

**THE UNIVERSITY OF BRITISH COLUMBIA**  
**Curriculum Vita for Faculty Members**

**Date:** April 19, 2021      **Initials:**

- 1. Surname:** McCormick      **First Name:** S. Thomas
- 2. Department/School:** Sauder School of Business, Division of Operations and Logistics
- 3. Faculty:** Sauder School of Business
- 4. Present Rank:** Professor      **Since:** July 1998

**5. Post-Secondary Education**

A.B., University of Pennsylvania, Philadelphia, PA 1975  
Mathematics with Honors, and Natural Sciences; Phi Beta Kappa and Summa Cum Laude  
Ph.D., Stanford University, Stanford, CA 1983  
Operations Research

**6. Employment Record**

**(a) Prior to coming to UBC**

Assistant Professor, Department of Industrial Engineering and Operations Research, Columbia University, July 1983–July 1989.

Summer Intern, IBM T. J. Watson Research Center, Yorktown Heights, NY, Summer 1982.

Research Associate, MIT Energy Laboratory, Cambridge, MA 1977–1979.

**(b) At UBC**

Assistant Professor, July 1989

Associate Professor, July 1993

Professor, July 1998

WJ Van Dusen Professor of Management, July 2000

**(c) Date of granting of tenure at UBC:**

July 1993

**(d) Short-term visits elsewhere while at UBC:**

Visiting Professor 10/2019, Laboratoire Lamsade, Université Paris-Dauphine.

Visiting Professor 4/2018, Laboratoire Lamsade, Université Paris-Dauphine.

Visiting Professor 5/2017, Laboratoire Lamsade, Université Paris-Dauphine.

Visiting Professor 7/2015, Laboratoire Lamsade, Université Paris-Dauphine.

Visiting Professor 4–6/2015, University of Rome La Sapienza.

Visiting Professor 10/2014–3/2015, University of Rome Tor Vergata.

Visiting Professor, Laboratoire Lamsade, Université Paris-Dauphine, 6–7/13.

Visiting Professor, Laboratoire Lamsade, Université Paris-Dauphine, 4–5/12.

Visiting Professor, Laboratoire Lamsade, Université Paris-Dauphine, 3/11.

Visiting Professor, Laboratoire Lamsade, Université Paris-Dauphine, 3–4/09.

Visiting Professor, Research Institute for Math. Sciences, Kyoto University, 1/07.

Visiting Professor, Research Institute for Math. Sciences, Kyoto University, 2/06.

Visiting Professor, Laboratoire LIMOS, Université Clermont-Ferrand II, 5/01–8/01.

## 7. Leaves of Absence

Sabbatical 2014–15, Visiting Professor, University of Rome Tor Vergata, University of Rome La Sapienza, Université Paris-Dauphine.

Sabbatical Spring term 2010, Visiting CNRS Researcher, Laboratoire G-SCOP, Université de Grenoble.

Sabbatical 2004–05, Visiting Professor, University of Montréal 08/04–12/04.

Sabbatical 1998–99, Visiting Professor, School of Operations Research and Industrial Engineering, Cornell University.

Sabbatical 1993–94, Visiting Professor, Laboratoire ARTEMIS, Université Joseph Fourier de Grenoble, France.

## 8. Teaching

### (a) Areas of special interest and accomplishments

Being a member of MBA 2001 Core Implementation Committee and teaching in the MBA Core have given me an integrated view of all areas of Commerce. Between this and my experience in coordinating Commerce 311, I have accomplished a lot in re-forming the quantitative aspects of the MBA program. I also developed the first versions of the Integrated Foundations Operations course BASC 540, BASC 550, and co-developed the PSM mini-module BAMA 541.

My expertise in graduate teaching was recognized when I received the UBC CGA Master Teaching Award for Graduate Teaching 1996–97, and it has led to invitations to give short courses in Padua (Italy), Berlin (Germany), Rimini (Italy), Clermont-Ferrand (France), Rome (Italy), and Grenoble (France).

Also, I have been very involved with teaching in the PhD programs both here and at Columbia, including writing, grading, and evaluating qualifying and comprehensive exams.

### (b) Courses taught at UBC

MBA Directed Study and internship supervision. Taught Commerce 311, 515, 517, 518, 618. Was Commerce 311 course coordinator for three years (1991, 1992, 1994), Management Science Workshop organizer (Commerce 611) for a semester. Taught BA500, the Core of the FT MBA program, 1995–98, 1999–2003, 2005–08, 2010–11; co-chair for 1996–97; I have been responsible for Statistics, Supply Chain Management, Decision Theory, and Optimization in the Core. Taught Math 442, BAMS 509, BAMS 510, IMBA BASC 500 2002–, MHA HCEC 542, PT MBA Core 2003, 2012, IMBA Core 2002–04, MBA IF 2012, BASC 540 2012, BASC 523 2012, BASC 550 2013/14 (FT & PT), IMBA BASC 523 2014/15, BAMA 541 (FT & PT) 2013/14, various FT & PT MBA IPD integrated cases 2013/14, one module of Comm 612 on Combinatorial Optimization 2016, Comm 204, 2016–18, BASC 500 IMBA 2015, BASC 523 IMBA 2017–18, BASC 523 DD 2017–18, Comm 618.

### (c) Graduate students supervised

#### Co-Principal advisor at Tor Vergata:

Jannik Matuschke, post-doc 2014–15 (with G. Oriolo).

Marco Senatore, post-doc 2014–15 (with G. Oriolo).

#### Principal advisor at UBC:

Anju Sethu, Research Associate 2019.

Mohammad Khalil, PhD 2017 (with M. Queyranne); withdrawn.

Yiwei Hou, Research Associate 2017.

Maxwell Allman, USRA 2016.  
William Jenden, MMOR (COE) 2016.  
Fridrik Karason, MMOR (COE) 2016.  
Vivian Li, MMOR (COE) 2014.  
Venus Lo, visiting MSc (Waterloo) 2014.  
Tom Diszhazy, MBA industry project 2014.  
Mohammedreza Bolandnazar, MSc 2013 (with Tim Huh).  
Yusuke Otsuki, visiting MSc (Tokyo), 2013.  
Ariel Waserhole, visiting PhD (Grenoble), 2013.  
Bobby Wong MMOR (COE) 2012.  
Jingya Shi, MMOR (COE) 2011.  
Anita Parkinson, PhD 2012 (with M. Queyranne).  
Yongning Wang, PT MBA industry project 2012.  
Jason Wong, MBA industry project 2011.  
Britta Peis, post-doc 2010.  
Jing Shao, PhD 2009 (with H. Krishnan) .  
Antonio Perez Sanchez, MBA internship 2008.  
Bo (Paul) Qu, MBA internship 2008.  
Yan Xu, MBA internship 2008.  
Maren Martens, post-doc 2007–08.  
Michael Chose, MBA internship 2007.  
Nathan Ung, MBA internship 2007.  
Jack Qian, MBA internship 2007.  
Michael Chang, MBA internship 2006.  
Young Wu, MBA internship 2006.  
Maria Tamayo, MBA internship 2006.  
Mahmood Kotb, MHA project 2004.  
Parinda Chagani, MHA project 2004.  
Aseem Bishnoi, MHA project 2004  
Alexei Schwartzman, MHA project 2004.  
Wayne Li, MBA internship 2003.  
Kevin Kearns, MBA internship 2003.  
Tomas Mojica, M.Sc. (COE) 2003.  
Russell Fenske, M.Sc. (COE) 2003.  
Eight MBA internships 2002.  
Amir Sepasi, M.Sc. (COE) 2001.  
Jeff Everett, MBA internship 2000.  
Brian Maclean, MBA internship 2000.  
Todd Stewart, MBA Graduating Essay 1996.  
Jaspreet Sahni, M.Sc. 1996.

