DAVID L. WOODRUFF
Curriculum Vitae

August 2020

Graduate School of Management
University of California at Davis
Davis, CA 95616
530-752-0515
dlwoodruff@ucdavis.edu

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.
CURRENTRESEARCH INTERESTS:	Stochastic Programming and Planning Under Uncertainty
	Modeling Language Development
	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.

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"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

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"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

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"PySP: modeling and solving stochastic programs in python," with William E. Hart and Jean-Paul Watson, *Mathematical Programming Computation*, 2012, Vol 4, No. 2, 109-149

"Attribute Based Similarity Function for VRP Decision Support," *Decision Making in Manufacturing and Service,* Vol 6, pp 65-85, 2013 with Arne Løkketangen, Johan Oppen, and Jorge Oyola

Uladzimir Rubasheuski, Johan Oppen, David L. Woodruff. "Multi-Stage Scenario Generation by The Combined Moment Matching and Scenario Reduction Method". *Operations Research Letters*, 42: 374-377.

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Claudio A. Kuhlmann-Salas, David L. Martell, Roger J-B Wets, David L. Woodruff. Generating Stochastic Ellipsoidal Forest and Wildland Fire Scar Scenarios for Strategic Forest Management Planning Under Uncertainty. Forest Science, 2014, 61(3): 494-508.

Fernando Badilla Veliz, Jean-Paul Watson, Andres Weintraub, Roger J-B Wets, David L. Woodruff. "Stochastic Optimization Models in Forest Planning: A Progressive Hedging Solution Approach". Annals of Operations Research, 2015. 232(1): 259-274.

Yonghan Feng, Sarah M. Ryan, Ignacio Rios, Kai Spurkel, Jean-Paul Watson, Roger J-B Wets, David L. Woodruff. "Toward Scalable Stochastic Unit Commitment Part 1: Load Scenario Generation". Energy Systems, 2015. 6(3): 309-329.

Kwok Cheung, Dinakar Gade, Cesar Silva-Monroy, Sarah M. Ryan, Jean-Paul Watson, Roger J.-B. Wets, David L. Woodruff. "Toward Scalable Stochastic Unit Commitment Part 2: Solver Configuration and Performance Assessment". Energy Systems, 2015. 6(3): 417-438.

Ignacio Rios, Roger J-B Wets, David L. Woodruff. "Multi-period forecasting and scenario generation with limited data". Computational Management Science, 2015. 12(2): 267-295.

Ge Guo, Gabriel Hackebeil, Sarah M. Ryan, Jean-Paul Watson, David L. Woodruff. "Integration of progressive hedging and dual decomposition in stochastic integer programs". Operations Research Letters, 2015. 43(3): 311-316.

Geun-Cheol Lee, Martin Hohenrieder, Jean-Paul Watson, David L.Woodruff. "Chance and Service Level Constraints for Stochastic Generation Expansion Planning". Netnomics, 2015. 16(3): 169-191.

Dinakar Gade Gabriel Hackebeil Sarah M. Ryan Jean-Paul Watson Roger J-B Wets David L. Woodruff. "Obtaining Lower Bounds from the Progressive Hedging Algorithm for Stochastic Mixed-Integer Programs". Mathematical Programming - Seriies B, 2016. 157(1): 47-67.

Sari, Didem; Lee, Youngrok; Ryan, Sarah M. Woodruff, David L. "Statistical metrics for assessing the quality of wind-power scenarios for stochastic unit commitment". Wind Energy, 2016. 19(5): 873-893.

D.L. Woodruff, G. Slevogt. "Variance Stabilizing Transformation of Wind Forecast Errors". Wind Energy, 2016. 19(10): 1845-1852.

Jason Barnett, Jean-Paul Watson, David L. Woodruff. "BBPH: Using Progressive Hedging Within Branch and Bound to Solve Multi-Stage Stochastic Mixed Integer Programs". Operations Research Letters, 2017. 1(45): 34-39.

Jorge Oyola-Mendoza , Halvard Arntzen, David L. Woodruff. "The stochastic vehicle routing problem, a literature review, Part II: solution methods". EURO Journal on Transportation and Logistics, 2017. 6(4): 349-388.

