Erik D. Demaine

Curriculum Vitæ

MIT Computer Science and Artificial Intelligence Lab
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Canadian and U.S. Citizen

Educational Background

Ph.D.	University of Waterloo, 1996–2001. Advisors: Anna Lubiw and J. Ian Munro
M.Math.	University of Waterloo, 1995–1996. Advisor: David Taylor
B.Sc.	Dalhousie University, 1993–1995. Advisor: Sampalli Srinivas

Positions Held

July 2005–present	Associate Professor, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology
July 2005–June 2008	Esther and Harold E. Edgerton Professor, Massachusetts Institute of Technology
Sept. 2001–June 2005	Assistant Professor, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology
Sept. 2001–present	Member, Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology

Teaching

Spring 2010	MIT 6.851, Advanced Data Structures.
Spring 2010	Supervisor for MIT ESG SP.268, Topics in the Mathematics of Toys and Games, by Melissa Gymrek and Jing Li.
Fall 2009	MIT 6.046, Design and Analysis of Algorithms. 109 MIT students. Rated 6.3/7.0.
Aug. 2008	MADALGO Summer School on Cache-Oblivious Algorithms. MADALGO, University of Aarhus, Denmark. Several lectures on cache-oblivious data structures and geometric algorithms.
Spring 2008	MIT 6.006, (New) Introduction to Algorithms. 75 MIT students. According to the *Underground Guide to Course 6*, "Demaine ... was very enthusiastic and passionate ... [and] related wwell to students." Rated 6.2/7.0.
Fall 2007	MIT 6.885, Geometric Folding Algorithms: Linkages, Origami, Polyhedra. 20 MIT students, 44 listeners. According to the *Underground Guide to Course 6*, "Demaine ... is an enthusiastic and fun lecturer. ... Several students took the class because of the professor." Rated 6.6/7.0.
Spring 2007	MIT 6.851, Advanced Data Structures. 25 MIT students, 11 listeners. According to the *Underground Guide to Course 6*, "Some [students] took it specifically because Erik Demaine was lecturing." Rated 6.7/7.0.
IAP 2007	MIT 6.096, Knot Language: Recreating Inca Quipu/Khipu, with Martin Demaine and Jean-Jacques Quisquater. 23 credit MIT students, 20 listeners.
Fall 2006	MIT 6.046J/18.410J, Introduction to Algorithms, with Madhu Sudan. 90 MIT students, 2 listeners. According to the *Underground Guide to Course 6*, "Demaine ... was funny and gave clear lectures ... [has] a thorough understanding of the subject and was enthusiastic ... very personable and available outside of class for help." Rated 5.7/7.0.
Fall 2005	MIT 6.046J/18.410J/SMA5503, Introduction to Algorithms, with Charles Leiserson. 85 MIT students, 2 listeners, 6 SMA students. According to the *Underground Guide to Course 6*, "Demaine ... was praised for being clear, enthusiastic, and funny. Students thought his lectures were fun, that he had a great presentation style, and they also appreciated his nerdy humor." Rated 6.2/7.0.
Spring 2005	MIT 6.897, Advanced Data Structures. 12 MIT students, 7 listeners. Rated 6.7/7.0.

IAP	2005	MIT IAP 6451, Junkyard Art: The Art of Recycling, with Jeff Smith, Justin Adams, and Martin Demaine.
Fall	2004	MIT 6.885, Folding and Unfolding in Computational Geometry. 12 MIT students, 7 listeners. According to the *Underground Guide to Course 6*, "Demaine . . . was universally praised as an excellent, clear lecturer who made good use of the blackboard and projector. . . . No CS student should leave MIT without taking an Erik Demaine class." Rated 6.5/7.0.
Fall	2004	MIT 4.491, Form-Finding and Structural Optimization, with Barb Cutler, Martin Demaine, Simon Greenwold, Axel Kilian, and John Ochsendorf.
Spring	2004	MIT 6.046J/18.410J, Introduction to Algorithms, with Shafi Goldwasser. 103 MIT students. According to the *Underground Guide to Course 6*, "Demaine . . . was widely considered to be an excellent lecturer. He was interesting and funny while giving clear explanations." Rated 6.3/7.0.
Spring	2004	MIT 4.493, 3-D Design Tools for Equilibrium: Exploring Gaudi's World, with Barb Cutler, Martin Demaine, Axel Kilian, and John Ochsendorf.
April	2004	2004 Novartis IT Excellence Program MIT, MIT Office of Professional Education Programs. Lecture on algorithms.
IAP	2004	MIT IAP 5804, Building with Books, with Martin Demaine, Chris Dewart, Stephanie Hartman, Wendy Jacob, and John Ochsendorf.
Fall	2003	MIT 6.854/18.415J, Advanced Algorithms, with David Karger. 58 MIT students. According to the *Underground Guide to Course 6*, "Demaine was lively, charismatic, knowledgable. . . His lectures were entertaining. . . insightful, interesting. . . " Rated 6.0/7.0.
Spring	2003	MIT 6.897, Advanced Data Structures. 37 MIT students, 10 listeners. According to the *Underground Guide to Course 6*, "Demaine was very knowledgeable about the material and gave very clear explanations of complicated material. Demaine created a laid back yet exciting environment to learn and was good at encouraging questions from the students." Rated 6.2/7.0.
Fall	2002	MIT 6.046J/18.410J, Introduction to Algorithms, with Shafi Goldwasser. 112 MIT students. According to the *Underground Guide to Course 6*, "Demaine was easy to understand, knowledgeable, well prepared, and had good board technique. He was appreciated as a strong lecturer overall, with a good choice of topics presented in the class and well structured presentations." Rated 5.7/7.0.
June	2002	EEF Summer School on Massive Data Sets. BRICS, University of Aarhus, Denmark. Several lectures on cache-oblivious algorithms and data structures.
Fall	2001	MIT 6.046J/18.410J/SMA5503, Introduction to Algorithms, with Charles Leiserson. 140 MIT students, 37 SMA students. According to the *Underground Guide to Course 6*, "A substantial number of students said that [Demaine's] lectures in this course were among the best at MIT." Rated 5.7/7.0.
Spring	1999	University of Waterloo CS 360, Introduction to the Theory of Computing. 80 students. Ranked by student evaluations as #2 teacher among 40 course offerings in computer science.

