DAVID L. WOODRUFF
Curriculum Vitae
Feb 2012

Graduate School of Management
University of California at Davis
Davis, CA 95616
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EDUCATION:	Ph.D., Northwestern University, 1990 (Industrial Engineering and Management Sciences)
	M.S., Stanford University, 1980 (Industrial Engineering and Engineering Management)
	B.S., Stanford University, 1979 (Industrial Engineering and Engineering Management)
EMPLOYMENT:	Professor, Graduate School of Management, University of California, Davis, 2001-present.
	Associate Dean, Graduate School of Management, University of California, Davis, 2007-2010.
	Visiting Professor, Abteilung Wirtschaftsinformatik und Informationsmanagement, Technische Universität, Braunschweig, Germany, 1998-1999.
	Associate Professor, Graduate School of Management, University of California, Davis, 1996-2001.
	Assistant Professor, Graduate School of Management, University of California, Davis, 1990-1996.
	Research Assistant, Northwestern University, Evanston, IL; Production Planning Project for an IBM plant in Austin, TX, 1987-1990.
	Programmer Analyst, RMT, Inc., Madison, WI, 1985-1987.
	Lecturer, Management Department, University of Wisconsin, Whitewater, 1985-1987.
	President, Jewelers Computer Applications, Inc., Madison, WI, 1982-1986.
	Manager of Computing Facilities, Silvar-Lisco, Inc., Palo Alto, CA, 1980-1981.
RESEARCH INTERESTS:	Stochastic Programming and Planning Under Uncertainty
	Heuristic search optimization techniques.
	Production and supply chain planning.
	Robust multivariate data analysis.
	Energy Planning

PAPERS IN JOURNALS and REFEREED EDITED VOLUMES

"A Hierarchical Control Architecture for Constant Work-in-Process (CONWIP) Production Systems," with W.J. Hopp and M.L. Spearman, *Journal of Manufacturing and Operations Management* **2**:3 (1989) 147-171.

"CONWIP: A Pull Alternative to Kanban," with M.L. Spearman and W.J. Hopp, *International Journal of Production Research* **28**:5 (1990) 879-894.

"Practical Strategies for Lead Time Reduction," with W.J. Hopp and M. L. Spearman, *Manufacturing Review* **3**:2 (1990) 78-84.

"Sequencing and Batching for Two Classes of Jobs with Deadlines   and Setup Times," with M.L. Spearman, *Production and Operations Management* **1**:1 (1992), 87-102.

"Hashing Vectors for Tabu Search," with E. Zemel, *Annals of Operations Research* **41** (1993) 123-137.

"Computation of Robust Estimates of Multivariate Location and Shape," with D.M. Rocke, *Statistica Neerlandica* **47** (1993) 27-42.

 "Heuristic Search Algorithms for the Minimum Volume Ellipsoid," with D.M. Rocke, *Journal of Computational and Graphical Statistics* **2** (1993) 69-95.

"Tabu Search and Simulated Annealing: Lessons from a Line Search," *Computers and Operations Research*, **21**:8 (1994) 823-839.

"Computable Robust Estimation of Multivariate Location and Shape in High Dimension Using Compound Estimators," with D.M. Rocke, *Journal of the American Statistical Association*, **89** (1994), 888-896.

"Ghost Image Processing for Minimum Covariance Determinant Estimators" *ORSA Journal on Computing* **7** (1995), 468-473.

"Chunking Applied to Reactive Tabu Search," *Metaheuristics: Theory and Applications*, I.H. Osman and J.P. Kelly, eds., (1996) 555-570.

 "Identification of Outliers in Multivariate Data" with D.M. Rocke, *Journal of the American Statistical Association,* **91**, (1996) 1047-1061.

"Progressive Hedging and Tabu Search Applied to Mixed Integer (0,1) Multistage Stochastic Programming" with Arne Løkketangen, *Journal of Heuristics*, **2,** 111-128, 1996.

 "Robust Estimation of Multivariate Location and Shape,'' with D.M. Rocke *Journal of Statistical Planning and Inference*, **57**, 245-255, 1997.

"Proposals for Chunking and Tabu Search," *European Journal of Operations Research*, 106, 585-598, 1998.

 "A Class of Stochastic Programs with Decision Dependent Random Elements" with T.W. Jonsbråten and R. J.-B. Wets, *Annals of Operations Research,* 82, 83-106, 1998.

 "A Chunking Based Selection Strategy for Integrating Meta-Heuristics with Branch and Bound, *Meta-Heuristics: Advances and Trends in Local Search Paradigms for Optimization*, Voß et al eds., Kluwer, 499-511, 1998.