**Principal advisor at Columbia:**

S. Frank Chang, Ph.D. 1989.  
Thomas R. Ervolina, Ph.D. 1989.

**Co-principal advisor at Columbia:**

(with D. Simchi-Levi) Chung-Lun Li, Ph.D. 1990.  
(with I. D. Moon) Sohail S. Chaudhry, Ph.D. 1985.

**Thesis Committee Member at UBC:**

X. Li, ECE, 2018.  
A. Sauré, Ph.D. Mgt. Sci. 2012.  
S. Vahid, Ph.D. Forestry 2012.  
C. Ryan, Ph.D. Mgt. Sci. 2010.  
Q. Wei, Ph.D. ECE 2009.  
F. Agharebparast, Ph.D. ECE 2008.  
J. Patrick, Ph.D. Mgt. Sci. 2006.  
S. Durocher, Ph.D. Comp. Sci. 2006.  
X. Zhao, Ph.D. Mgt. Sci. 2003.  
R. Desmeules, M.Sc. Mgt. Sci. 2001.  
D. Rugina, M.Sc. Mgt. Sci. 2000.  
P. Tyedmers, Ph.D. Resource Mgt. 2000.  
S. Kabanuk, M.Sc. Mgt. Sci. 2000.  
D. Williams, M.Sc. Mgt. Sci. 1997.  
V. Ranjan, Ph.D. Comp. Sci. 1996.  
P. Shi, M.Sc. Math. 1996.  
M. Armstrong, Ph.D. Mgt. Sci. 1996.  
P. Crookshanks, M.Sc. Mgt. Sci. 1995.  
K. Willoughby, M.Sc. Mgt. Sci. 1993.  
M. Hess, M.Sc. Math. 1992.  
J. Brzustowski, M.Sc. Math. 1992.  
Y. Wang, Ph.D. Mgt. Sci. 1991.  
K. Sato, M.Sc. Fin. 1991.  
D. Sun, Ph.D. Mgt. Sci. 1990.  
Z. Bo, M.Sc. Math. 1990.

**Thesis Committee Member at University of Grenoble:**

C. Privault, Doc. O.R. 1994.  
B. Chaourar, Doc. O.R. 1993.

**Thesis Committee Member at Columbia:**

J. Hao, Ph.D. IE/OR 1989.  
Q-J. Yeh, Ph.D. IE/OR 1989.  
D. A. Eppstein, Ph.D. Comp. Sci. 1989.  
D. Guha, Ph.D. Mgt. Sci. 1988.  
Y-S. Zheng, Ph.D. Mgt. Sci. 1987.  
S. Anily, Ph.D. Mgt. Sci. 1987.  
S-R. Kai, Ph.D. IE/OR 1987.  
M. Yung, Ph.D. Comp. Sci. 1987.  
S. Mehrotra, Ph.D. IE/OR 1986.  
S. B. Lee, Ph.D. Mgt. Sci. 1985.

**(d) Continuing education activities**

Supply chain management sessions in Part-time MBA Core, 2003. Operations and Logistics module in Masters in Health Management 2003. In-house program in Supply Chain Management, MDS Nordion, 2002. Supply chain management sessions in IMBA Shanghai Core and post-Core, 2002- . In-house program in Fundamentals of Supply Chain Management, Methanex Corp., 2001. Taught

Operations integrated with Reengineering as part of the Taught “E-Business and Supply Chain Management” twice (with Marty Puterman) in 2001. Residential Programme in Executive Development (RPED) at UBC 1997.

**(e) Visiting Lecturer**

Kyoto University, seminar talk 2019.  
University of Tokyo, seminar talk 2019.  
Université Paris-Dauphine, Laboratoire Lamsade, seminar talk 2019.  
Hausdorff Institute of Mathematics, Bonn, Germany seminar talk 2018.  
Kyoto University, seminar talk 2017.  
University of Tokyo, seminar talk 2017.  
TU Munich, Germany, seminar talk 2017.  
University of Göttingen, Germany, seminar talk 2017.  
Festschrift for Ridha Mahjoub, Paris, talk 2016.  
University of Tokyo, seminar talk 2015.  
Hausdorff Institute of Mathematics, Bonn, Germany seminar talk 2015.  
“Progetto di Reti” (Network Flow Algorithms), Masters course Tor Vergata 2014–15.  
RWTH Aachen, seminar talk 2015.  
University of Rome La Sapienza, seminar talks 2015.  
University of Rome Tor Vergata, two seminar talks 2015.  
LUISS business school, Rome, seminar talk 2014.  
TU Berlin, seminar talk 2014.  
RWTH Aachen, Algorithms colloquium, two seminar talks 2014.  
Summer School in Submodular Functions, JPOC Clermont-Ferrand 2013.  
Summer School in Network Flows, TU Berlin 2011.  
Doctoral short course in Submodular Function Minimization, Grenoble 2010.  
Graduate Program “Methods for Discrete Structures”, TU Berlin 2008.  
Columbia IEOR/Business School 2007.  
Research Institute for the Math. Sciences, Kyoto, Japan 2007.  
Kyoto University, Research Institute for Math. Sciences 2006.  
Montréal GERAD seminar 2004.  
Hong Kong Polytechnic Logistics seminar 2004.  
Princeton ORFE seminar, 2004.  
Columbia IEOR/Business School seminar, 2004.  
Waterloo Combinatorics and Optimization, 2003.  
Graduate Seminar on Combinatorics, Geometry and Computation, TU Berlin, 2003.  
Laboratoire LIMOS, Université Clermont-Ferrand II, 5/01–8/01.  
UC Irvine, 2002.  
EPFL Lausanne, 2001.  
University Blaise Pascal, Clermont-Ferrand, 2001.  
Northwestern IE/MS, 2000.  
INSEAD Technology Management, 2000.  
University of Maastricht, The Netherlands 1999.  
University of Rimini, Italy, gave short course 1999.  
IBM Watson Labs Math Sciences, 1999.  
MIT OR Colloquium 1999.  
Carnegie Mellon GSIA 1999.  
Cornell Theory Seminar 1998.  
Cornell OR Colloquium 1998.  
Columbia IEOR 1998.  
Berlin Algorithm Days, Berlin, Germany 1998.  
Kollegvorlesung, Technical University Berlin, Germany 1998.