Current Students

Ph.D. candidates:

1. Nadia Benbernou (Math) — geometric folding
2. David Charlton (EECS) — computational geometry
3. Jelani Nelson (EECS, cosupervised with Piotr Indyk) — streaming and cache-efficient data structures
4. Morteza Zadimoghaddam (EECS) — graph and approximation algorithms

M.Eng. candidates:

5. Aviv Ovadya (EECS) — computational origami

Undergraduate researchers:

5. Katherine Wong (Mech.E.) — unique manufacturing

I also serve as academic advisor to 19 MIT undergraduates (Sept. 2002–present).

Graduated Students

Ph.D. Theses:

1. Oren Weimann (EECS): "Accelerating Dynamic Programming", completed Mar. 2009.
2. Mihai Pătraşcu (EECS): "Lower Bound Techniques for Data Structures", completed Sept. 2008.
3. Dion Harmon (Math): "New Bounds on Optimal Binary Search Trees", completed May 2006.
4. Robert Hearn (cosupervised with Gerald Sussman): "Games, Puzzles, and Computation", completed May 2006.
5. MohammadTaghi Hajiaghayi (Math): "The Bidimensionality Theory and Its Algorithmic Applications", completed May 2005.
6. Nicole Immorlica (EECS, cosupervised with David Karger): "Computing with Strategic Agents", completed May 2005.
7. David Liben-Nowell (EECS): "An Algorithmic Approach to Social Networks", completed May 2005.

M.Eng. Theses:

8. Katherine Lai (EECS): "Complexity of Union-Split-Find Problems", completed May 2008.
9. Ilya Baran: "Adaptive Algorithms for Problems Involving Black-Box Lipschitz Functions", completed May 2004.

Grants

Jan. 2010–Dec. 2012	NSF CDI CBET-0941312, "CDI-Type I: Geometric Algorithms for Staged Nanomanufacturing" (PI) with Martin Demaine (coPI), Diane Souvaine (PI), Hyunmin Yi (PI)
May 2008–April 2010	DARPA, "Milli-Biology: Programmed Assembly of Engineered Materials" (coPI) with Neil Gershenfeld (PI), George Church
May 2008–April 2010	DARPA, "Programmable Matter: Creating Systems that Can Think, Talk, and Morph Autonomously" (coPI) with Daniela Rus (PI), Robert Wood (PI)
Jan. 2008–Dec. 2010	DARPA, "Chemical Robots" (coPI) with iRobot, Daniela Rus (PI), Robert Wood (PI)
Oct. 2007–Sept. 2008	Google Research Award, "Data Structures" (PI)
July 2007–June 2008	DARPA/AFOSR FA9550-07-1-0538, "Geometric Folding Algorithms: Bridging Theory to Practice" (PI)
Nov. 2004–Mar. 2005	NSF NSG CCF-0456026, "Workshop on Computational Geometry with a Focus on Open Problems" (PI) with Joseph Mitchell (coPI)
Oct. 2004–Sept. 2007	NSF INT OISE-0334653, "US-Belgium Cooperative Research: Retroactive Data Structures" (coPI) with John Iacono (PI)
Sept. 2004–Aug. 2007	DOE Early Career Principal Investigator Program DE-FG02-04ER25647, "Geometric Folding Algorithms" (PI)
Aug. 2004–July 2007	NSF Theory CCF-0430849, "Understanding Binary Search Trees" (coPI) with John Iacono (PI)
June 2004–May 2009	NSF CAREER CCF-0347776, "Fundamental Research in Geometric Folding" (PI)
Sept. 2002–Aug. 2007	NSF ITR ANI-0205445, "Scalable Location-Aware Monitoring (SLAM) Systems" (coPI) with Hari Balakrishnan (PI), Michael Stonebraker (coPI), and Seth Teller (coPI)
Aug. 2002	Intel Equipment Grant: "Algorithmic Research Problems on the Internet" (PI)
Sept. 2001–Aug. 2004	NSF ITR EIA-0112849: "Cache-Oblivious Data Structures" with Lars Arge (PI) and Michael Bender

