MICHAEL A. TRICK

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PROFESSIONAL EXPERIENCE

Carnegie Mellon University in Qatar, Doha, Qatar

Dean (2017–). Chief Academic, Administrative, and Executive Officer of Carnegie Mellon's campus at Education City in Doha, Qatar. Responsible for five undergraduate programs (business, information systems, computer science, biology, and computational biology), 400+ students, 50+ faculty, and 90+ staff.

Tepper School of Business (formerly Graduate School of Industrial Administration — GSIA), Carnegie Mellon University, Pittsburgh, PA USA (1989–)

Academic: Harry B. and James H. Higgins Professor of Operations Research (endowed Chair), 2012–; Bosch Professor (endowed Chair), 2003-2005; Professor of Operations Research with indefinite tenure, 2002–; Associate Professor with indefinite tenure, 1998–2002; Associate Professor without indefinite tenure, 1994–1998; Assistant Professor, 1989–1994.

Administrative: Senior Associate Dean, Faculty and Research (2014–2017) (responsible for faculty hiring, promotion and tenure, faculty support, centers, strategic projects and computing), Senior Associate Dean, Education (2011–2014) (responsible for educational programs, executive education, and computing), Associate Dean, Research (responsible for hiring and faculty support) (2009–2011), President, Carnegie Bosch Institute for Applied Studies in International Management (1998–2005); Associate Director for the Flexmode (distance) MBA Program (1996-97).

Courtesy Appointment

Heinz School of Information Systems and Public Policy (2017–)

Short Term Positions

Visiting Researcher, Living Analytics Research Center, Singapore Management University, (July, 2013).

Hood Fellow and Honorary Research Fellow, Department of Engineering Sciences, University of Auckland, Auckland, New Zealand (2007).

Visiting Associate Professor, Sloan School of Business, and Visiting Scientist, Operations Research Center, Massachusetts Institute of Technology, Cambridge, MA (1996–1997).

Coordinator, Second DIMACS Challenge, and Visiting Member, DIMACS Research Consortium, Rutgers University, New Brunswick, New Jersey (1992–1993).

Postdoctoral Fellow, Institut für Ökonometrie und Operations Research, Bonn, West Germany (1988–1989).

Postdoctoral Fellow, Institute for Mathematics and its Applications, Minneapolis, Minnesota (1987–1988).

EDUCATION

Doctor of Philosophy, Industrial and Systems Engineering. Georgia Institute of Technology, 1987.
Dissertation: *Networks with Additional Structured Constraints*, John Bartholdi and H. Donald Ratliff, advisors.

Master of Science in Operations Research. Georgia Institute of Technology, 1984.

Bachelor of Mathematics, Combinatorics and Optimization and Computer Science. University of Waterloo, 1982.

RESEARCH INTERESTS

Theory: Combinatorial optimization; Integer programming; Constraint programming.

Applications: Manufacturing, distribution, and logistics; Computer implementation of optimization algorithms; Applications in the social sciences; Sports scheduling, Telecommunications optimization.

AWARDS AND HONORS

Edelman Award for Achievement in Operations Research and Analytics, member of the Federal Communications Commission for "Unlocking the Beachfront: Using O.R. to Repurpose Wireless Spectrum" (2018).

Honorary Member, Omega Rho International Honor Society (Operations Research) (2017).

ACM SIGEcom Test of Time Award (with John J. Bartholdi, James B. Orlin, and Craig A. Tovey) for "How Hard is it to Control and Election." (2016)

George Leland Bach Teaching Award (for the top teacher in the MBA program, as voted on by the students), Tepper School of Business (2010), GSIA (1991). Finalist (one of four) 1997, 1998, 2000, 2008, 2010, 2016.

George E. Kimball Medal, INFORMS, (for distinguished service to the Institute and the profession of operations research) (2009).

University of Waterloo, Faculty of Mathematics, Alumni Achievement Medal (2009).

International Federation of Operational Research Societies (IFORS) Outstanding Officer Award (2009).

ORSNZ Visiting Lecturer, Operational Research Society of New Zealand (support for four "public lectures" around New Zealand) (2007).

Hood Fellowship, The University of Auckland Foundation (2007).

Fellow, Institute for Operations Research and the Management Sciences (INFORMS) (2006).

Council of Outstanding Young Engineering Alumni, Georgia Institute of Technology (1995).

Office of Naval Research Young Investigator Award, for *Solving integer generalized networks*, 3 years, $75,000 per year plus matching funds, 1992–1995.

PH.D. STUDENT ACTIVITY

Committee Chair for:

Ben Peterson, "Transportation Scheduling Models", February 2010. Initial Placement: Level 3

Hakan Yildiz, "Methodologies and Applications for Scheduling, Routing, and Related Problems", August 2008. Initial Placement: Michigan State University.

Nihat Altintas, "Data Mining and Operations Management", May 2006. Initial Placement: Lehman Brothers.

Kelly Easton, "Using Integer and Constraint Programming Methods to Solve Sports Scheduling Problems", January 2003 (co-advisor with George Nemhauser, student at Georgia Tech). Initial Placement: Sports Scheduling Group.

George Christopher, "Structure and Applications of Totally Decomposable Metrics", May, 1997.

Ken Murphy, "Scheduling Mail Sorting Machines", December 1996. Initial Placement: Florida International University.

Shmuel Ur, "Decision Trees, Order Constraints, and Orders", August 1994. Initial Placement: IBM Israel.

Committee Member for: Andre Cire (OR, 2014), Osman Özaltın (Industrial Engineering, University of Pittsburgh, 2011), Ozgun Ekici (Economics, 2011), G. Ayorkor Korsah (Robotics, 2011), John Turner (OR, 2010), Viswanath Nagarajan (ACO, 2009), Brian Taylor (ECE, 2009), Latife Genc-Kaya (Operations Research, 2008), Tallys Yunes (Operations Research, 2005), Xingming Liu (Operations Research, 2003), Roman Kapuscinski (Manufacturing, 1996), William Niehaus (Algorithms, Combinatorics, and Optimization, 1996), Bruno Repetto (Operations Research, 1994), Sebastian Ceria (Operations Research, 1992), Anastasios Pertsinidis (Chemical Engineering, 1992), Maria–Cecilia Carrerra (Math, 1991), Medini Singh (Manufacturing, 1989).

Outside Examiner for: Joris Kinable (KU Leuven, 2014), M. Elivelton Ferreira Bueno (University of Montreal, 2014), Thierry Benoist (Habilitation, Ecole des Mines de Nantes, 2014), Tyrel Russell

(University of Waterloo, November 2010), Patrick-St. Louis (University of Montreal, January 2007), Yannis Vergados (Brown University, December 2006).