University J. Fourier, Grenoble 1996.  
University of Paris VI, Equipe Combinatoire 1996.  
University of Marseille Laboratoire d'Informatique 1996.  
Italian National Research Center IASI, Rome 1996.  
University of Pisa 1996.  
University of Padua, Italy, gave short course 1996.  
MIT Sloan School 1995.  
Dartmouth Computer Science Department 1995.  
Tsukuba University, Institute of Socio-Economic Planning 1995.  
Kyoto University, Research Inst. of Math. Sciences 1995.  
University of Paris VI, Equipe Combinatoire 1994.  
Lausanne-Grenoble Cours Postgrade de Recherche Operationelle, plenary talk 1993.  
Univ. of Victoria Comb. Algorithms Group 1992.  
Simon Fraser Univ. Combinatorics Seminar 1992.  
Carnegie Mellon University Grad. Sch. Ind. Admin. 1992.  
Columbia University IE/OR-Mgt. Sci. joint seminar 1992.  
Princeton University Civil Engr. and OR Dept. seminar 1992.  
Northwestern Univ. Business School 1992.  
UBC Computer Science Theory seminar 1992.  
Univ. of Waterloo Combinatorics and Opt. seminar 1992.  
Columbia University Symposium on Manufacturing 1989.  
Pennsylvania State Univ. IE Dept. 1989.  
Univ. of Minnesota Business School 1989.  
MIT Operations Research Center seminar 1989.  
Cornell University SORIE seminar 1988.

**(f) Other**

UBC CGA Master Teaching Award — Graduate Teaching 1996–97, \$5,000.  
STLHE Alan Blizzard Award 2001 for collaborative teaching in MBA Core (with 9 colleagues)

## 9. Scholarly and Professional Activities

**(a) Areas of special interest and accomplishments**

Combinatorial optimization, network flows, integer programming, routing, scheduling, facility location, analysis of algorithms, computational complexity, parametric algorithms, submodularity, supply chain management.

**(b) Research or equivalent grants (all competitive)**

NSERC USRA “Parametric Min Cut” (2016) \$4,500 (to support Maxwell Allman).

Peter Wall Institute “International Visiting Research Scholar Award” (2013–14) \$10,000 (to support sabbatical of Martin Skutella).

CIHR Research Grant, “Strategic Configuration of Cancer Care Services Based on Clinical, Demographic and Geographic Considerations” (2012-14), \$148,750 per year; part of research team.

NSERC Operating Grant, “Better Algorithms for Discrete Optimization, with Applications” (April 10–March 18), \$24,000 per year (extended due to service on NSERC Evaluation Group).

NSERC Operating Grant, “Finding Combinatorial Algorithms for Discrete Optimization Problems” (April 04–March 09), \$36,000 per year.

NSERC Equipment Grant for COE computers (April 04), \$61,438 (Marty Puterman principal investigator, also with Derek Atkins).

UBC-HSS Research Grant, “Designing Open-Pit Mines under Changing Economic Conditions” (May 04–April 05), \$1,294.49.

NSERC Operating Grant, “Generic Algorithms for Combinatorial Optimization” (April 00–March 04), \$34,230 per year.

NSERC Operating Grant, “Polynomial Algorithms for Flow Problems, Orientations, and Scheduling” (April 95–March 00), \$31,000 per year.

UBC-HSS Research Grant, “How to Design an Open-Pit Mine to Maximize its Net Present Value” (May 96–April 97), \$1,500.

NSERC Equipment Grant, “Workstation Upgrade and Terminals for Numerically Intensive Research in Industrial Engineering” (March 1994), joint with M. Queyranne, \$32,787.

NSERC Grant for Research Abroad , “Algorithms for Identifying Facets of the Dominant Cut Polytope” (1993–1994), \$7,000.

UBC Izaak Walton Killam Memorial Faculty Research Fellowship, 1993–94, which includes a stipend of \$15,000 and research support of \$3,000.

NSERC Operating Grant, “Polynomial Algorithms for Combinatorial Linear Programs and Facets of Well-Solved Problems” (April 92–March 95), \$30,000 per year.

NSERC Equipment Grant, “Workstation for Numerically Intensive Research in Industrial Engineering” (April 1991), joint with M. Queyranne and H. Chen, \$23,495.

NSERC Operating Grant, “Applications of Combinatorial Optimization to Making Matrices Sparser and to Algorithms for Totally Dual Integral Problems” (April 90–March 92), \$22,843 per year.

UBC-NSERC Equipment Grant, (August 1990), \$10,000.

NSF Grant ECS-86-14659, “Sequencing Flexible Assembly Systems with Blocking” (July 87–December 1990), co-principal investigator with M. Pinedo, \$90,000 per year.

ONR Contract N0014-87-K0214, “Karmarkar’s Method: Theory, Computational Aspects, and Extensions” (February 1987–January 1990; D. Goldfarb, principal investigator).

Also supported at Columbia by NSF Engineering Research Grant CDR-84-21402, “Center for Telecommunications Research” (a multi-year ongoing Engineering Research Center then under the direction of M. Schwartz from which I got support Summers 1985–1988).

NSF Grant ECS-84-04350, “Research Initiation: Algorithms that Improve the Performance of Sparse Matrix Software” (May 1984–October 1986), principal investigator.

### **(c) Research or equivalent contracts**

Intel Corp.: Improved Algorithms for Wire Routing for Integrated Circuits, \$8,000, 1999-2000 (at UBC).

Intel Corp.: Choosing Wire Routes for Integrated Circuits, US\$5,000, 1999 (at Cornell).

BC Telephone: Building a Constrained Resource Allocation and Project Prioritization Model \$31,400 1998.

BC Telephone: Constrained Resource Allocation and Project Prioritization Study \$8,000 1997.

BC Telephone: Scheduling Procedures for Outside Plant Placing and Splicing Crews Study \$8,000 1997.

BC Transit: Depot Location — Line Allocation Study \$16,000, 1995–1996.

### **(d) Invited presentations**

OR 2021, Bern, Switzerland (via Zoom), talk 2021.

Alan Hoffman Memorial (via Zoom), talk 2021.

TU Berlin Workshop on Combinatorial Optimization, keynote talk 2019.

Cargèse Workshop on Combinatorial Optimization, Corsica, talk 2019.

Algorithms Workshop, Santiago, Chile, talk 2019.

Combinatorial Optimization Workshop, Aussois, France, talk 2019.  
 BIRS TSP Workshop, talk 2018.  
 Flexible Network Design conference, Univ. Maryland, talk 2018.  
 Cargèse Workshop on Combinatorial Optimization, Porquerolles, talk 2017.  
 SIAM Optimization Conference, Vancouver, talk 2017.  
 UBC SCIAM seminar, talk 2017.  
 Bellairs workshop, Barbados, talk 2017.  
 Cargèse Workshop on Combinatorial Optimization, Corsica, talk 2016.  
 Flexible Network Design conference, Amsterdam, talk 2016.  
 ISMP symposium Pittsburgh, 2015.  
 NIPS-DISCML conference Montreal, keynote 2014.  
 Hoffmanfest workshop in celebration of Alan Hoffman's 90th birthday, Rutgers, 2014.  
 Combinatorial Optimization Workshop, Aussois, France, talk 2014.  
 Cargèse Workshop on Combinatorial Optimization, Corsica, plenary talk 2013.  
 Flexible Network Design conference, Toronto 2013.  
 Université Paris-Dauphine, Laboratoire Lamsade 2013.  
 Université Grenoble, Laboratoire G-SCOP 2013.  
 CanaDAM conference, St John Nfld 2013.  
 Bellairs Workshop, Barbados 2013.  
 Combinatorial Optimization Workshop, Aussois, France 2013.  
 Kyoto RIMS Discrete Convexity Workshop 2012.  
 International Symposium on Math Programming, Berlin 2012.  
 TU Berlin 2012.  
 Université Bordeaux 2012.  
 Université Paris-Dauphine, Laboratoire Lamsade 2012.  
 Modern Aspects of Submodularity, Atlanta 2012.  
 Combinatorial Optimization Workshop, Aussois, France, invited talk 2012.  
 Cargèse Workshop on Combinatorial Optimization, Corsica 2011  
 IPCO IBM Yorktown, NY 2011  
 Canadian Discrete and Algorithmic Mathematics Conference, Victoria, BC 2011.  
 Université Paris-Dauphine, Laboratoire Lamsade 2011.  
 Université Grenoble, Laboratoire G-SCOP 2011.  
 NII Shonan Graph Algorithm and Combinatorial Optimization workshop, Shonan Village, Japan 2011.  
 Combinatorial Optimization Workshop, Aussois, France 2011.  
 Joint Math Meeting, New Orleans 2011.  
 INFORMS Austin 2010.  
 Bixby festschrift, Erlangen, Germany 2010.  
 Cargèse Workshop on Combinatorial Optimization, Corsica 2010.  
 CNRS Grenoble, Laboratoire G-SCOP 2010.  
 ISCO Conference, Hammamet Tunisia 2010.  
 University of Tokyo Mathematical Engineering seminar 2010.  
 CNRS Grenoble, Laboratoire G-SCOP 2009.  
 Université Paris-Dauphine, Laboratoire Lamsade 2009.  
 Workshop on Combinatorial Optimization, Oberwolfach, Germany 2008.  
 Workshop on Combinatorial Optimization, Bonn, Germany 2008.  
 PIMS Workshop "Transport, optimization, equilibrium in economics", UBC, 2008.  
 OR and Global Business, Augsburg, Germany 2008.  
 CODA Workshop, Kyoto, Japan 2008.  
 IPCO Bertinoro, Italy 2008.  
 Italy-Spain Workshop, Rome, Italy 2008.  
 Penn Computer & Information Science 2008.