"Solving the Medium Newspaper Production/Distribution Problem" with M. van Buer and R. T. Olson *European Journal of Operations Research*, 115, 237-253, 1999.

 "Some Computational Issues in Cluster Analysis with no a priori Metric," with Coleman, Dong, Hardin and Rocke, *Computational Statistics and Data Analysis*, 31, 1-11, 1999.

"Optimal Selection of Subsets of Sizes for Production" with S. Jorjani and C.H. Scott, *International Journal of Production Research*, 37, 3697-3710, 1999.

"Scatter Search to Generate Diverse MIP Solutions,'' with F. Glover and A. Løkketangen in *Computing Tools for Modeling Optimization and Simulation*, Laguna and Velarde eds., 299-320, Kluwer, 2000.

"Integrating Pivot Based Search with Branch and Bound for Binary MIPs'' with Arne Løkketangen, *Control and Cybernetics,* 29, 741-759, 2000.

"Cluster Analysis for Large Data Sets: Efficient Algorithms for Maximizing the Mixture Likelihood" with D.A. Coleman, *Journal of Computational and Graphical Statistics*, 9, 672-688, 2000.

"Progressive Hedging as a Meta-Heuristic Applied to Stochastic Lot-Sizing,'' with Kjetil Haugen and Arne Løkketangen, *European Journal of Operations Research,* 132, 103-109, 2001.

"Discussion of 'Multivariate Outlier Detection and Robust Covariance Matrix Estimation," by D. Peña and F.J. Prieto" with D.M. Rocke, *Technometrics*, 43, 300-303, 2001.

"Object-Oriented Programming," with A. Fink and S. Voß in P.P. Pardalos und M.G.C. Resende (Eds.), Handbook of Applied Optimization, Oxford University Press, New York, 1053-1062, 2002.

"Optimization Software Libraries," with A. Fink and S. Voß, in P.P. Pardalos und M.G.C. Resende (Eds.), Handbook of Applied Optimization, Oxford University Press, New York, 1016-1024, 2002.

"Optimization Software Class Libraries," with S. Voß, in Optimization Software Class Libraries, S. Voβ and D.L. Woodruff, (Eds.), Kluwer Academic Press, 1-23, 2002.

"Interdicting Stochastic Networks with Binary Interdiction Effort," with R. Schultz and R. Hemmecke in D.L. Woodruff (Ed.) Network Interdiction and Stochastic Integer Programming, Kluwer Academic Press, 69-84, 2003.

"Metaheuristic Class Libraries," with A. Fink and S. Voß, in F. Glover and G.A. Kochenberger (Eds.), Handbook of Metaheuristics, Kluwer Academic Publishers, Boston, 515-535, 2003.

"Experiments with, and on, Algorithms for Maximum Likelihood Clustering," with Torsten Reiners, *Computational Statistics and Data Analysis*, 47/2 (2004), 237-253.

"Discrimination Models using Variance-Stabilizing Transformation of Metabolomic NMR Data," with P. Purohit, D.M. Rocke and M. R. Viant, *OMICS*, 2004, 8(2).

"General Purpose Metrics for Solution Variety," in *Adaptive Memory and Evolution: Tabu Search and Scatter Search*, edited by Cesar Rego and Bahram Alidaee, Kluwer Academic Publishers.

"Beam Search for Peak Alignment of NMR Signals" Analytica Chemica Acta, 513/2 (2004) pp 413-416, with Geun-Cheol Lee.

"A Distance Function to Support Optimized Selection Decisions," with Arne Løkketangen, *Decision Support Systems,* Vol 39 (2005) pp 345-354.

"A Decomposition Algorithm Applied to Planning the Interdiction of Stochastic Networks," with Harald Held and Raymond Hemmecke, *Naval Research Logistics*, 52 (2005), 321-328.

"Load Dependent Lead Times – From Empirical Evidence to Mathematical Modeling," with Julia Pahl and Stefan Voß, in: Kotzab, H., Seuring, S., Müller, M., Reiner, G. (eds.) (2005): *Research Methodologies in Supply Chain Management*, Physica-Verlag, Heidelberg, pp. 540-554.

""Heuristics for Multi-stage Interdiction of Stochastic Networks" with Harald Held, *Journal of Heuristics*, 11 (2005). 483-500.

"Production planning with load dependent lead times" with Julia Pahl and Stefan Voß, *4OR: A Quarterly Journal of Operation Research*, 3 (2005), 257 – 302.