TEACHING ACTIVITIES
Course Development and Teaching:
(All courses half–semester)
Masters Level (Teaching ratings out of 5.0)
"Statistical Decision Making," Spring 2017 (4.51, 4.61), Spring 2016 (4.48, 4.59), Spring 2015 (4.45, 4.63), Spring 2014 (4.38, 4.43), Spring 2013 (4.27), Spring 2012 (4.53)

"Operations Research Implementations," (co-taught with Willem van Hoeve) Spring 2017 (4.94), Spring 2016 (4.73), Fall 2014 (4.91), Fall 2013 (4.81), Spring 2012 (4.83), Spring 2011 (4.64), Spring 2010 (4.83)

"Operations Research Applications" aka "OR Techniques for Consultants", Spring 2016 (5.00), Spring 2013 (4.77,4.37), Spring 2010 (4.82, 4.72, 4.57), Spring 2009 (4.56, 4.74), Spring 2008 (4.50, 4.00), Spring 2005 (4.55), Spring 2006 (4.67), Spring 2004 (4.69, 4.54), Spring 2001 (4.38), Spring 2000 (4.64), Spring 1998 (4.77), Summer 1997 (4.61), Summer 1996 (4.77), Spring 1996 (4.39), Spring 1995 (4.61), Spring 1993 (4.67), Spring 1992 (4.44), Spring 1991 (4.75, 4.46), Summer 1990 (4.32), Spring 1990 (4.25), Summer 1992 (4.05)

"Data Mining" aka "Mining Data for Decision Making", Summer 2012 (4.33), Spring 2011 (4.47, 4.52, 4.26, 4.71), Spring 2010 (4.56, 4.60), Spring 2009 (4.50, 4.68), Spring 2008 (4.65, 4.71), Spring 2006 (4.47, 4.14), Spring 2005 (4.41, 4.47), Spring 2004 (4.16, 4.50), Spring 2003 (3.72, 3.81), Spring 2002 (4.50, 4.06), Spring 2001 (4.06,4.50), Spring 2000 (3.81, 4.33)

"Business Analytics Project," Spring 2011 (5.0)

"Optimization and Decision Making," Fall 2008 (4.32, 4.10, 4.30), Fall 2006 (4.42, 4.51)

"Operations Research Project", "Scheduling Major League Baseball Umpires" (2005).

"Quantitative Methods for Management Science," Fall 1998 (4.46, 4.41), Fall 1997 (4.61, 4.73), Summer 1994 (4.25), Summer 1992 (4.56), Summer 1991 (3.94),

"Introduction to Operations Research," Summer 1997 (4.44), Fall 1995 (4.27, 4.39, 4.49), Summer 1994 (4.62), Fall 1993 (3.60, 3.62, 3.76), Summer 1992 (4.02), Summer 1991 (4.27), Summer 1990 (4.01)

"Management Science Techniques for Consultants" (MIT Sloan School), Fall 1996 (4.17).

"Stochastic Models in Production and Operations Management," Spring 1995 (4.48), Spring 1993 (4.75)

"Network Algorithms," Fall 1990 (4.35);

"Simulation," Fall 1990 (4.56);

"Distribution and Location," Spring 1990 (4.44);

Have supervised 8 individuals in special topics/readings courses.

Undergraduate Level (Teaching ratings out of 5.0)
"Forecasting and Data Mining," Spring 2012 (4.33)

Ph.D. Level
"Combinatorial Optimization," Spring 1995.
"Networks and Matchings," Fall 1991.
"Operations Research Techniques in Robotics," Fall 1991.
"Heuristics," Spring 1990.
"Network Algorithms," Fall 1989.

Executive Education
McKinsey Advanced Analytics for Translators Program, Tepper Executive Education, Carnegie Mellon, presentation on business analytics, various (2016-)

PNC Retail Quantitative Risk Management Program, Tepper Executive Education Program, Carnegie Mellon, presentation on business analytics, various 2014-15.

International Operations Management Forum for Executives, Carnegie Bosch Institute, Carnegie Mellon, Principal Organizer and lectures on optimization and simulation, Fall 2002.

Technology Driven Global Supply Chains, Carnegie Mellon, Lectures on Supply Chain Techniques and Location Models, April, 1999

Logistics and Supply Chain Management, Piancenza, Italy. Lectures on Supply Chain Techniques, Routing, Location, Distribution, and Global Operations Management. Offered jointly by Carnegie Mellon and Universita Cattolica, Piacenza. March, 1999

Other Course Development

Data Mining Lead faculty on a course suite developed by Unext.com for Cardean University in conjunction with Carnege Mellon. (2001)

MBA Mini Abroad, Developer of innovative seven week program for MBA students to study in Europe (2002–2006).

SERVICE (Tepper/GSIA)

Committee Membership: New Building Committee (2010–2017), Curriculum Review Committee (2010–2011), Dean's Advisory Committee (2002-2003, 2005–2011), Elliot Dunlap Smith Award Committee (2011 (chair), 2010, 2009 (chair)), MBA Educational Affairs Committee (2002–2010), Masters Academic Actions Committee (2000–2010), Information Systems Faculty Search Committee (chair, 2008-2009), ad-hoc Committee on Program Size (chair, 2008) Thompson Ph.D. Award Committee (Chair, 2006), Tepper/Swiss Banking School Wealth Management EMBA Review Committee (chair, 2005), Tepper Teaching Innovation Committee (2004–), Roman Weil Prize Committee (1999–2007),OR Faculty Search Committee (2005), OR Faculty Search Committee (chair, 2004), Qatar Steering Committee (2003-2004), Ad-hoc Core Curriculum Review Committee (2002-2003), Dean Transition Committee (2001-2002), Dean Search Committee (Chair, 2000-2001), Curriculum Review Committee (1999–2003), Faculty Computing Committee (Chair 1996–1998), Research Computing Committee (1989–1996, Chair 1992–1996); Dean Search Committee (1995-1996); OR Faculty Recruitment Committee (1995), Ad-hoc Committee on Notebook Computers (1996).

SERVICE (CMU)

Committee Membership: University Research Council (2016–2017), Faculty Senate Library Advisory Committee (2016–2017), Middle States Accreditation Committee (subcommittee co-chair, 2016–2017), Committee on Reappointment and Promotion Practices (2016), University Diversity Committee (2015–2017), Doherty Award Committee (2015/16), Gateway Building Committee (2015–16), Final Exam Scheduling Task Force (2013), CFO Search Committee (2013), Ryan Award Committee (2011 (co-chair), 2010, 2009), Dean of Students Search Committee (2008-09), Student Disciplinary Committee (1993–2006), International Committee (1998–2006), Interdisciplinery Research Committee (1998–1999)

FUNDING

STORM: Standardized Technology for Optimizing Rapid Modeling, DARPA, co-PI, $4,795,902$ (1.2 million CMU), funded at reduced level

IBM-CMU Collaborative Grant, with Robin Lougee-Heimer, $40,000 (2008).

Hood Fellowship, University of Auckland, NZ$24,000 to support visit to University of Auckland (2007).

Office of Naval Research, Young Investigators program. 1992-1995 $225,000 *See Awards and Honors.*

Naval Personnel Research and Development Center, *Dynamic Assignment Algorithms for Naval Personnel Rotations*, 1 year, $75,000 (includes matching funds from ONR). Received January 1993.

Center for Information Technology and Decision Making (in conjunction with the United States Postal Service), Carnegie Mellon University, *Optimal Sort Schemes for Mail Sorting Machines*, 1 year, $50,000 per year. Received February 1992.

Information Networking Institute, Carnegie Mellon University, *Combinatorial optimization methods for network design*, (with I. Baybars and G. Cornuéjols), 1 year, $50,000 per year. Applied: February 1991, Received April 1991. Renewed April 1992 for a second year.

Faculty Initiative Grant, Carnegie Mellon University. 1 year, $2,500. Received January 1991.