MIT OR Center 2008.  
SODA San Francisco 2008.  
Université Paris-Dauphine, Laboratoire Lamsade 2008.  
Workshop on Combinatorial Optimization, Aussois, France 2008.  
China Supply Chain Council, Shanghai, China, 2007.  
Combinatorial Optimization Workshop, Aussois, France 2007.  
INFORMS Pittsburgh 2006.  
Combinatorial Optimization Workshop, Aussois, France, invited talk 2006.  
Workshop on Combinatorial Optimization, Oberwolfach, Germany, 2005.  
INFORMS San Francisco 2005.  
MSOM Chicago 2005.  
INFORMS Denver, (two talks) 2004.  
Journées de l'Optimisation, Montréal, Canada, 2004.  
Workshop on Mathematics of Supply Chains, Oberwolfach, Germany, 2004.  
Combinatorial Optimization Workshop, Aussois, France, 2004.  
INFORMS Atlanta, 2003.  
Canadian OR Society Conference, Vancouver, tutorial 2003.  
Workshop on Constraint Programming, Banff (BIRS), 2003.  
Combinatorial Optimization Workshop, Aussois, France 2003.  
Workshop on Combinatorial Optimization, Oberwolfach, Germany, 2002.  
TIMS International Edinburgh, 2002.  
Combinatorial Optimization Workshop, Aussois, France 2002.  
INFORMS Miami, two invited talks 2001.  
West Coast Optimization meeting, Seattle 2000.  
International Symposium on Mathematical Programming, Atlanta 2000.  
Combinatorial Optimization Workshop, Aussois, France 2000.  
Workshop on Matroids, Matching, and Extensions (Waterloo) 1999.  
INFORMS Philadelphia, 1999.  
IPCO Graz 1999.  
Combinatorial Optimization Workshop, Aussois, France 1999.  
INFORMS Seattle 1999.  
INFORMS Montreal 1998.  
Combinatorial Optimization Workshop, Aussois, France 1998.  
SODA San Francisco 1998.  
Combinatorial Optimization Workshop, Tokyo 1997.  
Paraopt, Tokyo, plenary talk 1997.  
International Math Programming Symposium, Lausanne 1997.  
INFORMS San Diego 1997.  
SODA New Orleans 1997.  
IFORS Vancouver 1996.  
STOC Philadelphia 1996.  
SODA Atlanta 1996.  
Combinatorial Optimization Workshop, Aussois, France 1996.  
INFORMS New Orleans, two talks 1995.  
TIMS Joint International Meeting, Singapore 1995.  
SODA San Francisco 1995.  
Math Programming Symposium, Ann Arbor, two talks 1994.  
Workshop on Hard Combinatorial Problems, Giens, France, 1994.  
Netflow93 San Miniato, Italy 1993.  
IPCO Erice, Italy 1993.  
ORSA/TIMS Chicago, session organizer 1993.  
ORSA/TIMS Chicago 1993.

Pacific West Optimization seminar, Vancouver 1991.  
Dimacs Netflow Challenge Workshop 1991.  
TIMS Joint International Meeting, Rio de Janeiro 1991.  
ORSA/TIMS Nashville, session organizer 1991.  
ORSA/TIMS Nashville 1991.  
Pacific West Optimization seminar, Seattle 1989.

**(e) Other presentations**

ORSA/TIMS Las Vegas 1990.  
ORSA/TIMS New York 1989.  
ORSA/TIMS Vancouver 1989  
SIAM Optimization meeting Boston 1988.  
ORSA/TIMS Miami 1987.  
ORSA/TIMS Boston 1984.  
Sparse Matrix Symposium, Fairfield Glade 1983.  
Waterloo Silver Jubilee Conference on Combinatorics 1982.

**(f) Other**

Sauder Senior Research Award 2016.

**(g) Conference participation**

SIAM Optimization Vancouver, session organizer 2017.  
ISMP Pittsburgh, session organizer 2015.  
INFORMS San Jose, session chair 2002.  
TIMS International Edinburgh, session chair 2002.  
International Conference on Global Supply Chain Management, Beijing, Program Committee 2002.  
ALENEX (Algorithm Engineering and Experimentation) Program Committee member 2001.  
Thought Leaders Roundtable on Supply Chain Management 2001.  
INFORMS Philadelphia, invited session chair 1999.  
INFORMS Montreal, invited organizer of two sessions 1998.  
INFORMS San Diego 1997, cluster chair.  
Int'l Math. Prog. Symposium, Lausanne 1997, co-organizer of cluster.  
Discrete Optimization Workshop, Trento, Italy, invited participant 1994.  
ORSA/TIMS Chicago, invited session organizer 1993.  
ORSA/TIMS Nashville, invited session organizer 1991.  
ORSA/TIMS Atlanta, invited session organizer 1986.  
AMS Workshop on Interior Point Algorithms, Bowdoin, Maine, invited participant 1988.

## 10. Service to the University

**(a) Memberships on committees**

Chair of Site Visit Committee for NSERC CRD grant, 2019.  
Member of NSERC Evaluation Group 1509 2016–19.  
Sauder Representative to Other Faculties 2016–19.  
Peer Review of Teaching for Harish Krishnan promotion to Full 2016.  
Member FOGS New Programs and Curriculum Committee 2015–16.  
Member of UBC Senior Appointments Committee 2010–14, subcommittee co-chair 2011–14.  
Member of Sauder Appointments, Promotions, and Tenure Senior Professor subcommittee, 2006–09.  
MBA SCM Advisor 2005–08.  
Member of PCC Committee at Sauder School 2005–2006.  
Member of Steering Committee of Point Grey Commerce Faculty Association, 2002– .  
Member of Sauder Appointments, Promotions, and Tenure Senior Professor subcommittee, 2003–04.  
Member of Search Committee for CN Chair 2002–04.  
Member of Salaries and Economic Benefits Committee of Faculty Association, 2000–01.