"Automated Screening for Metabolites in Complex Mixtures using 2D COSY NMR Spectroscopy," with Yuanxin Xi, Jeffrey S. de Ropp, Mark Viant and Ping Yu, *Metabolomics*, 2 (2006). 221-233.

"A New Computer Program (GlycoX) To Determine Simultaneously the Glycosylation Sites and Oligosaccharide Heterogeneity of Glycoproteins," with Hyun Joo An, John S. Tillinghast, David M. Rocke, and Carlito B. Lebrilla, *Journal of Proteome Research*, vol 5, No 10, pp 2800 - 2808, 2006.

"Production Planning with Load Dependent Lead Times: An Update of Research," with Julia Pahl and Stefan Voß, *Annals of Operations Research*, 153(1):297-345, 2007.

"Heuristic Search for 2D NMR Alignment to Support Metabolite Identification," Geun-Cheol Lee, Jeff de Ropp, Mark R. Viant, David L. Woodruff, Ping Yu in Bo Chen, Mike Paterson and Guochuan Zhang (eds.), *Combinatorics, Algorithms, Probabilistic and Experimental Methodologies, First International Symposium, ESCAPE*, Springer Lecture Notes in Computer Science, pages 447-458, 2007.

"Human-guided enhancement of a stochastic local search: Visualization and adjustment of 3D pheromone," Sreevalsan-Nair, J., Verhoeven, M., Woodruff, D.L., Hotz, I. and Hamann, B., in: Stuetzle, T., Birattari, M. and Hoos, H.H., eds.,*Proceedings of Engineering Stochastic Local Search Algorithms (SLS) 2007, Lecture Notes in Computer Science (LNCS) Series*, Vol. 4638, Springer-Verlag, Heidelberg, Germany, pp. 182-186, 2007.

"Experiments Concerning Sequential versus Simultaneous Maximization of Objective Function and Distance," with Peter Greistorfer, Arne Løkketangen and Stefan Voß, *Journal of Heuristics*, 14 (2008) 613-625.

"Improved Identification of Metabolites in Complex Mixtures using HSQC NMR Spectroscopy," Yuanxin Xi, Jeffrey S. de Ropp, Mark R. Viant, David L. Woodruff and Ping Yu, *Analytica Chimica Acta*, 2008 May 5;614(2):127-33.

"Optimizing Paths in the Presence of Spherical Impediments" with M. Verhoeven in J.W. Chinneck, B. Kristjansson, and M. Saltzman (eds.) *Operations Research and Cyber-Infrastructure*, Springer, 2008, pp341-361.

"How to Select a Small Set of Diverse Solutions to Mixed Integer Programming Problems: Good News and Bad News" with E. Dana, *Operations Research Letters*, 37 (4), p.255-260, Jul 2009.

"Parametric models of local search progression" with Johan Oppen, *Intl. Trans. in Op. Res*. 16 (2009) 627–640.

'Scalable Heuristics for a Class of Chance Constrained Stochastic Programs" with J.P. Watson and R. J.-B. Wets, *INFORMS Journal on Computing*, Vol. 22, No. 4, Fall 2010, pp. 543-554.

"Progressive Hedging Innovations for a Class of Stochastic Mixed-integer Resource Allocation Problems," with Jean-Paul Watson, *Computational Management Science*, Volume 8, Issue 4 (2011), Page 355-370.

"Research Note: The Point of Diminishing Returns in Heuristic Search," with Ulrike Ritzinger and Johan Oppen, *Int. J. Metaheuristics,* Vol. 1, No. 3, 2011*,* 222-231.

"Pyomo: Modeling and Solving Mathematical Programs in Python," with William E. Hart and Jean-Paul Watson, *Mathematical Programming Computation*, 2011, Vol 3, No. 3, 219-260.

 Modeling and solving a large-scale generation expansion planning problem under uncertainty," with Shan Jin, Sarah Ryan, and Jean-Paul Watson, *Energy Systems*: Volume 2, Issue 3 (2011), Page 209-242.

"PySP: modeling and solving stochastic programs in python," with William E. Hart and Jean-Paul Watson, *Mathematical Programming Computation*, 2012, Vol 4, No. 2.

EDITED VOLUMES:

Advances in Computational and Stochastic Optimization, Logic Programming, and Heuristic Search, Kluwer Academic Press, 1998.

Optimization Software Class Libraries, with Stefan Voβ, Kluwer Academic Press, 2002.