PUBLICATIONS

Books (Editor)

L. PERRON AND M.A. TRICK, *Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems*, Lecture Notes in Computer Science 5015, Springer (2008).

E.K. BAKER, A. JOSEPH, A. MEHROTRA, AND M.A. TRICK, *Extending the Horizons: Advances in Computing, Optimization, and Decision Technologies*, Springer Operations Research/Computer Science Interfaces Series 37 (2007).

E.K. BURKE AND M.A. TRICK, *Practice and Theory of Automated Timetabling V*, Springer Lecture Notes in Computer Science 3616 (2005).

M.A. TRICK, *Global Corporate Evolution: Looking inward or looking outward?*, Carnegie Bosch Institute International Mangement Series, **4** (2004).

M.A. TRICK, *Growing the International Firm: Success in Mergers, Acquisitions, Networks and Alliances*, Carnegie Bosch Institute International Mangement Series, **1** (2002).

D.S. JOHNSON AND M.A. TRICK, *Cliques, Coloring, and Satisfiability: Second DIMACS Implementation Challenge*, DIMACS Series in Discrete Mathematics and Theoretical Computer Science, **26**, 1996. (Volume of refereed articles). Also provided "Introduction" (pp 1-10) and "Second DIMACS Challenge Test Problems" (pp 653-657).

Book Chapters

M.A. Trick, *Sports Scheduling*, Hybrid Optimization: The Ten Years of CPAIOR, P. van Hentenryck and M. Milano (eds.), Springer (2010).

R. BOSCH AND M.A. TRICK, *Integer Programming*, Search Methodologies: Introductory Tutorials in Optimization and Decision Support Techniques, E.K. Burke and G. Kendall (eds.), Springer (2005).

K. EASTON, G.L. NEMHAUSER, AND M.A. TRICK, *Sports Scheduling*, Handbook of Scheduling: Models, Algorithms, and Performance Analysis, J. Y-T. Leung (eds), CRC Press (2004).

M. MILANO AND M.A. TRICK, *Constraint and Integer Programming*, Constraint and Integer Programming: Toward a Unified Methodology, Michela Milano (ed.), Kluwer Academic Publishers, 1–29, (2003).

K. EASTON, G.L. NEMHAUSER AND M.A. TRICK, *CP Based Branch and Price*, Constraint and Integer Programming: Toward a Unified Methodology, Michela Milano (ed.), Kluwer Academic Publishers, 207–231, (2003).

M.A. TRICK, *Optimization and the Internet*, Handbook of Applied Optimization, Panos Pardalos and Mauricio Resende (eds.), Oxford University Press (2000).

Appeared in Refereed Journals

N. ALTINTAS AND M.A. TRICK, *A Data Mining Approach to Forecast Behavior*, Annals of Operations Research, **216**:1, 3-22 (2014).

M.A. TRICK, H. YILDIZ, T. YUNES, *Scheduling Major League Baseball Umpires and the Traveling Umpire Problems*, Interfaces, **42**, 232–244 (2012).

M.A. TRICK AND H. YILDIZ, *Locally Optimized Crossover for the Traveling Umpire Problem*, European Journal of Operational Research, **216**, 286–292 (2012).

M.A. TRICK AND H. YILDIZ, *Bender's Cuts Guided Large Neighborhood Search for the Traveling Umpire Problem*, Naval Research Logistics, **58**, 771–781 (2011).

R. RASMUSSEN AND M.A. TRICK, *The Timetable Constrained Distance Minimization Problem*, Annals of Operations Research, **171**:1, 45–59 (2009)

C.T. RAGSDALE, K.P. SCHEIBE, AND M.A. TRICK, *Fashioning Fair Foursomes for the Fairways (Using a Spreadsheet-based DSS as the Driver)*, Decision Support Systems, **45**, 997–1006 (2008).

R. RASMUSSEN AND M.A. TRICK, *Round Robin Scheduling – A Survey*, European Journal of Operational Research, **188**, 617–636 (2008).

D.S. JOHNSON, A. MEHROTRA, AND M.A. TRICK, *Introduction to Special Issue on Computational Methods for Graph Coloring and its Generalizations*, Discrete Applied Mathematics, **156**, 145–146 (2008).

A. Pajunas, E.J. Matto, M.A. Trick, and L.F. Zuluaga, *Optimizing Highway Transportation at the United States Postal Service*, Interfaces, **37**, 515–525 (2007).

R. Rasmussen and M.A. Trick, *A Benders Approach to the Constrained Minimum Break Problem*, European Journal of Operational Research, **177**, 198–213 (2007).

A. Mehrotra and M.A. Trick, *A Branch-and-Price Approach for Graph Multicoloring*, in *Extending the Horizons: Advances in Computing, Optimization, and Decision Technologies*, Springer Operations Research/Computer Science Interfaces Series, **37** 15–30 (2007).

A. Mehrotra, J. Shantz, and M.A. Trick *Enhancing Value by Optimal Segmentation: Application to Determine Newspaper Zones*, Naval Research Logistics, **52**, 82–92 (2004).

M.A. Trick, *Using Sports Scheduling to Teach Integer and Constraint Programming*, INFORMS Transactions on Education, **5**, no. 1 (2004).

R. Bosch and M.A. Trick, *Constraint Programming and Hybrid Formulations for Life*, Annals of OR, **130**, 41–56 (2004).

M.A. Trick, *Integer and Constraint Programming Approaches for Round Robin Tournament Scheduling*, in PATAT'2002, E. Burke and P. Causmaecker (eds), Springer Lecture Notes in Computer Science **2740**, 63–77 (2003).

K. Easton, G.L. Nemhauser, and M.A. Trick, *Solving the Traveling Tournament Problem: A Combined Integer and Constraint Programming Approach*, in PATAT'2002, E. Burke and P. Causmaecker (eds), Springer Lecture Notes in Computer Science **2740**, 63–77 (2003).

M.A. Trick, *A Dynamic Programming Approach for Consistency and Propagation for Knapsack Constraints*, Annals of Operations Research, **118**, 73-84 (2003).

M.A. Trick, *A Schedule-and-Break Approach to Sports Scheduling*, in PATAT'2000, E. Burke and W. Erben (eds.), Springer Lecture Notes in Computer Science **2079**: 242-253 (2001).

A. Mehrotra, N.R. Natraj and M.A. Trick, *Consolidating Maintenance Spares*, Computational Optimization, **18**(3): 251-272 (2001).

M.A. Trick, *A Flip Analysis*, INFORMS Transactions on Education, **2**(1) (2001).

A. Mehrotra, K.E. Murphy, and M.A. Trick, *Optimal Shift Scheduling: A Branch-and-Price Approach*, Naval Research Logistics, **47**(3): 185-200 (2000).

M.A. Trick, *The World Wide Web: It's the Customers!* (Refereed Commentary), INFORMS Journal on Computing, **10**(4): 393-395 (1998).

A. Mehrotra and M.A. Trick, *Cliques and Clustering: A Combinatorial Approach*, Operations Research Letters, **22**(1): 1–12 (1998).

G.L. Nemhauser and M.A. Trick, *Scheduling a Major College Basketball Conference*, Operations Research, **46**: 1–8 (1998).

V. Chandru and M.A. Trick, *The Search for Optimal Lagrange Multipliers*, Journal of the Indian Institute of Science, **78**: 131–151 (1998).