Member of Appointments, Promotion, and Tenure Committee 2000–01.  
Co-chair of OpLog Recruiting Committee 1999–2003.  
Chair of Teaching Development Committee 1997–1998.  
Member of MBA 2001 Core Implementation Committee 1994–1995.  
Member of MBA Policy Committee 1996–1997.  
Member of MBA Technology Committee 1996–1997.  
Member of Commerce Space Planning Committee 1996–1997.

**(b) Other service**

Member of Organizing Committee for CORS Conference 2002–03.  
Supply Chain Management specialization advisor, 2000–04, 2005–06.  
Member of Point Grey Commerce Faculty Association steering committee 1999– .  
Chair of Operations and Logistics Division January 2000–2004.  
Served on a Degree Validation Panel for a BCIT proposal to establish a Bachelor of Technology in Management 1997.  
Member of Special Panel for Promotion of Steve Alisharan to Senior Lecturer 1997.  
Served as part of faculty team teaching in the first three years of UBC’s new MBA Core program 1995–97, again in 99, co-chair of Core Team 1995–96.  
Management Science Ph.D. student advisor 1992–93.  
Course coordinator for Commerce 311 (a core MBA course) 1991, 1992, and 1994 at UBC.  
Faculty of Commerce representative to Faculty of Applied Science 1991–92 at UBC.  
Referee for numerous journals.  
Colloquium organizer at both UBC and Columbia.  
Departmental computer coordinator and computer laboratory supervisor at Columbia.

**11. Service to the Community**

**(a) Memberships in scholarly societies**

Institute for Operations Research and Management Science  
Mathematical Programming Society  
Society for Industrial and Applied Mathematics

**(b) Memberships in other societies**

**(c) Memberships on scholarly committees**

Member of Program Committee for IPCO Conference, Ann Arbor, Michigan 2019.  
Member of Program Committee for ISMP Conference, Bordeaux, France 2018.  
Member of Program Committee for ISCO Conference, Marrakesh, Morocco 2018.  
Member of Program Committee for ISCO Conference, Salerno, Italy 2016.  
Member of Algorithmic Aspects in Information and Management Program Committee 2014.  
Member of Program Committee for IPCO Conference, Valparaiso, Chile 2013.  
Member of Program Committee for ISCO Conference, Athens, Greece 2012.  
Member of INFORMS Optimization Society Prize for Young Researchers Committee 2011.  
Member of Program Committee for ISCO Conference, Hammamet, Tunisia 2010.  
Member of Algorithmic Aspects in Information and Management Program Committee 2008.  
Combinatorial Optimization Co-Cluster Chair, International Symposium on Mathematical Programming 2008.  
Secretary of SIAM Optimization Activity Group 2008–2010.  
Member of INFORMS Optimization Prize Committee 2007.  
IPCO 2007 Program Committee member.  
Chair of Tucker Prize Committee of the Mathematical Programming Society 2005–06.  
Member of SIAM Optimization Prize Committee 2005.  
Member of Tucker Prize Committee of the Mathematical Programming Society 2002–03.  
Member of IFIP working group on Discrete Optimization 1997–2001.

Member of local organizing committee for the Integer Programming and Combinatorial Optimization '96 Conference in Vancouver.

Vice President for Network Flows, Optimization Section of INFORMS 1995–1997.

**(d) Memberships on other committees**

none

**(e) Editorships**

Associate Editor for *Operations Research* 2012–17.

Guest Co-editor for special volume of *Discrete Optimization* in memory of George Dantzig 2005–07.

Area Editor for Graphs and Networks for *OR Letters* 2002.

Associate Editor of *Mathematical Programming* 1996–2007.

**(f) Reviewer**

Reviewed several NSERC operating grant applications over several years. Asked to be external referee for several promotion/tenure cases at other universities. Have refereed for many journals over many years including *Math Programming*, *Discrete Applied Math*, *SIAM Journal on Computing*, *Math of OR*, *Operations Research*, *Networks*, *Management Science*, *Algorithmica*, etc. I referee an average of ten papers per year.

**(g) External examiner**

M. Schlöter, Ph.D. Math, 2018, TU Berlin.

J. Matuschke, Ph.D. Math, 2013, TU Berlin.

R. Taktak, Ph.D. Operations Research, Paris-Dauphine.

A. Cameron, Ph.D. Computer Science, 2012, U. of Ottawa.

F. Zaragosa, Ph.D. Combinatorics and Optimization, 2003, U. of Waterloo.

J. Swann, Ph.D., IE/MS 2000, Northwestern University.

M. Hadjiat, Doc. O.R. 1996, U. of Marseille, France.

I. Bongartz, Ph.D. Sys. Design Engr. 1992, U. of Waterloo.

**(h) Consultant**

WorkSafeBC, Richmond, BC 2016: mining unstructured text for risk analysis.

WorkSafeBC, Richmond, BC 2014: analysis of physician billing records to determine best practices.  
Development and Alumni Engagement, Sauder School of Business, UBC 2012–13: analysis of alumni database.

Seaspan, Vancouver, BC 2011–12: improving crew assignment and scheduling of tugboats.

Vancouver Coastal Health Authority, Vancouver, BC 2005; improving process flow in pathology labs.

Telus Inc., Burnaby, BC 2003–04; reducing bottlenecks in assignment of work orders to field service crews.

Methanex Inc., Vancouver, BC 2002–03; determining optimal inventory levels.

Intel Corp., Santa Clara, CA 1999–2002; choosing wire routes for integrated circuits.

BC Tel, Vancouver, BC 1997–1998; balancing resources and scheduling work crews to better meet constraints.

Avcorp, Richmond, BC 1995–1997; modifying factory layout to improve throughput.

BC Transit, Vancouver, BC 1995–1996; assigning bus lines to bus barns to minimize deadheads.

Xerox Webster Research Laboratory, North Tarrytown, NY 1988–1989; scheduling flexible assembly lines.

**(i) Other service to the community**

Member of Services Auction Committee Unitarian Church of Vancouver 2012.

Organizer of one Sunday Service at Unitarian Church of Vancouver, 2007.

Member of Unitarian Church of Vancouver Communications Committee, 2006.

Interviewer for UPenn Secondary School Alumni Committee, 2004–.

Member of BRAMSS Advisory Council 1996–1998.

Active member of Centre for Operations Excellence (COE).  
Advisor to UBC APICS Student Chapter.  
Active in APICS Vancouver chapter.

### **13. Other Relevant Information**

UBC Izaak Walton Killam Memorial Faculty Research Fellowship, 1993–94, which includes a stipend of \$15,000 and research support of \$3,000.