Network Interdiction and Stochastic Integer Programming, Kluwer Academic Press, 2003.

MONOGRAPHS:

Introduction to Computational Optimization Models for Production Planning in a Supply Chain, with S. Voß, Springer, 2003.

Pyomo: Optimization Modeling in Python, with W.E. Hart, C. Laird and J.-P. Watson, Springer, 2012.

PAPERS IN
CONFERENCE
PROCEEDINGS:

"Sub-Contracting When there are Setups and Deadlines," *Proceedings of the Intelligent Systems Symposium,* ORSA/TIMS Fall Conference, 1992.

"Computation of High-Breakdown Estimates of Multivariate Location and Shape," with D.M. Rocke, *Proceedings of the Stat. Comp. Sect. Of the ASA*, 1992.

"Building Reusable Software Components for Heuristic Search," with A. Fink and S. Voß, *Operaions Research Proceedings 1998*, P. Kall, and H.-j. Lüthi, eds., 210-219, Springer, Berlin, 1998.

"Integrating Pivot Based Search with Branch and Bound for Binary MIPs," with A. Løkketangen, in Nordic MPS 98 Proceedings, A. Løkketangen, Ed., (ISBN 82-90347-76-6), 1998.

"An Adoption Path for Heuristic Search Componentware," with A. Fink and S. Voß, *Proceedings of the Informs Conference on Information Systems and Technology*, E. Rolland and N.S. Umanth, Eds, 153-168, (ISBN 1-877640-15-8) 1999.

"Mining the Data From Experiments on Algorithms using Maximum Likelihood Clustering" with Torsten Reiners and Ramanpreet Singh, *Proceedings of the Informs Conference on Information Systems and Technology*, E. Rolland and N.S. Umanth, Eds, 235-254, (ISBN 1-877640-15-8) 1999.

"Supply Chain Management: Is mrp a good starting point?" with S.Voß, *Supply Chain Management,* Horst Wildemann, Ed., 177-203, (ISBN 3-931511-48-0), TCW Transfer-Centrum-Verlag, Munich, 2000.

"Computational Connections Between Robust Multivariate Analysis and Clustering," with David M. Rocke in *COMPSTAT 2002 Proceedings in Computational Statistics,* Wolfgang Härdle and Bernd Rönz eds., 255–260, Heidelberg: Physica-Verlag.

"Connecting mrp, MRP II and ERP – Supply Chain Production Planning via Optimization Models" with S.Voß, *Tutorials on Emerging Methodologies and Applications in Operations Research,* Harvey J. Greenberg, Ed., Springer, 2004.

Planning for a Big Bang in a Supply Chain: Fast Hedging for Production Indicators" with S. Voß, Proceedings of the HICSS, 2006.

"Extended Abstract for Hybrid Heuristic Search for 2D NMR Alignment to Support Compound Identification," with Geun-Cheol Lee, Jeff de Ropp, Mark R. Viant, and Ping Yu, in 4th EU/ME Workshop: Design and Evaluation of Advanced Hybrid Meta-Heuristics, 4-5 November 2004, Nottingham England, 2004.

"Production planning with deterioration constraints: A survey," Julia Pahl, Stefan Voß, and David L. Woodruff, In J.A. Ceroni (ed.) *The Development of Collaborative Production and Service Systems in Emergent Economies, Proceedings of the 19th International Conference on Production Research, IFPR*, Valparaiso, Chile, 2007.

"Formulating and Analyzing Multi-Stage Sensor Placement Problems," with Jean-Paul Watson, William Hart and Regan Murray, *Proceedings of Water Distribution System Analysis 2010 -- WDSA2010*, Tucson, AZ, USA, Sept. 12-15, 2010.

"Discrete Lot-Sizing and Scheduling with Sequence-Dependent Setup Times and Costs Including Deterioration and Perishability Constraints" with J. Pahl and S. Voß, Proceedings of the HICSS, 2011.

Teodor G. Crainic, Guido Perboli, Jean-Paul Watson, David L. Woodruff and Walter Rei, "A Stochastic Bin Paking Model for Logistical Capacity Planning," ODYSSEUS 2012.

"Long Term Resource Planning for Electric Power Systems Under Uncertainty," with S.M. Ryan and J.D. McCalley, White Paper in J.H. Eto and R.J. Thomas, eds. *Computational Needs for the Next Generation Electric Grid: Proceedings April 19-20 2011,* Department of Energy, Lawrence Berkeley National Laboratory, pages 7-1 to 7-72.