M.A. Trick and S.E. Zin, *Spline Approximations to Value Functions: A Linear Programming Approach*, Macroeconomic Dynamics, **1**: 255–277 (1997).

A. Mehrotra and M.A. Trick, *A column generation approach for graph coloring*, INFORMS Journal on Computing, **8**:344–354 (1996).

S. Srivastava and M.A. Trick, *Sophisticated voting rules: The two tournament case*, Social Choice and Welfare, **13**: 275-289 (1996).

M.A. Trick, *Scheduling Multiple Variable Speed Machines*, Operations Research, **42**:234–248 (1994).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *How hard is it to control an election?*, Special Issue on Formal Theories of Politics, Mathematical and Computer Modeling, **16**: 27–40 (1992).

M.A. Trick, *A linear relaxation heuristic for the generalized assignment problem*, **39**: 137–152, Naval Research Logistics, **39**: 137–152 (1992).

M.A. Trick, *Recognizing single–peaked preferences on a tree*, Mathematical Social Sciences, **17**: 329–334 (1989).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *The computational difficulty of manipulating an election*, Social Choice and Welfare, **6**: 227–241 (1989).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *Voting schemes for which it can be difficult to tell who won the election*, Social Choice and Welfare, **6:** 157–165 (1989).

D.C. Llewellyn, C.A. Tovey, and M.A. Trick, *Local Optimization on Graphs*, Discrete Applied Mathematics, **23**:157–178 (1989)

D.C. Llewellyn, C.A. Tovey and M.A. Trick, *Finding saddlepoints of two person zero–sum games*, American Mathematical Monthly, **95**:912–918 (1988).

W.G. Nulty and M.A. Trick, *GNO: a generalized network optimizer (software announcement)*, Operations Research Letters, **7**:101–102 (1988).

J.J. Bartholdi and M.A. Trick, *Stable matchings with preferences derived from a psychological model*, Operations Research Letters, **5**:165–169 (1986).

E. Tardós, C.A. Tovey, and M.A. Trick, *Layered augmenting path algorithms*, Mathematics of Operations Research, **11**:362–370 (1986).

J.J. Bartholdi and M.A. Trick, *More on the evolution of cooperation*, Journal of Conflict Resolution, **30**:129–140 (1986).

Competitively Reviewed Conference Proceedings

S. Ghosh and M.A. Trick, *Robust Repositioning to Counter Unpredictable Demand in Bike Sharing Systems*, IJCAI 2016, New York, NY (2016).

J. Kinable and M.A. Trick, *A Logic Based Benders' Approach to the Concrete Delivery Problem*, CPAIOR 2014, Cork, Ireland (2014).

R. Bao and M.A. Trick, *The Relaxed Traveling Tournament Problem (Extended Abstract)*, PATAT 2010, Belfast, UK (2010).

B. Peterson and M.A. Trick, *A Benders Approach to a Transportation Network Design Problem (Extended Abstract)*, CP-AI-OR 2009, Pittsburgh, USA (2009).

M.A. Trick and H. Yildiz, *Bender's Cuts Guided Large Neighborhood Search for the Traveling Umpire Problem*, CP-AI-OR 2007, Brussels, Belgium (2007).

M.A. Trick and H. Yildiz, *A Large Neighborhood Search Heuristic for Graph Coloring*, CP-AI-OR 2007, Brussels, Belgium (2007).

M.A. Trick, *Small Binary Voting Trees*, First International Workshop on Computational Social Choice, Amsterdam, Netherlands, 500-511 (2006).

R. Rasmussen and M.A. Trick, *The Timetable Constrained Distance Minimization Problem*, CP-AI-OR 2006, Cork, Ireland (2006).

M.A. Trick, *Formulations and Reformulations in Integer Programming*, CP-AI-OR 2005, Prague, Czech Republic (2005).

M.A. Trick, *Scheduling Court-Constrained Sports Tournaments*, PATAT 2005, Pittsburgh, PA (2004).

M.A. Trick, *A dynamic programming approach for consistency and propagation for knapsack constraints*, CP-AI-OR 2001, Third International Workshop on integration of AI and OR techniques, Wye, England.

K. Easton, G.L. Nemhauser, and M.A. Trick, *The Traveling Tournament Problem: Description and Benchmarks*, Constraint Programming, 2001, 580–584 (2001).

R. Bosch and M.A. Trick, *Constraint Programming and Hybrid Formulations for Life*, FORMUL'01, Cyprus (2001)

G.L. Nemhauser and M.A. Trick, *Scheduling a Major College Basketball Conference*, 2nd International Conference on the Practice and Theory of Automated Timetabling, Toronto (1997)

G. Christopher, M. Farach, and M.A. Trick, *The structure of circular decomposable metrics* European Symposium on Algorithms, Barcelona (1996).

M.A. Trick and S.E. Zin, *Adaptive Spline Generation through Linear Programming: Applications to Stochastic Dynamic Programming*, Conference on Computational Economics, Austin (1995).

M.A. Trick, *Scheduling multiple variable–speed machines*, Integer Programming and Combinatorial Optimization Conference (IPCO), Waterloo (1990).

Unrefereed Conference Proceedings

S. Ur, D. Sleator, and M.A. Trick, *Analysis of online algorithms for organ allocation*, IFIP World Computer Congress, Madrid, Spain, Information Processing 92, 458–464 (1992).

Expository Publications

M.A. Trick, *Michael Trick's Operations Research Blog*, semi-periodic posts at http://mat.tepper.cmu.edu/blog, October, 2005 - (readership as of 7/2012: approx 2,000 per post).

M.A. Trick, Review of *The Traveling Salesman Problem: A Computational Study* by Applegate, Bixby, Chvatal, and Cook, Operations Research Letters (2008).

M.A. Trick, *The CIO as Business Predictor*, Optimize magazine, May 2006.

M.A. Trick, *Best Possible Outcome*, Optimize magazine, January 2003.

M.A. Trick, *President's Column*, bimonthly column in the magazine *OR/MS Today*, January 2002-December 2002.

M.A. Trick, *INFORMS Online*, bimonthly column in the magazine *OR/MS Today*, April, 1997 – December 2000.

PRESENTATIONS

Featured and Special Presentations

M.A. Trick, *Sports Scheduling Meets Business Analytics*, INFORMS Houston (2017) (Omega Rho Plenary Lecture)

M.A. Trick, *Business Analytics: combining predictive and prescriptive analytics to have broad impact*, ASOCIO 2017, Medellin, Colombia (2017) (plenary presentation)

M.A. Trick, *Twelve Years of Scheduling Major League Baseball Teams and Umpires*, MathSport International, Padua, Italy (2017) (opening plenary)

M.A. Trick, *Operational Research Societies and the Future of Operational Research*, African Operational Research Summit, Nairobi, Kenya (2016) (invited presentation).