**THE UNIVERSITY OF BRITISH COLUMBIA**  
**Publication Record**

**Date:** April 19, 2021      **Initials:**

**Surname:** McCormick      **First Name:** S. Thomas

**Department/School:** Sauder School of Business, Division of Operations and Logistics

**Faculty:** Sauder School of Business

## 1. Refereed Publications

### (a) Journals

- [1] Y. Ding, S.T. McCormick, and M. Nagarajan (2020). A Fluid Model for an Overloaded Bipartite Queueing System with Heterogeneous Matching Utilities. *OR* <https://doi.org/10.1287/opre.2020.2015>.
- [2] J. Matuschke, S.T. McCormick, G. Oriolo (2020). Rerouting Flows when Links Fail. *SIAM J. on Disc. Math.*, **34**, 2082–2107
- [3] M. Bolandnazar, W.T. Huh, S.T. McCormick, K. Murota (2019). Error Noted in “Order-Based Cost Optimization in Assemble-to-Order Systems” by Lu and Song (2005). *OR*, <https://doi.org/10.1287/opre.2018.1789>.
- [4] J. Matuschke, S.T. McCormick, G. Oriolo, B. Peis, M. Skutella (2017). Protection of Flows under Targeted Attacks. *OR Letters*, **45**, 53–59..
- [5] A. Fischer, F. Fischer, and S.T. McCormick (2017). Matroid Optimisation Problems with Nested Non-Linear Monomials in the Objective Function. *Math. Prog.*, <https://doi.org/10.1007/s10107-017-1140-9> (a preliminary version was a poster at IPCO 2014).
- [6] Y. Bo, M. Dawande, G. Janakiraman, and S.T. McCormick (2017). On Integral Policies in Deterministic and Stochastic Distribution Systems. *OR*, **65**, 703–711.
- [7] S.T. McCormick, B. Peis, J. Verschae, and A. Wierz (2017). Primal-Dual Algorithms for Precedence Constrained Covering Problems. *Algorithmica*, **78**, :771-787 (a conference version appeared in *Proceedings of WAOA 2014*, 260–272).
- [8] J. Shao, H. Krishnan, and S.T. McCormick (2016). Gray Markets and Supply Chain Incentives. *POM*, **25**, 1807–1819.
- [9] H. Aissi, A.R. Mahjoub, S.T. McCormick, and M. Queyranne (2015). Strongly Polynomial Bounds for Multiobjective and Parametric Global Minimum Cuts in Graphs and Hypergraphs. *Math. Prog.*, **154** 3–28 (conference version appeared as “A Strongly Polynomial Time Algorithm for Multicriteria Global Minimum Cuts” in *Proceedings of IPCO 2014*, J. Lee and J. Vygen (eds.) LNCS 8494, 25–36).
- [10] J. Shao, H. Krishnan, and S.T. McCormick (2014). Price Incentives and Coordination in a Two-Product Decentralized Supply Chain. *Decision Sciences*, **45**, 507–533.
- [11] J. Shao, H. Krishnan, and S.T. McCormick (2013). Distributing a Product Line in a Decentralized Supply Chain. *POMS*, **22**, 151–163.

- [12] F. Granot, S.T. McCormick, M.N. Queyranne, and F. Tardella (2012). Monotone parametric min cut revisited: structures and algorithms. *Math. Prog.*, **135**, 337–367.
- [13] J. Shao, H. Krishnan, and S.T. McCormick (2011). Incentives for Transshipment in Decentralized Supply Chains with Competing Retailers. *MSOM*, **13**, 361–372.
- [14] A.R. Mahjoub and S.T. McCormick (2010). Max Flow and Min Cut with Bounded-Length Paths: Complexity, Algorithms, and Approximation. *Math. Prog. B*, **124**, 271–284.
- [15] Maren Martens, S.T. McCormick, and M.N. Queyranne (2010). Characterizing Flow through Components in Assembly Networks. *Math. Prog. B*, **124**, 317–348.
- [16] S. T. McCormick and S. Fujishige (2010). Strongly Polynomial and Fully Combinatorial Algorithms for Bisubmodular Function Minimization. *Mathematical Programming*, **122**, 87–120; an extended abstract appears in *Proceedings of Nineteenth SODA* (2008), 44–53.
- [17] B. Fortz, A.R. Mahjoub, S. T. McCormick, and P. Pesneau (2006). The 2-Edge Connected Subgraph Problem with Bounded Rings. *Math. Prog.*, **105**, 85–111.
- [18] S. Iwata, S. T. McCormick, and M. Shigeno (2005). A Strongly Polynomial Cut Canceling Algorithm for the Submodular Flow Problem. *SIAM J. on Discrete Math.*, **19**, 304–320; a preliminary version appeared in *Proceedings of the Seventh IPCO* (1999), G. Cornuéjols, R. E. Burkard, and G. J. Woeginger, eds., 259–272.
- [19] S. Iwata, S. T. McCormick, and M. Shigeno (2003). Fast Cycle Canceling Algorithms for Minimum Cost Submodular Flow. *Combinatorica* **23**, 503–525; an extended abstract of a preliminary version appears as A Faster Algorithm for Minimum Cost Submodular Flows *Proceedings of the Ninth Annual ACM-SIAM Symposium on Discrete Algorithms* (1998), 167–174.
- [20] S.T. McCormick, G. Rinaldi, and M.R. Rao (2003). Easy and Difficult Objective Functions for Max Cut. *Math. Prog. B*, **94**, 459–466.
- [21] Lisa K. Fleischer, S. Iwata, and S. T. McCormick (2002). A Faster Capacity Scaling Algorithm for Minimum Cost Submodular Flow *Math. Prog.*, **92**, 119–139.
- [22] S.T. McCormick, S.R. Smallwood and F.C.R. Spieksma (2001). A Polynomial Algorithm for Multiprocessor Scheduling with Two Job Lengths. *Math. of OR*, **26**, 31–49. An extended abstract appears in *Proceedings of Eighth SODA* (1997), 509–517.
- [23] S. Iwata, S. T. McCormick, and M. Shigeno (2000). A Fast Cost Scaling Algorithm for Submodular Flow. *Information Processing Letters*, **74**, 123–128.
- [24] M. Shigeno, S. Iwata, and S.T. McCormick (2000). Relaxed most negative cycle and most positive cut canceling algorithms for minimum cost flow. *Math. of OR*, **25**, 76–104.
- [25] S.T. McCormick and A. Shioura (2000). Minimum Ratio Canceling is Oracle Polynomial for Linear Programming, but Not Strongly Polynomial, Even for Networks. *OR Letters*, **27**, 199–207. An extended abstract appeared in *Proceeding of SODA 2000*, 944–952.
- [26] S.T. McCormick (1995). A Polynomial Algorithm for Abstract Maximum Flow. UBC Faculty of Commerce Working Paper 95-MS-001. An extended abstract appears in *Proceedings of the Seventh Annual ACM-SIAM Symposium on Discrete Algorithms 1996*, 490–497.
- [27] McCormick, S.T. (2000). Fast Algorithms for Parametric Scheduling come from Extensions to Parametric Maximum Flow. UBC Faculty of Commerce Working Paper 95-MS-009. An extended abstract appears in *Proceedings of Symposium on the Theory of Computing* (1996) 319–328, full paper appears in *Operations Research*, **47**, 744–756.