UNIVERSITY COMMITTEES; ADMINISTRATIVE POSITIONS	Director of Joint Degree Programs for the GSM, 2003-2007
	Chair, GSM Undergraduate Program Committee 2003-2005
	Chair, GSM Committee on Courses, 2005-2007
	Faculty Chair of the Graduate School of Management , 2001-2003, 2004-2005
	UCD Academic Senate Executive Council 2001-2003, 2004-2005
	UCD Committee on Educational Policy 2000 – 2002
	UCD Undergraduate Council 2002-2003
	UCD Network Operations Advisory Committee 1999 – 2001
	UCD Research Coordinating Council 2003-2007
	Scientific Advisory Board of IPFM, Prague, 2004-2008
	Associate Dean for Instructional Programs, GSM, 2007-2010
	Chair, GSM Educational Policy Committee, 2010-2011
	Member, GSM Executive Committee, 2010-2011
	Member, GSM Admissions Committee, 2011-2012
	Member, GSM Faculty Personnel Committee, 2011-

PROFESSIONAL AND EDITORIAL POSITIONS	Area Editor – Heuristic Search and Learning, INFORMS Journal on Computing, 2008-
	Area Editor - Methodology, Journal of Heuristics , 2003-2008
	Chair, INFORMS Computing Society, November 2001-November 2003
	Tutorial Chair, INFORMS National Meeting, November 2002
	Co-editor, Special Issue of Production and Operations Management, Vol. 6, No. 1 (1997)
	General Chair, 6th Informs Computer Science Technical Section Meeting; Monterey California, January 1998
	Vice-chair, Informs Computing Society, May 2000 – November 2001
	Editorial Board, International Journal of Production Research 1995-2004
	Editorial Review Board, Production and Operations Management 1995-2002
	Member, INFORMS Subdivision Council 2002-2004
	Associate Editor, International Journal of Mathematical Algorithms 1996-1998
	Associate Editor, INFORMS Journal on Computing 1998-2002
	Associate Editor, Naval Research Logistics 1992-2001
	Member, Search Committee for Editor INFORMS Tutorial Series, 2005
	Member of INFORMS TutORials Advisory Committee, 2005-
	Co-editor, Special Issue of INFORMS Transactions on Education, Integrating OR in Teaching Supply Chain Management, 2006
	Chair, INFORMS Computing Society Student Paper Award Committee, 2006
	Member, INFORMS Computing Society Service Award Committee, 2008

LIMITED DISTRIBUTION PAPERS AND REPORTS:	"Prioritering av Prosjektporteføljer når noen av Konsekvensene ikke lar seg måle I Kroner" with A. Løkketangen and James Odeck, Report 0301, Møeforsking, Molde, N6400 Norway, 2003.
	"Profittmaksimerende Produksjons- og Lagerstryingsmodeller Under Usidderhet," with K. Haugen, A. Løkketangen, B.Nygreen, and A. Olstad, Arbeidsrapport M9814, Møeforsking, Molde, N6400 Norway 1999.
	"A Class Library for Heuristic Search," *INFORMS Computer Science Technical Section Newsletter*, Vol 8 (1997), No 2, pages 1-5.

BOOK REVIEW:	Review of *Supply Chain Management and Advanced Planning* for *Interfaces,* 34-2 (2004) 164-165.

SERVICE AS A REFEREE:	Over 100 papers thoroughly reviewed for *Annals of OR, EJOR, IJFMS, IJPR, NRL, IIE Trans., IJOC, JCGS, Mgt. Sci., Opns. Res., OJOC, POM,* and many others.

GRANTS, AWARDS, HONORS:

DOE Green Electricity Networks Grant (ARPAe GENI), "Improved Power System Operations Using Advanced Stochastic Optimization", Co-PI. 2012-2014.

ORSA Doctoral Colloquium, 1988.

J.D. Scaiffe Award given for "CONWIP: A Pull Alternative to Kanban" by the Institution of Manufacturing Engineers, 1990.

Dissertation Competition of the Production and Operations Management Society, Runner-up 1991.

Teaching Award: Electives Courses Teacher of the Year, 94-95, 96-97, 00-01.

COURSES TAUGHT:

Management Information Systems

Systems Analysis and Design

Production and Operations Management

Decision Making and Management Science

Technology Management

Production Planning

Expert Systems

Managing Software Development

RESEARCH GRANTS:

National Science Foundation Research Grant DMS-93.01344; with D.M. Rocke.

National Science Foundation Mathematical Sciences Computing Research Environment Grant DMS -94.06193; Co-PI.

