solution Algorithms for the Single-Machine Tardiness Problem," (with J.B. Martin) *Naval Research Logistics Quarterly* (March, 1974).

"Scheduling Full-Time and Part-Time Staff to Meet Cyclic Requirements," *Operational Research Quarterly* (March, 1974).

- "An Experimental Study of the Effectiveness of Rolling Schedules in Production Planning," *Decision Sciences* (Special issue on Operations Management, January, 1977).
- "Dynamic Programming Solution of Sequencing Problems with Precedence Constraints," (with L.E. Schrage) *Operations Research* (May-June, 1978).
- "The Effects of Input Control in a Simple Scheduling Model," *Journal of Operations Management* (February, 1984).
- "Scheduling Rules and Due Date Assignments in a Job Shop," *Management Science* (September, 1984).
- "The Effect of Commonality on Safety Stock in a Simple Inventory Model," (with M.J. Magazine and H.L.W. Nuttle) *Management Science* (August, 1986).
- "Flow Shop Scheduling with Lot Streaming," (with C.N. Potts) *Operations Research Letters* (December, 1989).
- "Sequencing With Earliness and Tardiness Penalties: A Review," (with G.D. Scudder), *Operations Research* (January-February, 1990).
- "Buffered and Unbuffered Assembly Systems with Variable Processing Times," (with S.G. Powell and D.F. Pyke) *Journal of Manufacturing and Operations Management* (Fall, 1990).
- "Tightly-Coupled Production Systems: Models, Analysis, and Insights," *Journal of Manufacturing Systems* Vol. 11, No. 6 (1992).
- "Scheduling Groups of Jobs on a Single Machine," (with S. Webster) *Operations Research* Vol. 43, No. 4 (1995), 692-703.
- "Heuristic Procedures for Scheduling Job Families with Setups and Due Dates," *Naval Research Logistics* Vol. 46, No. 8 (1999) 978-991.
- "Minimizing Maximum Lateness with Job Families," (with M.J. Magazine) *European Journal of Operational Research* Vol. 127, No. 1 (2000).
- "On the Use of Integer Programming vs. Evolutionary Solver in Spreadsheet Optimization," (with J. Camm), *INFORMS Transactions on Education* 5, 3, May, 2005.
- "Safe Scheduling" (with Dan Trietsch) Chapter 5 in *Tutorials in Operations Research* (T. Klastorin, ed.) INFORMS, 2007.
- "A Critical Review of the Literature on Spreadsheet Errors," (with S. Powell and B. Lawson) *Decision Support Systems* 46 (2008) 128-138.
- "Safe Scheduling: Setting Due Dates in Single-Machine Problems," (with D. Trietsch) *European Journal of Operational Research* 196 (2009) 69-77.
- "Solving Sequencing Problems in Spreadsheets," *International Journal of Planning and Scheduling* 1 (2011) 3-18.