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Uladzimir Rubashevski, Johan Oppen, David L. Woodruff. "A Stochastic Programming Approach to solve a Coordinated Capacitated Stochastic Dynamic Demand Lot-Sizing Problem with Emergency Supplies". International Journal of Logistics Systems and Management, 2017. 29(2): 173-189.

Yingjie Fan,Frank Schwartz, Stefan Voss, David L. Woodruff. "Stochastic Programming for Flexible Global Supply Chain Planning". Flexible Services and Manufacturing Journal, 2017. 29(3-4): 601–633.

David L. Woodruff, Julio Deride, Andrea Staid, Jean-Paul Watson, Gerrit Slevogt, Cesar Silva-Monroy. "Constructing Probabilistic Scenarios for Wide-Area Solar Power Generation". Solar Energy, 2018. 160: 153-167.

Andrea Staid, David L. Woodruff. "Software for Creating Stochastic Scenarios for Optimization from Data". Computer Aided Chemical Engineering, 2018. 44: 1531-1536.

Katherine A. Klise; Bethany L. Nicholson; Andrea Staid; David L.Woodruff. Parmest: Parameter Estimation Via Pyomo. Computer Aided Chemical Engineering, 47: 41-46.

Benjamin Rachunok and Andrea Staid and Jean-Paul Watson and David L. Woodruff, "Assessment of wind power scenario creation methods for stochastic power systems operations", *Applied Energy",2020,vol 268.*

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; second edition 2017

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.

PAPERS IN CONFERENCE PROCEEDINGS (CONTINUED):	Y. Feng, D. Gade, S. M. Ryan, J-P Watson, R. J-B Wets, and D. L. Woodruff, "A New Approximation Method for Generating Day-Ahead Load Scenarios," *IEEE Power and Energy Society General Meeting*, July 2013.S. M. Ryan, R. J-B Wets, D. L. Woodruff, C. Silva-Monroy, and J-P Watson, "Toward Scalable, Parallel Progressive Hedging for Stochastic Unit Commitment," *IEEE Power and Energy Society General Meeting*, July 2013.
	S Nitsche, CA Silva-Monroy, A Staid, JP Watson, S Winner, DL Woodruff . Improving Wind Power Prediction Intervals Using Vendor-Supplied Probabilistic Forecast Information . IEEE Power and Energy Society General Meeting (PES) 2017.
	Jean-Paul Watson, Andrea Staid, David Woodruff, Dominic Yang, Benjamin Rachunok. Stochastic Unit Commitment Performance Considering Monte Carlo Wind Power Scenarios. PMAPS 2018 Proceedings 2018.
UNIVERSITY COMMITTEES;ADMINIS TRATIVE POSITIONS	Chair, UCD Committee on Academic Freedom & Responsibility (CAFR) 2012-13 UCD Committee on Research 2018 - Present UCD Academic Senate Executive Council 2001-2003, 2004-2005 UCD Committee on Educational Policy 2000 – 2002UCD Undergraduate Council 2002-2003 UCD Network Operations Advisory Committee 1999 – 2001UCD Research Coordinating Council 2003-2007 Associate Dean for Instructional Programs, GSM, 2007-2010, 2016-2017 Faculty Chair of the Graduate School of Management , 2001-2003, 2004-2005 Member, GSM Faculty Personnel Committee, 2011-2013 Director of Concurrent Degree Programs for the GSM, 2003-2007 Chair, GSM Undergraduate Program Committee 2003-2005 Chair, GSM Committee on Courses, 2005-2007 Scientific Advisory Board of IPFM, Prague, 2004-2008 Chair, GSM Educational Policy Committee, 2010-2011, 2019-2020 Member, GSM Executive Committee, 2010-2011, 2012, 2012-2013, 2018-2019, 2020-2021
PROFESSIONAL AND EDITORIAL POSITIONS	Editor in Chief, *INFORMS Journal on Computing*, Jan 2013 – Dec 2018 Area Editor – Heuristic Search and Learning, *INFORMS Journal on Computing*, 2008-2012 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- 2008 Co-editor, Special Issue of *INFORMS Transactions on Education*, Integrating OR in Teaching Supply Chain Management, 2006 Member, IJOC Test of Time Paper Prize Committee 2019 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:	Hundreds of papers thoroughly reviewed for *Annals of OR, EJOR, IJFMS, IJPR, NRL, IIE Trans., IJOC, JCGS, Mgt. Sci., Opns. Res., OJOC, POM,* and many others.
AWARDS AND HONORS:	ORSA Doctoral Colloquium, 1988.
	J.D. Scaiffe Award given for "CONWIP: A Pull Alternative to Kanban" by the Institution of Manufacturing Engineers, 1990 (with Mark Spearman and Wallace Hopp).
	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.
	Computational Management Science 2011 Best Paper Prize for ""Progressive hedging innovations for a class of stochastic mixed-integer resource allocation problems" (with Jean-Paul Watson)
	R&D 100 Award for Pyomo, 2016
	INFORMS Computing Society Prize for Pyomo 2019
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
	Data Analysis for Managers