National Institute of Environmental Health Sciences, National Institutes of Health Grant P42 ES04699, Co-PI.

DuPont Corporate Educational Aid Grant with D.M. Rocke for research in "Outlier and Cluster Identification for Multivariate Process Data," 1995 and 1996.

Founder of "Research Consortium on Production Planning Software in the Face of Uncertainty and Limited Capacity."

National Partnership for Academic Computing Infrastructure Co-PI.

National Science Foundation Research Grant DMS-98.70172; with D.M. Rocke.

U.C. Life Sciences Initiative; with D.M. Rocke

AFOSR award number F49620-01-0327, Co-PI.

NIH 1 RO1 HG003352-01A2 with D.M. Rocke, Co-PI.

DOE Small Grant from LBNL to Develop a White Paper, Co-PI. 2011.

DOE Green Electricity Networks (ARPAe GENI), AR0000254, Co-PI. 2012-2014.

NATIONAL MEETING
PRESENTATIONS
(CONTINUED):

"Tutorial: A Class Library for Heuristic Search Optimization," Full Length Tutorial, TIMS, Anchorage, AK, June 1994.

"Proposals for Chunking and Tabu Search," Invited Paper, Math Programming Society in Ann Arbor, August 1994.

"Newspaper Production/Distribution," Contributed Paper, POMS Washington D.C., October 1994.

"Chunking and Tabu Search," Invited Paper, ORSA/TIMS, Detroit, October 1994.

"Progressive Hedging Applied to Short Term Planning for Sub-contracting," Invited Paper, INFORMS, Los Angeles, April 1995.

"Progressive Hedging and Tabu Search Applied to Mixed Integer, Multistage Stochastic Programming," DGOR, Passau, Germanay, September, 1995.

"Progressive Hedging and Tabu Search Applied to Mixed Integer, Multistage Stochastic Programming," invited paper, INFORMS, New Orleans, October 1995.

"Progressive Hedging and Tabu Search Applied to Mixed Integer, Multistage Stochastic Programming," invited paper, CSTS, Dallas, January 1996.

"Optimal Selection of a Subset of Sizes," contributed paper, INFORMS, Washington D.C., May 1996.

"Progressive Hedging for Mixed Integer, Multistage Stochastic Programming," invited paper, Informs, Atlanta, November 1996.

"PHA Applied to Lot-Sizing Models," invited paper, Informs, San Diego, May, 1997.

"A Chunking Based Selection Strategy for Integrating Meta-Heuristics with Branch and Bound ," MIC 97, Sophia Antipolis (France), July 1997.

"Combination of Tabu Search and Exact Methods for MIPs," ISMP 97, Laussanne, Switzerland, August 1997.

"Heuristic Search Applications in Statistics," Invited Tutorial, ISI Satellite Meeting, Rostock, Germany 1997.

"Data Mining via Clustering with Data Driven Metrics," INFORMS, Montreal April 1998.

"Heuristic Search Applications in Statistics," Invited Tutorial, Interfaces Society Meeting, Minneapolis, MN May, 1998.

"Commercial and Research Implementations of Tailored Metaheuristics for Integer Programming, Tutorial, European Chapter on Combinatorial Optimization, Copenhagen May 1998 (Work coauthored with Fred Glover Arne Løkketangen).

"Mining the Data From Experiments on Algorithms using Maximum Likelihood Clustering" Optimization'98, Coimbra, Portugal, July 1998.

"Building Reusable Software Components for Heuristic Search," with A. Fink and S. Voß, DOR, Zurich, September 1998.

"Mining the Data From Experiments on Algorithms using Maximum Likelihood Clustering" *Informs Conference on Information Systems and Technology*, Cincinnati, May 1999.

NATIONAL AND INTERNATIONAL MEETING PRESENTATIONS:

"Hierarchical Production Planning in a Pull Environment," with W.J. Hopp and M.L. Spearman, Joint National Meeting of ORSA and TIMS, New York, October 1989.

"Synchronization of JIT Production," with W.J. Hopp and M.L. Spearman, Joint National Meeting of ORSA and TIMS, New York, October 1989.

"Sequencing Jobs in a Generalized Pull System," with M.L. Spearman and W.J. Hopp, Joint National Meeting of CORS, TIMS, and ORSA, Vancouver, May 1989.

"Implementing CONWIP in a Circuit Board Plant," with M.L. Spearman and W.J. Hopp, invited paper to the Joint National Meeting of ORSA and TIMS, Philadelphia, October 1990.