M.A. Trick, *Voting and Computational Complexity: Test of Time Award Presentation*, ACM Conference on Economics and Computation, Maastricht (2016), (prize acceptance presentation)

M.A. Trick, *Business Analytics: Combining Predictive and Prescriptive Analytics to Have Broad Impact*, Operational Research Society of South Africa Annual Meeting, Hartbeespoort (2015), (opening plenary)

M.A. Trick, *Combinatorial Benders Approaches: Theory and Application*, Operational Research Society of South Africa Annual Meeting, Hartbeespoort (2015), (tutorial lectures)

M.A. Trick, *Business Analytics: Combining Predictive and Prescriptive Analytics to Have Broad Impact*, 27th European Conference on Operational Research (EURO), Glasgow (2015), (invited keynote)

M.A. Trick, *Sports Scheduling Meets Business Analytics*, XX Congreso Nacional de Estadistica e Investigacion Operativa (Spanish O.R. Society Annual Meeting), Pamplona (2015), (invited plenary)

M.A. Trick, *Sports Scheduling Meets Business Analytics*, International Conference on Operations Research (German O.R. Society Annual Meeting), Aachen (2014), (opening plenary)

M.A. Trick, *Metaheuristics and Optimization in Sports Scheduling*, Metaheuristics International Conference, Singapore (2013), (LARC plenary)

M.A. Trick, *Adventures in Scheduling in the Real World*, INFORMS Computing Society Annual Meeting, Sante Fe (2013), (invited plenary)

M.A. Trick, *Successful New Curricula*, AACSB Associate Deans Conference, Houston (2012), (special lunch presentation)

M.A. Trick, *Combining Optimization and Heuristics in Sports Scheduling*, Matheuristics, Rio de Janeiro, Brazil (2012), (invited plenary)

M.A. Trick, *Optimization Methods in Sports Scheduling*, Modeling Optimization Conference (MOPTA), Lehigh University (2012), (invited plenary)

M.A. Trick, *Adventures in Sports Scheduling and Trends in Operations Research*, Benelux Conference on Artificial Intelligence, Ghent (2011), (invited plenary)

M.A. TRICK, *Adventures in Scheduling and Trends in Operations Research*, International Joint Conferences on Artificial Intelligence, Barcelona (2011), (invited plenary)

M.A. TRICK, *Business Analytics: The Past, Present, and Future of Operations Research*, Danish Operational Research Society, Applications of Optimization Conference (2011), (invited plenary)

M.A. TRICK, *Combinatorial Benders Approaches to Hard Problems*, ALIO/INFORMS Buenos Aries (2010), (tutorial)

M.A. TRICK, *An Operations Research Look at Voting*, First International Conference on Algorithmic Decision Making, Venice (2009), (plenary)

M.A. TRICK, *Sports Scheduling and Advances in Integer and Constraint Programming*, EURO XXIII Bonn (2009), (keynote)

M.A. TRICK, *Sports Scheduling and the Practice of Operations Research*, IMA Public Lecture Series, Institute for Mathematics and its Applications, University of Minnesota (2009), (public lecture)

M.A. TRICK, *Sports Scheduling and Trends in Operations Research*, 19th Irish Conference on Artificial Intelligence and Cognitive Science, Cork, Ireland (2008) (plenary).

M.A. TRICK, *Sports Scheduling and the Practice of Operations Research*, 17th Annual Arnoff Lecture on the Practice of Management Science, University of Cincinnati (2008), (public lecture).

M.A. TRICK, *Integrated Integer and Constraint Programming in Sports Scheduling*, CPAIOR Master Class, Paris (2008) (featured presentation).

M.A. TRICK, *The Science of Better and Better Together*, 19th National Conference of the Australian Society for Operations Research, Melbourne, Australia (2007), (plenary)

M.A. TRICK, *The Science of Better and Better Together*, 42nd Annual Operational Society of New Zealand Conference, Auckland (2007), (plenary)

M.A. TRICK, *The Science of Better: Practical Operations Research*, Hood Fellows Public Lecture, University of Auckland (2007) (public lecture)

M.A. TRICK, *The Society of Operations Research*, EURO Reykjavik (2006) (Semi-plenary Presentation).

M.A. TRICK, *The Community of Operations Research*, INFORMS Doctoral Colloquium (2002, 2003, 2004, 2005, 2006) (Closing Keynote).

M.A. TRICK, *Adventures in Sports Scheduling*, MAPSP 2005, Siena (2005) (Invited Keynote).

M.A. TRICK, *Formulations and Reformulations in Integer Programming*, FORMUL'04, Toronto (2004) (Invited Keynote).

M.A. TRICK, *Sports Scheduling*, Colloquium on Applied Combinatorial Optimization, Montreal (2004) (Invited Presentation).

M.A. TRICK, *Scheduling Sports Events*, INFORMS/CORS Joint Meeting, Banff (2004) (Invited Tutorial).

R. BOSCH AND M.A. TRICK, *Integer Programming*, INTROS Tutorial Series, Nottingham (2003) (Invited Tutorial).

P. SHAH, D. SIMCHI-LEVI, A. GREENLAND, AND M.A. TRICK, *US Postal Services Network Design Challenges*, INFORMS Practice Meeting, Phoenix (2003) (Special Invited Session).

M.A. TRICK, *Constraint Programming*, INFORMS Practice Meeting, Phoenix (2003) (Invited Tutorial).

M.A. TRICK, *Adventures in Sports Scheduling*, Oberlin College Distinguished Lecturer Series (2002).

M.A. TRICK, *The Role of Social Capital in Operations Research Societies*, IFORS, Edinburgh (2002) (Plenary Presentation).

M.A. TRICK, *Constraint Programming*, INFORMS Practice Meeting, Montreal (2002) (Invited Tutorial).

M.A. TRICK, *University and Industry Cooperation in Logistics Optimization*, ODETTE (European Automotive Industry Organization), Amsterdam (2001) (Featured Presentation)

M.A. TRICK, *Constraint Programming*, INFORMS Practice Meeting, San Diego (2001) (Invited Tutorial).

M.A. TRICK, *Sports Scheduling in the "Real World"*, Algorithms in the "Real World", Carnegie Mellon (2000) (Featured Presentation).

M.A. TRICK, *Adventures in Sports Scheduling*, 16th Annual Conference on Undergraduate Mathematics, Rose-Hulman Institute of Technology, Terre Haute (1999) (Featured Presentation).

M.A. TRICK, *Scheduling a Baseball League*, Discrete Optimization Network Conference on Combinatorial Optimization and its Applications, London (1995) (Featured Presentation).

Conference Presentations

M.A. TRICK, *Twelve Years of Scheduling Major League Baseball Teams and Umpires*, NemFest, Atlanta, Georgia (2017)

INFORMS, EURO and IFORS Presentations are invited, but are not competitively reviewed.

M.A. TRICK, *Solving real-world problems with OR/Analytics — an academician's perspective*, INFORMS Combined Colloquium, Philadelphia (2015).

M.A. TRICK, *Solving real-world problems with OR/Analytics — an academician's perspective*, INFORMS Combined Colloquium, San Francisco (2014).

M.A. TRICK, *Scheduling Major League Baseball's Umpires*, MathSport International, Leuven, Belgium (2013).

M.A. TRICK, *The Relaxed Traveling Tournament Problem*, INFORMS Austin (2010).

M.A. TRICK, *Social Networking and Operations Research* (panel member), INFORMS Austin (2010).

B. PETERSON AND M.A. TRICK, *A Benders Approach to a Transportation Network Design Problem*, INFORMS San Diego (2009).

M.A. TRICK AND H. YILDIZ, *Locally Optimized Crossover for the Traveling Umpire Problem*, INFORMS San Diego (2009).