- [28] S. Iwata, T. Matsui, and S.T. McCormick (1998). A Fast Bipartite Network Flow Algorithm for Selective Assembly. *OR Letters*, **22**, 137–143.
- [29] S.T. McCormick (1997). How to Compute Least Infeasible Flows. *Math Programming B*, **78**, 179–194. An extended abstract appears in the program book of *NETFLOW93*, 160–164.
- [30] A.V. Karzanov and S.T. McCormick (1997). Polynomial Methods for Separable Convex Optimization in Totally Unimodular Linear Spaces with Applications to Circulations and Co-circulations in Networks. *SIAM J. on Computing*, **26**, 1245–1275. An extended abstract appears in *Proceedings of the Sixth SODA*, (1995), 78–87.
- [31] S.T. McCormick (1996). Submodular Containment is Hard, Even for Networks. *OR Letters*, **19**, 95–99.
- [32] S.T. McCormick and M.L. Pinedo (1995). Scheduling  $n$  Independent Jobs on  $m$  Uniform Machines with both Flow Time and Makespan Objectives: A Parametric Approach. *ORSA Journal on Computing*, **7**, 63–77.
- [33] S.T. McCormick and U.S. Rao (1994). Some Complexity Results in Cyclic Scheduling. *Mathematical and Computer Modelling*, **20**, 107–122.
- [34] S.T. McCormick and T.R. Ervolina (1994). Computing Maximum Mean Cuts. *Discrete Applied Math*, **52**, 53–70.
- [35] T.R. Ervolina and S.T. McCormick (1993). Two Strongly Polynomial Cut Cancelling Algorithms for Minimum Cost Network Flow. *Discrete Applied Math*, **46**, pp. 133–165.
- [36] S.T. McCormick (1993). Approximate Binary Search Algorithms for Mean Cuts and Cycles. *OR Letters*, **14**, 129–132.
- [37] T.R. Ervolina and S.T. McCormick (1993). Cancelling Most Helpful Total Cuts for Minimum Cost Network Flow. *Networks*, **23**, pp. 41–52.
- [38] S.F. Chang and S.T. McCormick (1993). Computational Results for the Hierarchical Algorithm for Making Sparse Matrices Sparser. *ACM Transactions on Mathematical Software*, **19**, 419–441.
- [39] S.T. McCormick and S.F. Chang (1993). The Weighted Sparsity Problem: Complexity and Algorithms. *SIAM Journal on Discrete Mathematics*, **6**, pp. 57–69.
- [40] S.F. Chang and S.T. McCormick (1992). A Hierarchical Algorithm for Making Sparse Matrices Sparser. *Mathematical Programming*, **56**, pp. 1–30.
- [41] C-L. Li, S.T. McCormick and D. Simchi-Levi (1992). On the Minimum-Cardinality-Bounded-Diameter and the Fixed-Budget-Minimum-Diameter Edge Addition Problems. *OR Letters*, **11**, pp. 303–308.
- [42] C-L. Li, S.T. McCormick and D. Simchi-Levi (1992). Finding Disjoint Paths with Different Path Costs: Complexity and Algorithms. *Networks*, **22**, pp. 653–667.
- [43] C-L. Li, S.T. McCormick and D. Simchi-Levi (1992). The Point-to-Point Delivery and Connection Problems: Complexity and Algorithms. *Discrete Applied Mathematics*, **36**, pp. 267–292.
- [44] D.L. Applegate, W.J. Cook and S.T. McCormick (1991). Integral Infeasibility and Testing Total Dual Integrality. *OR Letters*, **10**, pp. 37–41.
- [45] S.T. McCormick, M.L. Pinedo, S. Shenker and B. Wolf (1991). Transient Behavior in a Flexible Assembly System, *International Journal of Flexible Manufacturing Systems*, **3**, pp. 27–44.



- [46] S.T. McCormick (1990). Making Sparse Matrices Sparser: Computational Results. *Math. Programming*, **49**, pp. 91–111.
- [47] C-L. Li, S.T. McCormick and D. Simchi-Levi (1990). The Complexity of Finding Two Disjoint Paths with Min-Max Objective Function, *Discrete Applied Mathematics*, **26**, pp. 105–115.
- [48] S.T. McCormick, M.L. Pinedo, S. Shenker and B. Wolf (1989). Sequencing in an Assembly Line with Blocking to Minimize Cycle Time, *Operations Research*, **37**, pp. 925–935.
- [49] S.S. Chaudhry, S.T. McCormick and J.D. Moon (1987). Conditional Covering: Greedy Heuristics and Computational Results, *Computers in Operations Research*, **14**, pp. 11–18.
- [50] S.S. Chaudhry, S.T. McCormick and J.D. Moon (1986). Locating Independent Facilities with Maximum Weight: Greedy Heuristics, *OMEGA*, **14**, pp. 383–389.
- [51] S.T. McCormick (1983). Optimal Approximation of Sparse Hessians and its Equivalence to a Graph Coloring Problem. *Mathematical Programming*, **26**, pp. 153–171.

**(b) Conference Proceedings**

- [52] Alan J. Hoffman and S.T. McCormick (1984). A Fast Algorithm that Makes Matrices Optimally Sparse. In *Progress in Combinatorial Optimization*, W. Pulleyblank, ed., Academic Press, New York.

**(c) Other**

- [53] S.T. McCormick and L. Liu (1993). An Experimental Implementation of the Dual Cancel and Tighten Algorithm for Minimum Cost Network Flow. In *Network Flows and Matching*, D.S. Johnson and C.S McGeoch, eds., American Mathematical Society DIMACS Series in Discrete Mathematics and Theoretical Computer Science, Volume 12, 247–266.
- [54] S.T. McCormick, M.L. Pinedo and B. Wolf (1986). Sequencing in a Flexible Assembly Line with Blocking to Minimize Cycle Time. In *Flexible Manufacturing Systems*, K.E. Stecke and R. Suri, eds., Elsevier, Amsterdam.

**2. Non-Refereed Publications**

**(a) Journals**

- [55] E. Balas, A.J. Hoffman, and S.T. McCormick (2008). Introduction to Special Issue of Discrete Optimization in Memory of George B. Dantzig. *Discrete Optimization*, **5**.
- [56] S.T. McCormick (2005). Review of the book *Selected Papers of Alan J. Hoffman*, Charles A. Michelli ed. *Interfaces*, **35**, pp. 184–186.
- [57] S.T. McCormick (1989). Review of the book *Polyhedral Combinatorics and the Acyclic Subgraph Problem* by M. Jünger. *Interfaces*, **19**, pp. 98–99.

**(b) Conference Proceedings**

- [58] H. Aissi, S.T. McCormick, M. Queyranne (2020). Strongly Polynomial Algorithms for Some Problems Related to Parametric Global Minimum Cuts. In *Proceedings of IPCO 2020* 27–39.
- [59] S.T. McCormick and B. Peis (2011). A Primal-Dual Algorithm for Weighted Abstract Cut Packing. In *Proceedings of IPCO 2011*, O. Günlük and G.J. Woeginger (eds.) LNCS 6655, 324–335.

- [60] S. Iwata, S. T. McCormick, and M. Shigeno (1996). A Faster Polynomial Algorithm for Minimum Cost Submodular Flows. Working Paper; an extended abstract appears in *Proceedings of the Ninth SODA Conference* (1998), 167–174.
- [61] S.T. McCormick and T.R. Ervolina (1993). Cancelling Most Helpful Total Submodular Cuts for Submodular Flow. In *Integer Programming and Combinatorial Optimization* (proceedings of the third IPCO Conference), G. Rinaldi and L.A. Wolsey eds. (1993), pp. 343–353.