"Bounds on Sequence Feasibility with Setups and Deadlines" with M.L. Spearman, Joint National Meeting of ORSA and TIMS, Philadelphia, October 1990.

"Bottleneck Sequencing of Two Classes of Jobs with Due Dates and Setup Times," with M.L. Spearman, meeting of the Production and Operations Management Society, October 1990.

"Tabu Search and Simulated Annealing: Lessons from a Line Search," Workshop on Topics in Heuristic Search, Sponsored by the Dept. of Dec. and Info. Sci., College of Business, Univ. of Florida, April 1991.

"Sub-Contracting with Setups and Deadlines," Joint National Meeting of ORSA and TIMS, Anaheim, CA, November 1991.

"Optimization of PAC Parameters," Invited Paper, Joint National Meeting of ORSA and TIMS, Orlando FL, April 1992.

"Obtaining Minimum Volume Ellipsoid Estimates using Heuristic Search," with D.M. Rocke, Invited Paper, Joint National Meeting of ORSA and TIMS, Orlando FL, April 1992.

"Heuristic Search Applications in Robust Statistics," Invited Paper, Joint National Meeting of ORSA and TIMS, San Francisco, CA, November 1992.

"Planning for Exceptions in Pull Production Systems," Invited Paper and Session Chair, Joint National Meeting of ORSA and TIMS, San Francisco, CA, November 1992.

"Using Shunts in Pull Based Production Systems," with J.O. McClain, Invited Paper, POMS, Orlando, FL, October 1992.

"Using Shunts in Pull Based Production Systems," with J.O. McClain, Invited Paper, Joint National Meeting of ORSA and TIMS, Chicago, IL, May 1993.

"Interplay Between Genetic Algorithms and Tabu Search," Invited Paper, Joint National Meeting of ORSA and TIMS, Chicago, IL, May 1993.

"Hybrid Heuristic Search Algorithms for Robust Mult-variate Analysis," Invited Paper, IFORS, Lisbon, Portugal, July 1993.

"Simultaneous Production and Distribution Planning for Newspapers," Invited Paper and Session Chair, POMS Boston, October 1993.

"Heuristic Search in Real and Near-Real Worlds," Invited Paper, TIMS/ORSA, Phoenix, November 1993.

"A Class Library for Heuristic Search Optimization," CSTS, Williamsburg, VA, January 1994.

NATIONAL MEETING PRESENTATIONS (CONTINUED):

"Scatter Search to Generate, and Chunking to Evaluate, Diverse MIP Solutions" ECCO XII, Bendor, France, May 1999.

"Scatter Search to Generate Diverse MIP Solutions,'' IFORMS Computing Society, Cancun, Mexico, Jan 2000.

"Scatter Search to Generate Diverse MIP Solutions,'' Invited Paper, INFORMS, Salt Lake City, May 2000.

"Supply Chain Planning: Is mrp a good starting point?" CO2000, London, England, July 2000.

"Measuring Solution Variety: The Case for Chunking Based on Dual Clustering," International Symposium on Mathematical Programming, Atlanta, August 2000.

"Dimension Reduction for Solution Variety Measurement," Conference on *Adaptive Memory and Evolution: Scatter Search and Tabu Search,* Oxford, MS, March 01.

"Tutorial on Metaheuristics," Invited Tutorial, INFORMS, San Diego, May 2001.

"Metrics for Solution Variety," EURO 2001, Rotterdam, July 2001.

"Metrics for Solution Variety," Metaheuristics International Conference, Porto, Portugal, July 2001.

"A Blackboard Architecture for Maximum Likelihood Clustering," Invited Paper, INFORMS, Miami, November 2001.

"Statiscal Analysis of Microarray Data," invited paper, INFORMS, Miami, November 2001.

"Can you Start at mrp and Arrive at a Good SCP Solution?" POMS, San Francisco, April 2002.

"General Purpose Metrics in Solution Spaces," IFORS, Edinburgh, July 2002.

"General Purpose Metrics in Solution Spaces," Nordic MPS, Bergen, Norway, September, 2002.

"Interdicting Stochastic Networks With Binary Interdiction Effort" San Jose INFORMS, October 2002.

"Optimizing Bin Widths for NMR Spectroscopy Data in Metabalomics Studies" INFORMS Computing Society, Phoenix, January 2003.

"Stochastic Programming Models with Decision Dependent Probabilities" Atlanta INFORMS, October 2003.

"A Model for Multi-Stage Production Planning with Load Dependent Lead Times," HICSS, January 2004.