M.A. TRICK, *Benders' Approaches to Sports Scheduling*, MIP, New York, NY (2008).

M.A. TRICK, *Benders' Approaches to Sports Scheduling*, IFORS South Africa (2008).

M.A. TRICK AND H. YILDIZ, *Logical Bender's Cuts Guided Local Search and a Greedy Heuristic for the Traveling umpire Problem*, INFORMS Seattle (2007).

M.A. TRICK, H. YILDIZ, AND T. YUNES, *Scheduling Umpires*, EURO Prague (2007).

M.A. TRICK, *George Nemhauser and Sports Scheduling*, Symposium in Honor of George Nemhauser's 70th Birthday, Atlanta (2007).

H. BARRINGER, J. LEVINE, T. YUNES, AND M.A. TRICK, *Scheduling Major League Baseball Umpires*, INFORMS National Meeting, Pittsburgh (2006).

M.A. TRICK, *Volunteering, Social Capital, and Professional Leadership*, INFORMS National Meeting, Pittsburgh (2006).

M.A. TRICK AND H. YILDIZ, *The Traveling Umpire Problem*, INFORMS National Meeting, Pittsburgh (2006).

K. EASTON, G.L. NEMHAUSER, AND M.A. TRICK, *Scheduling Major League Baseball*, INFORMS National Meeting, San Francisco (2005).

R. RASMUSSEN AND M.A. TRICK, *A Benders Approach to the Minimum Break Scheduling Problem*, INFORMS National Meeting, San Francisco (2005).

N. ALTINTAS, A. MONTGOMERY, AND M.A. TRICK, *A Time Series Approach to Forecasting Patterns in the Automotive Industry*, INFORMS National Meeting, San Francisco (2005).

M.A. TRICK, *Using Sports Scheduling to Teach Integer and Constraint programming*, IFORS, Hawaii (2005).

M.A. TRICK AND H. YILDIZ, *A Large Neighborhood Search Heuristic for Graph Coloring*, INFORMS National Meeting, Denver (2004).

M.A. TRICK, *Using Sports Scheduling to Teach Integer and Constraint Programming*, INFORMS National Meeting, Denver (2004).

N. ALTINTAS, A. MONTGOMERY, AND M.A. TRICK, *Data Mining Analysis of Ordering Patterns in the Automotive Industry*, INFORMS National Meeting, Denver (2004).

M.A. TRICK, *Integer and Constraint Programming Approaches for Sports Schedules*, INFORMS/CORS Joint Meeting, Banff (2003).

J. FORREST, R. LOUGEE-HEIMER, G. GRUN, A. MARTIN, M.A. TRICK, AND YAN XU, *COIN-OR Open-Source Coding Contest*, INFORMS National Meeting, Atlanta (2003).

A. MEHROTRA AND M.A. TRICK, *Branch and Price: Application to Coloring and Clustering*, INFORMS National Meeting, Atlanta (2003).

K.EASTON, G.L. NEMHAUSER, AND M.A. TRICK, *A Parallel IP/CP Approach to Solving the Traveling Tournament Problem*, INFORMS National Meeting, Atlanta (2003).

A. Mehrotra and M.A. Trick, *Column Generation Approaches for Graph Coloring Generalizations*, International Symposium on Mathematical Programming, Copenhagen (2003).

M.A. Trick, *Integer and Constraint Programming Methods for Sports Scheduling*, EURO/INFORMS Joint National Meeting, Istanbul (2003).

Information Technology and Uncertainty (Panel Discussion), InformationWeek Spring Conference, Amelia Island (2003).

A. Mehrotra and M.A. Trick, *Optimal Contiguous Clustering*, INFORMS National Meeting, San Jose (2002).

K. Easton, G.L. Nemhauser, and M.A. Trick, *The Traveling Tournament Problem*, International Symposium on Mathematical Programming, Atlanta (2000).

R. Bosch and M.A. Trick, *Approaches to finding dense still lifes*, International Symposium on Mathematical Programming, Atlanta (2000).

K. Easton, G.L. Nemhauser, and M.A. Trick, *The Traveling Tournament Problem*, INFORMS National Meeting, Salt Lake City (2000).

M.A. Trick, *A Flip Analysis*, INFORMS National Meeting, Salt Lake City (2000).

M.A. Trick, *Integer and Constraint Approaches to Sports Scheduling Problems*, Schloss Dagstuhl Conference on Integer and Constraint Programming, Dagstuhl, Germany (2000).

G.L. Nemhauser and M.A. Trick, *Integer Programming Formulations and Algorithms*, Schloss Dagstuhl Conference on Integer and Constraint Programming, Dagstuhl, Germany (2000).

M.A. Trick, *Information Technology and International Management*, Department of Education BIE Meeting, Charleston, SC (1999).

A. Mehrotra, K.E. Murphy, and M.A. Trick, *Optimal Shift Scheduling in Call Centers*, INFORMS National Meeting, Philadelphia (1999).

M.A. Trick, *Adventures in Sports Scheduling*, Conference in Honor of Ralph Gomory in Honor of his 70th Birthday, IBM (1999).

M.A. Trick, *Computational Complexity and Algorithmic Aspects in Voting Theory*, DIMACS Workshop on Voting Systems, Rutgers University (1999).

K. Easton, G.L. Nemhauser, and M.A. Trick, *Scheduling College Basketball*, INFORMS National Meeting, Cincinnati (1999).

M.A. Trick, *Further Adventures in Baseball Scheduling*, INFORMS National Meeting, Cincinnati (1999).

A. Mehrotra, N. Natraj, and M.A. Trick, *Consolidating Maintenance Spares*, INFORMS National Meeting, Seattle (1998).

M.A. Trick, *Adventures in Sports Scheduling*, DIMACS-CMU-Georgia Tech. Workshop on Large Scale Discrete Optimization, DIMACS, New Jersey (1998).

M.A. Trick, *Optimization on the Internet*, (panel member), INFORMS National Meeting, San Diego (1997).

M.A. Trick, *Scheduling Major League Baseball*, INFORMS National Meeting, Atlanta (1996).

A. Mehrotra and M.A. Trick, *Solving Clustering Problems by Branch and Price*, INFORMS National Meeting, Atlanta (1996).

A. Mehrotra, N. Natraj, and M.A. Trick, *Maintenence Spare Clustering*, INFORMS National Meeting, Atlanta (1996).

M.A. Trick (Chair and Panel Member), *INFORMS and Online Information*, INFORMS National Meeting, Washington (1996).

M.A. Trick and S.E. Zin, *Adaptive Spline Generation: A New Algorithm for Solving Stochastic Dynamic Programs*, Recent Advances in Economics and Finance, St. Louis (1995).

A. Mehrotra and M.A. Trick, *Graph Coloring using Column Generation*, Optimization Days, University of Montreal (1995).

A. Mehrotra and M.A. Trick, *Graph Coloring using Column Generation*, Conference on Optimization, Braga, Portugal (1995).

M.A. Trick, *Computational Approaches to Voting Problems*, London Mathematical Programming Society Monthly Meeting, London (1995).

M.A. Trick, *INFORMS Online (Panel Discussion)*, INFORMS National Meeting, Los Angeles (1995).

J.J. Bartholdi, J.B. Orlin, and M.A. Trick, *Borda Count Resists Manipulation by Groups*, INFORMS National Meeting, Los Angeles (1995).