**(c) Other**

- [62] S.T. McCormick (2001). A Quick, Network-Based Algorithm to Solve a Physics Problem. Working paper.
- [63] S.T. McCormick (1999). Min-Cost Subgraph Allowing  $k$  Disjoint Paths from Two Terminals is NP Hard. Working paper.
- [64] S. Iwata, S. T. McCormick, and M. Shigeno (1999). A Relaxed Cycle-Canceling Approach to Separable Convex Optimization in Unimodular Linear Space. Manuscript.
- [65] A. Martin and S.T. McCormick (1999). The Complexity of Separation for a Network Reliability Problem.
- [66] S.T. McCormick (1994). Re-orienting Arcs to Strongly Connect Two Nodes is NP Hard. UBC Faculty of Commerce Working Paper.
- [67] S.T. McCormick, T.R. Ervolina and B. Zhou (1994). Mean Canceling Algorithms for General Linear Programs, and Why They (Probably) Don't Work for Submodular Flow. UBC Faculty of Commerce Working Paper 94-MS-011.
- [68] S.F. Chang and S.T. McCormick (1991). A Faster Implementation of a Bipartite Cardinality Matching Algorithm. UBC Faculty of Commerce Working Paper.
- [69] S.T. McCormick (1983). A Combinatorial Approach to Some Sparse Matrix Problems. Ph.D. Thesis, Stanford University, Stanford CA.
- [70] Gary L. Lilien and S.T. McCormick (1979). The Diffusion of Photovoltaics: Marketing and Government Policy Implications for an Emerging Technology. Proceedings of the 13th Annual IEEE Photovoltaics Specialists Convention.
- [71] S.T. McCormick (1979). User's Guide to the Oak Ridge National Laboratory Residential Energy Demand Model. MIT Energy Laboratory Working Paper No. MIT-EL-79-042WP.
- [72] Gary L. Lilien and S.T. McCormick (1979). The Consumer Response to Photovoltaics: The MIT Sun Day Experience. MIT Energy Laboratory Report No. MIT-EL-79-005.

**3. Books**

**(a) Authored**

none

**(b) Edited**

- [73] *Integer Programming and Combinatorial Optimization* (proceedings of IPCO V, Vancouver 1996). W.H. Cunningham, S.T. McCormick, and M. Queyranne, eds., *Lecture Notes in Computer Science*, **1084**, Springer, Berlin.

**(c) Chapters**

- [74] S.T. McCormick, G. Oriolo, B. Peis (2014). Netzwerkalgorithmen in der robusten Optimierung. In *Zukunftsperspektiven des Operations Research*, M. Lübbecke, A. Weiler, and B. Werners eds. (in German), 237–248.
- [75] S.T. McCormick (2011). Algorithms for Submodular Totally Dual Integral Problems. Chapter 3 in *Progress in Combinatorial Optimization*, Wiley ISTE, R. Mahjoub ed., 81–150.
- [76] S. T. McCormick (2006). Submodular Function Minimization. Chapter 7 in the *Handbook on Discrete Optimization*, Elsevier, K. Aardal, G. Nemhauser, and R. Weismantel, eds, 321–391.
- [77] S. T. McCormick (2001). Minimum Cost Single Commodity Flow. Chapter 9.4 in *Handbook of Applied Optimization*, Oxford University Press, P. Pardalos and M. Resende, eds.

#### **4. Patents**

none

#### **5. Special Copyrights**

none

#### **6. Artistic Works, Performances, Designs**

none

#### **7. Other Works**

- [78] S.B. McCormick, S.T. McCormick, and M. Puterman (1997). Implementation Management Constrained Resource Allocation and Project Prioritization Phases 1 & 2. Report prepared for BC Telephone.
- [79] S.B. McCormick, S.T. McCormick, and M. Puterman (1997). Assessment of Scheduling Procedures for Outside Plant Placing and Splicing Crews, Phases 1 & 2. Report prepared for BC Telephone.
- [80] J. Davis, B. Kapalka, S.T. McCormick, and M. Puterman (1996). Depot Location — Line Allocation Study. Report prepared for BC Transit.

#### **8. Work Submitted**

- [81] H. Aissi, S.T. McCormick, M. Queyranne (2020). Strongly Polynomial Algorithms for Some Problems Related to Parametric Global Minimum Cuts. Submitted to *Math. Prog.*; an extended abstract appears in *Proceedings of IPCO 2020*, 27–39.
- [82] S.T. McCormick, B. Peis, R. Scheidweiler, and F. Vallentin (2020). A Polynomial Time Algorithm for Solving the Closest Vector Problem in Zonotopal Lattices. Submitted to *SIAM J. on Disc. Math.*

#### **9. Work in Progress**

- [83] A. Fischer, F. Fischer, and S.T. McCormick (2017). A Study of Matroid Optimization Problems with Monotone Monomials in the Objective. Manuscript.
- [84] M. Allman, V. Lo, and S.T. McCormick (2016). Complexity of Parametric Min Cut. Manuscript.
- [85] J. Matuschke, S.T. McCormick, B. Peis (2015). Monotone Min-Cost Flow with Parametric Capacities and Costs. Manuscript.
- [86] J. Matuschke, S.T. McCormick, G. Oriolo, M. Senatore (2015). Algorithms for the Generalized Online Replacement Path Problem. Manuscript.

- [87] J-P. Kappmeier, S.T. McCormick, M. Skutella (2014). Earliest Arrival Abstract Flows. Manuscript.
- [88] S.T. McCormick, G. Oriolo, B. Peis (2014). Discrete Newton Algorithms for Budgeted Network Problems. Working paper.
- [89] J. Matuschke, S.T. McCormick, G. Oriolo, B. Peis, M. Skutella (2014). Network Interdiction and Protection Problems. Working paper.
- [90] Y. Kobayashi, A.R. Mahjoub and S.T. McCormick (2011). Separation Algorithms for Single-Machine Scheduling with Precedence Constraints. Working paper.
- [91] M. Martens and S.T. McCormick (2008). A Polynomial Algorithm for Weighted Abstract Flow. Working paper, Sauder School of Business, UBC; an extended abstract appears in *Proceedings of IPCO 2008*, 97–111.
- [92] K. Nagano, S. Iwata, and S.T. McCormick (2006). Algorithms for Minimizing Separable Convex Functions over Base Polytopes. Working paper.
- [93] A. Parkinson, S.T. McCormick, and M.N. Queyranne (2005). Algorithms for Scheduling Block Cave Mining Operations. Working paper.
- [94] A. Parkinson and S.T. McCormick (2004). Optimal Inventory Levels for Two Delivery Sizes. Working paper.
- [95] S.T. McCormick, A. Chan, J. Swann, and D. Simchi-Levi (2000). A Production-Inventory-Pricing Model that Can (Sometimes) be Solved by Submodular Flow. Manuscript.
- [96] K. D. Wayne and S. T. McCormick (1999). A Polynomial Min Ratio Canceling Algorithm for Dual Generalized Min Cost Flow. Manuscript.
- [97] S.T. McCormick, A. Schulz, A. Shioura, and R. Weismantel (1999). A Note on an Augmentation Method for Mixed Integer Programming Problems. Manuscript.
- [98] N. Katoh and S.T. McCormick (1999). Improving and Extending Most Helpful Canceling Algorithms.
- [99] S.T. McCormick, J. Sahni, and T. Stewart (1996). A Computational Study of Algorithms for Finding Ultimate Contours of Open-Pit Mines. In preparation.
- [100] S.T. McCormick and B. Zhou (1993). Algorithms for Separating from the Cut Dominant Polytope. Planned.
- [101] S.T. McCormick and S.F. Chang (1993). Making  $AA^T$  as Sparse as Possible: Complexity and Heuristics. Planned.