"A Distance Function to Support Optimized Selection Decisions," CORS/INFORMS, Banff, May, 2004.

NATIONAL MEETING PRESENTATIONS (CONTINUED):

"Tutorial: Connecting mrp, MRP II and ERP Supply Chain Planning via Optimization Models," INFORMS, Denver, November 2005.

"Hybrid Heuristic Search for 2D NMR Alignment to Support Compound Identification," Geun-Cheol Lee, Jeff de Ropp, Mark R. Viant, and Ping Yu, in 4th EU/ME Workshop: Design and Evaluation of Advanced Hybrid Meta-Heuristcs, 4-5 November 2004, Nottingham England.

"A Tabu Search for 2D NMR Alignment," INFORMS Computing Society, Annapolis, MD, January, 2005.

MIC Vienna

Informs SF

POMS Boston

HICSS

Bertinoro Italy, fall 06

MIC Montreal

INFORMS Pittsburgh

 ICS Miami Jan 2007

Lion, Adalano Italy, Feb 2007

INFORMS Seattle, Nov 2007

POM May 2008

INFORMS DC 2008

ALIO/EURO 2008 Buenos Aries, Dec 2008

ICS South Carolina, Jan 2009

MIC Hamburg – Search Progression w/Oppen August 2009

INFORMS San Diego (2 talks) October 2009

ALIO/INFORMS Buenos Aires, June 2010

Stochastic Programming Halifax August 2010

 Plenary in Valencia MAEB, is part of a macro conference on Computer science, CEDI, which integrates 12 conferences (the largest in Spain). You can see in the web page of CEDI that you appear as invited speakers:

 http://cedi2005.ugr.es/2010/contenido.php?apartado=actividades&sub=invitadas

INFORMS Nov 2010

INOC Keynote, June 2011
 MIC July 2011
INFORMS Nov 2011: Suffixes for PH; also a mining talk
AWRA – Albuquerque Nov 2011: Chilean Hydro

UNIVERSITY AND OTHER PRESENTATIONS:

"Progressive Hedging Applied to Subcontractor Planning…" Northwestern, September 1994.

"Progressive Hedging and Tabu Search Applied to Mixed Integer, Multistage Stochastic Programming," Molde College, Molde Norway, September, 1995.

"Proposals for Chunking and Tabu Search, Braunschweig Germany, September 1995.

"Progressive Hedging and Tabu Search Applied to Mixed Integer, Multistage Stochastic Programming," Georgia Tech AT&T Seminar Series, April, 1996.

"Heuristic Search Optimization" Workshop on Massive Data Analysis, San Diego Super Computer Center, March 1997.

General Chair and presenter at the Workshop on Robust Analysis of Multivariate Data: Outlier Detection, Cluster Identification and Data Mining, Braunschweig, Germany, November 1998.

"Issues in Supply Chain Planning," Iowa State University, November 1998.

"A Synthesis of Outlier Detection and Cluster Analysis," Hamburg , Germany, December 1998.

"Scatter Search to Generate, and Chunking to Evaluate, Diverse MIP Solutions," Trondheim, Norway, March1999.

"Scatter Search to Generate, and Chunking to Evaluate, Diverse MIP Solutions," Molde, Norway, March 1999.

"Progressive Hedging for Stochastic Integer Programming," TU-Darmstadt, April 1999.

"A Synthesis of Outlier Detection and Cluster Analysis," Universität Köln, Germany, June 1999.

"Interdicting Stochastic Networks With Binary Interdiction Effort," NPS Feb 2003.

"Interdicting Stochastic Networks With Binary Interdiction Effort," Dash User's Group Meeting October 2003.

"A Distance Function to Support Optimized Selection Decisions," Molde, Norway, February, 2004.

"Connecting mrp, MRP II and ERP Supply Chain Planning via Optimization Models," Sandia National Laboratory, August, 2004.

"Integer Stochastic Programming" University of Iowa, March, 2006.

"Stochastic Programming" University of California, Irvine, March, 2009.

"Progressive Hedging for Multi-Stage, Stochastic Logistics Problems" Unversidad de Chile, April 2009

"Progressive Hedging", University of Wisconsin, March 2010.

"Progressive Hedging Innovations", Montreal, February 2011.

"Software and an Experimental Environment for Stochastic Programming", Molde, Norway 2011.

AACSB Courses

June 11-12, 2007 Business Accreditation Seminar held in Tampa, Florida.

November 27-28, 2007 Assessment Seminar, Tampa, FL.

February 6, 2008 Maintenance of Accreditation Seminar, San Antonio, TX