M.A. Trick, *The Second DIMACS Challenge*, ORSA/TIMS National Meeting, Boston (1994).

M.A. Trick, *Solving assignment problems with additional constraints*, ORSA/TIMS National Meeting, Phoenix (1993).

M.A. Trick, *Organizing an implementation challenge*, ORSA/TIMS National Meeting, Chicago (1993).

K.E. Murphy and M.A. Trick, *Optimal sort schemes for mail sorting machines*, ORSA/TIMS National Meeting, San Francisco (1992).

S. Srivastava and M.A. Trick, *Sophisticated voting systems*, ORSA/TIMS National Meeting, San Francisco (1992).

S. Srivastava and M.A. Trick, *Sophisticated voting rules: the two tournament case*, Conference on Social Choice and Welfare, Caen, France (1992).

S. Srivastava and M.A. Trick, *Implementable voting and tournament decomposition*, ORSA/TIMS National Meeting, Orlando (1992).

M.A. Trick, *Totally decomposable metrics and the traveling salesman problem*, ORSA/TIMS Joint National Meeting, Nashville (1991).

M.A. Trick, *Scheduling variable–speed machines*, ORSA/TIMS Joint National Meeting, Philadelphia (1990).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *The computational difficulty of manipulating an election*, ORSA/TIMS Joint National Meeting, Las Vegas (1990).

M.A. Trick, *Recognizing restricted preferences*, ORSA/TIMS Joint National Meeting, Las Vegas (1990).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *Computational complexity of decision making and manipulation in social choice*, Fourth SIAM Conference on Discrete Mathematics, San Francisco, (1988).

M.A. Trick, *Solving combinatorial optimization problems with network data structures*, ORSA/TIMS Joint National Meeting, Washington, (1988).

D.C. Llewellyn, C.A. Tovey, and M.A. Trick, *The complexity of finding saddlepoints of two–person zero–sum games*, ORSA/TIMS Joint National Meeting, St. Louis (1987).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *The computational complexity of voting systems*, IFORS, Buenos Aires (1987).

J.J. Bartholdi, C.A. Tovey, and M.A. Trick, *An algorithmic guide to voting theory*, Second Advanced Research Institute in Discrete Applied Mathematics, Rutgers, NJ (1987).

M.A. Trick, *Solving matching problems with generalized networks*, ORSA/TIMS Joint National Meeting, New Orleans (1987).

V. Chandru and M.A. Trick, *The complexity of dual multiplier search*, ORSA/TIMS Joint National Meeting, New Orleans (1987).

D.C. Llewellyn, C.A. Tovey, and M.A. Trick, *Finding local minima in discrete structures*, ORSA/TIMS Joint National Meeting, New Orleans (1987).

J.J. Jarvis, H.D. Ratliff, and M.A. Trick, *Exploiting pure network structure in generalized networks*, ORSA/TIMS Joint National Meeting, Miami (1986).

J.J. Bartholdi and M.A. Trick, *Stable matchings and single peaked preferences*, Advanced Research Institute in Discrete Applied Mathematics, Rutgers, NJ (1986).

J.J. Bartholdi and M.A. Trick, *More on the evolution of cooperation*, ORSA/TIMS Joint National Meeting, Los Angeles (1986).

M.A. Trick, *Solving lagrangians with the ellipsoid algorithm*, ORSA/TIMS Joint National Meeting, Los Angeles (1986).

J.J. Jarvis, H.D. Ratliff, and M.A. Trick, *Generalized network implementations on microcomputers*, ORSA/TIMS Joint National Meeting, Atlanta (1985).

E. Tardós, C.A. Tovey, and M.A. Trick, *Layered augmenting path algorithms*, ORSA/TIMS Joint National Meeting, Atlanta (1985).

C.A. Tovey and M.A. Trick, *A layered algorithm for polymatroidal flows*, ORSA/TIMS Joint National Meeting, San Francisco (1984).

University and Other Presentations

Adventures in Sports Scheduling and other general sports scheduling Talks: Lehigh University (2016), University of California, Irvine (2014), Penn State (2013), University of Aachen, Germany (2013), University of Toronto (2013), University of Western Ontario (2010), Texas A&M (2010), George Washington University (2010), NYU Stern School (2010), SINTEF Oslo (2008), Auburn University (2008), University of Auckland (2007), Victoria University (Wellington) (2007), University of Canterbury (Christchurch) (2007), University of Illinois (Urbana-Champaign) (2006), University of Michigan (2006), Ohio State University (2005), Duke University (2004), University of Nottingham (2003), UCLA (2003), Oberlin College (2002), Washington INFORMS Chapter (2001), Bucknell University (2000), Oberlin College (2000), SUNY University at Buffalo (1999), IBM Watson Research Lab (1998), Notre Dame University (1998), Northwestern University (1997), University of Chicago (1997), Columbia University (1997), University of California, Los Angeles (1997), Naval Postgraduate School (1997), Stanford University (1997), University of California, Berkeley (1997), Massachusetts Institute of Technology (1996), University of Cincinnati (1996), Georgia Institute of Technology (1995), University of Miami (1995), Carnegie Mellon University (1994).

Business Analytics: The Past, Present, and Future of Operations Research: Carnegie Mellon (Chemical Engineering, 2013).

Sports Scheduling Meets Business Analytics University of Wisconsin (2017), University of Buffalo (2015), University of Michigan (2015), KU Leuven (2014)

Benders Approaches to Scheduling: University of Waterloo (2010), Singapore Management University (2007).

The Science of Better: Practical Operations Research: University of Western Ontario (2010), University of Auckland (2007), Victoria University (Wellington) (2007), University of Canterbury (Christchurch) (2007).

Lessons from Three Applications: University of Canterbury (Christchurch) (2007), Naval Postgraduate School (2006)

Linear Programming for Stochastic Dynamic Programs: Massachusetts Institute of Technology (1996), Carnegie Mellon University (1996).

Coloring and Clustering by Branch and Price: Carnegie Mellon University (1995).

Implementation of Voting Schemes: Bell Laboratories (1992).

Metrics and the traveling salesman problem: Massachusetts Institute of Technology (1996), University of Chicago (1993), Rutgers University (1992), Carnegie Mellon University (1991), Rice University (1991)

An algorithmic guide to voting theory: Lehigh University (1992), Haverford College (1992).

Expository Presentations

Communications and Computers, Greater Pittsburgh Area Secondary Science Inservice, Brashear High School, Pittsburgh (1992).

PROFESSIONAL ACTIVITIES

International Federation of Operations Research Societies (IFORS)

Administrative Committee: President (2016-2018), Vice President (North America) (2004-2009), responsible for Meetings.

Committee: ITOR Editor Search Committee (chair, 2006).

Institute for Operations Research and the Management Sciences (INFORMS)

Elected Positions: President (2002) (includes President-Elect (2001) and Past President (2003)), Board of Directors Member at Large (1998-2000).

Editor: INFORMS Online (founding editor, 1995–2000).

Committees: Teaching of INFORMS Practice Prize (2013-2014, Chair 2014), Kimball Medal Selection Committee (2010-11, Chair 2012), IOL Editor Search Committee (2010), Publications

Organization Review Committee (Chair, 2010), Public Information Committee (2008-), Nominating Committee (1999, 2000, 2003 (chair), 2005, 2008), IOL Editor Search Committee (2006), Executive Committee (2001-2003), Strategic Planning Committee (chair, 2001), INFORMS Information Technology Committee (1995–2001), INFORMS Outreach Committee (1995-1998).