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, PI. 2012-2014

Principal Investigator, Sandia Wind Energy, DOE/Sandia National Laboratories, 2016-2020

Principal Investigator, Resilience Modeling, DOE/Sandia National Laboratories, 2020-2021

KEYNOTES, ETC.:

Plenary in Valencia MAEB, is part of a macro conference on Computer science, CEDI, which integrates 12 conferences (the largest in Spain).

INOC Keynote, June 2011

Plenary III Plenary Speaker III Jornada Internacional de Probabilidad y Estadística Lima, August 13 to 15, 2014

Keynote at BigComm in Chengdu, China, 2017

Tutorial at ICSP, Trondheim, 2019

NATIONAL MEETING
PRESENTATIONS

"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 00

"Scatter Search to Generate Diverse MIP Solutions,'' Invited Paper, INFORMS, Salt Lake City, May 00

"Supply Chain Planning: Is mrp a good starting point?" CO2000, London, England, July 00

"Measuring Solution Variety: The Case for Chunking Based on Dual Clustering," International Symposium on Mathematical Programming, Atlanta, August 00.

"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 01

"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
INFORMS Nov 2010
ICSP Stochastic Programming Halifax August 2010
POMS – Reno 2011
MIC July 2011
I NFORMS Nov 2011: Suffixes for PH; also a mining talk
SAMSI 2011; present a poster on UC for renewables
ICS Monterrey 2011
AWRA – Albuquerque Nov 2011: Chilean Hydro
JOPT – Montreal, May 2012 Pyom and PySP
ISMP – Berlin 2012
INFORMS – Phoenix Oct 2012
EIC, October 2012, Lake Genva WI (GEP)
ICS Santa Fe 2013
ICSP 2013 Bergamo; Organized and led a mini-track
INFORMS MN 2013
LOT 2014 Molde, Norway
UVIG San Antonio 2014
UVIG 2016
INFORMS 2014 San FranciscoICS 2015
INFORMS Nashville 2016
ICSP 2016 Buzios Brazil; Organized and led a mini-track
SESO 2016
SESO 2017 Paris, France
INFORMS 2017 Houston
ICS Austin 2017
CLSAC 2017
PSCC 2018
PSE 2018 (poster)
PMAPS 2018
ADMM Workshop 2018 (DIMACS)
FOCAPD 2019 (Poster)
INFORMS 2019
ICS 2019

UNIVERSITY AND
OTHER
PRESENTATIONS:

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

"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 98

"A Synthesis of Outlier Detection and Cluster Analysis," Hamburg , Germany, December 98

"Scatter Search to Generate, and Chunking to Evaluate, Diverse MIP Solutions," Trondheim, Norway, March 99

"Scatter Search to Generate, and Chunking to Evaluate, Diverse MIP Solutions," Molde, Norway, March 99

"Progressive Hedging for Stochastic Integer Programming," TU-Darmstadt, April 99

"A Synthesis of Outlier Detection and Cluster Analysis," Universität Köln, Germany, June 99

"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, Sept 2011

"Software and an Experimental Environment for Stochastic Programming II", Molde, Norway, Sept 2012

Koc University, Istanbul, Turkey, Oct 2012

SIAM 2014 San Diego

Duisburg 2014

Peru 2014 at the Ministry of Energy

Hong Kong 2018

Texas A&M Distinguished Speaker Series in Industrial Engineering, 2018

Frauenhofer 2018

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