Association to Advance Collegiate Schools of Business(AACSB)
Committees: Associate Deans Conference Advisory Committee, Phoenix (2013), Doctoral Education Task Force (2012-13)

Association for Constraint Programming
Elected Position: Member, Executive Committee (2007-2009).
Committee: Strategic Planning (2014).

COIN-OR (COmputational INfrastructure for Operations Research)
Elected Position: Member, Strategic Leadership Board (2008-2010)

Conference Organizing and Program Committees
INFORMS Conference on Business Analytics and Operations Research, Edelman Competition Judge: Orlando (chair, 2016), Huntington Beach (chair, 2015), Boston (2014), Huntington Beach (2012), Chicago (2011), Phoenix (2009).
CP-AI-OR (Constraint Programming-Artificial Intelligence-Operations Research): Steering Committee (2006-); Program Committee: Padova (2017), Cork (2014), Yorktown Heights, NY (2013), Quebec City (2012), Berlin (2011), Milan (2010), Pittsburgh (2009), Paris (2008, co-program chair), Brussels (2007), Cork (2006), Prague (2005), Nice (2004), Montreal (2003), Le Croisic, France (2002).
PATAT (Practice and Theory of Automated Timetabling): Steering Committtee (2005-2008); Program Committee: Udine (2016), York (2014), Oslo (2012), Belfast (2010), Brno (2006), Pittsburgh (2004,co-chair), Gent (2002), Konstanz (2000), Toronto (1997).
CP (Constraint Programming), Senior Program Committee: Uppsala, Sweden (2013); Program Committee: Toulouse (2016), Perugia (2011), Lisbon (2009), Sydney (2008, member Best Paper committee), Toronto (2004), Cork, Ireland (2003)
MISTA (Multidisciplinery International Conference on Scheduling: Theory and Applications): Advisory Committee (2003-); Program Committee: Prague (2015), Ghent (2013), Phoenix (2011), Dublin (2009), Paris (2007), New York (2005), Nottingham (2003)
AAAI (Association for the Advancement of Artificial Intelligence), Program Committee: San Francisco (2017), Austin (2015)
Matheuristics, Program Committee: Brussels (2016), Rio de Janeiro (2012).
COMSOC (Workshop on Computational Social Choice), Program Committee: Toulouse (2016), Pittsburgh (2014), Krakow (2012), Dusseldorf (2010), Liverpool (2008).
LION (Learning and Intelligent Optimization), Program Committee: Naples (2016).
MIC (Metaheuristics International Conference), Program Committee: Barcelona (2017), Morocco (2015), Singapore (2013)
INFORMS JFIG Paper Competition, Selection Committee: San Francisco (2014).
EURO/INFORMS International Conference, Program Committee: Rome (2013)
INFORMS Optimization Society: Miami (2012, co-chair)
BNAIC (Belgium and Netherlands Artificial Intelligence Conference), Program Committee: Gent (2011)
INFORMS Computing Society, Program Committee: Monterey (2011), Charleston (2009), Miami (2007, Co-chair)
ADT (Algorithmic Decision Theory), Program Committee: Venice (2009).
MIC (Metaheuristics International Conference), Program Committee: Morocco (2015), Montreal (2007), Vienna (2005).
IEEE Symposium on Computational Intelligence and Scheduling, Program Committee: Honolulu (2007)
INFORMS National Meeting, General Chair: Pittsburgh (2006)

ICAPS (International Conference on Automated Planning and Scheduling), Program Committee: Ableside (2006), Monterey (2005), Whistler (2004).

Carnegie Bosch Institute International Conference, General Chair: Stuttgart (2005), Pittsburgh (2003), Berlin (2001), San Francisco (1999).

Symposium on Graph Coloring (chair): Copenhagen (2003), Ithaca (2002).

Cluster Chair: Panels on Professional Issues, INFORMS Austin (2010), IFORS 50th Anniversary, IFORS South Africa (2008), OR in Sports, IFORS South Africa (2008),OR in Sports, EURO Rejkyavik (2006), Information Technology, Mathamatical Programming Symposium, Atlanta (2000), Sports and OR, INFORMS National Meeting, Atlanta (1996), DIMACS Challenge, Mathematical Programming Symposium, Ann Arbor (1994).

Session Organizer: Graph Coloring, ISMP (2003), Recreational Mathematical Programming, INFORMS Salt Lake City (2000), Sports and OR/MS, INFORMS Cincinnati (1999), Combinatorial Optimization, ORSA/TIMS Boston (1994), Integer Programming, ORSA/TIMS Boston (1994), Network Optimization, ORSA/TIMS Chicago (1993), Combinatorial Optimization, ORSA/TIMS San Francisco (1993).

EDITORIAL POSITIONS

Co-Editor in Chief: Surveys in OR/MS (2008-2012)

Advisory Board Member: Mathematical Programming Computation (2008-), Constraints (2009-)

Area Editor: Operations Research (OR Forum, 2006-2011)

Associate Editor: Annals of Operations Research (2005-), International Transactions in Operational Research (2008-), INFORMS Transactions on Education (1999-), Constraints (1995–2009), INFORMS Online (2001–2010), Naval Research Logistics (1992–1996), Operations Research (1987–1989).

Referee: For most journals in operations research and discrete mathematics.

OTHER ACTIVITIES

Scientific Advisory Committee: Cork Constraint Computational Center(2005–2013) and Insight @ UCC (2014–2018), Cork, Ireland (2005–2018).

Scientific Advisory Board: SPORTING (SPORT schedulING), SINTEF, Norway (2015–2017).

External Review Committee: National ICT Australia (2012, 2014).

Faculty Hiring Review: Chair in Optimization (Uppsala University, 2014).

Special Year Chair: DIMACS Special Year on Large Scale Discrete Optimization (a year consisting of workshops, visitors, postdocs, and so on with a budget of approximately $300,000) (2000).

Other Professional Society Committee: Site Selection Committee, Mathematical Programming Society (2009).

OTHER AWARDS AND HONORS

Honorable Mention, 2010 Railway Applications Problem Solving Competition (with Tallys Yunes)

NATO Postdoctoral Fellowship (awarded by NSERC, Canada), 1988–1990.

Research Award (Best Dissertation in Industrial and Systems Engineering, Georgia Tech), 1988.

Second Place, George Nicholson Student Paper Award, for *Solving Matchings with Generalized Networks*, 1987.

Finalist, George Nicholson Student Paper Award, for *Solving Lagrangians with the Ellipsoid Algorithm*, 1986.

CONSULTING/CORPORATE ACTIVITY

Partner, Sports Scheduling Group. Scheduling consulting for many sports leagues, including Major League Baseball and various US university conferences (2003-).

Consulting with IBM Business Consulting (formerly PriceWaterhouseCoopers) and the United States Postal Service on supply chain design (2002-2006).

Consulting with PriceWaterhouseCoopers and the Internal Revenue Service on Budget Allocation procedures (1999-2001).

Consulting with the Major League Baseball, International Baseball League, and Atlantic Coast Conference on scheduling issues (1994–2002) (subsumed by Sports Scheduling Group).