July 2001–June 2003	NTT/MIT Research Collaboration MIT2001-09, "Monitoring Network Routing Traffic with Low Space" (PI) with Hisaki Oohara (PI)
July 2001–June 2002	MIT Project Oxygen, "Algorithmic Problems in Indoor Location Systems" (PI)

Editorial Work

1. Editorial board, *Journal of Computational Geometry*, 2009–present.
2. Editorial board, *Discrete & Computational Geometry*, 2006–present.
3. Guest co-editor, Special Issue of Selected Papers from ALENEX 2003, *ACM Journal of Experimental Algorithmics*, volume 8, 2003.
4. Co-editor, *The Open Problems Project* (an up-to-date compilation of important open problems in computational geometry), with Joseph Mitchell and Joseph O'Rourke, 2001–present.

Conference and Workshop Committees

1. Program committee, 2nd Symposium on Innovations in Computer Science, Beijing, China, January 2011.
2. Program committee, 2nd Workshop on Massive Data Algorithmics, Snowbird, Utah, June 2010.
3. Program committee, 5th International Conference on Fun with Algorithms, Ischia, Italy, June 2010.
4. Co-organizer, Seminar on Data Structures, Schloss Dagstuhl, Germany, Feb. 2010.
5. Co-organizer, 25th Bellairs Winter Workshop on Computational Geometry, Holetown, Barbados, Feb. 2010.
6. Co-organizer, Seminar on Parameterized Complexity and Approximation Algorithms, Schloss Dagstuhl, Germany, Dec. 2009.
7. Program committee, Workshop on Massive Data Algorithmics, Aarhus, Denmark, June 2009.
8. Co-organizer, Workshop on Deciphering Inka Khipus and Other Lost Languages, Louvain-la-Neuve, Belgium, Apr. 2009.
9. Co-organizer, Workshop on Algorithmic Folding, Origami and Linkages, Brussels, Belgium, Mar. 2009.
10. Program committee, 25th European Workshop on Computational Geometry, Brussels, Belgium, Mar. 2009.
11. Co-organizer, 24th Bellairs Winter Workshop on Computational Geometry, Holetown, Barbados, Feb. 2009.
12. Program committee, 18th Annual Fall Workshop on Computational Geometry, Troy, NY, Oct. 2008.
13. Program committee, 17th Annual Fall Workshop on Computational Geometry, Hawthorne, NY, Nov. 2007.
14. Program committee, 19th Canadian Conference on Computational Geometry, Ottawa, Canada, Aug. 2007.
15. Program committee, 4th Workshop on Combinatorial and Algorithmic Aspects of Networking, Halifax, Canada, Aug. 2007.
16. Co-organizer, Seminar on Structure Theory and FPT Algorithmics for Graphs, Digraphs and Hypergraphs, Schloss Dagstuhl, Germany, July 2007.
17. Program committee, 13th Symposium on String Processing and Information Retrieval, Glasgow, Scotland, Oct. 2006.
18. Program committee, 2nd International Workshop on Parameterized and Exact Computation, Zürich, Switzerland, Sept. 2006.
19. Program committee, 10th Scandinavian Workshop on Algorithm Theory, Riga, Latvia, July 2006.
20. Program committee, 2nd Workshop on Combinatorial and Algorithmic Aspects of Networking, Waterloo, Canada, August 2005.
21. Program committee chair and organizing committee chair, 14th Annual Fall Workshop on Computational Geometry, Cambridge, MA, Nov. 2004.
22. Program committee, International Workshop on Parameterized and Exact Computation, Bergen, Norway, September 2004.
23. Program committee, 1st Workshop on Combinatorial and Algorithmic Aspects of Networking, Banff, Canada, August 2004.
24. Co-organizer, Seminar on Cache-Oblivious and Cache-Aware Algorithms, Schloss Dagstuhl, Germany, July 2004.
25. Program committee, 44th Annual IEEE Symposium on Foundations of Computer Science, Cambridge, Massachusetts, November 2003.
26. Program committee, 8th Workshop on Algorithms and Data Structures, Ottawa, Canada, July 2003.
27. Program committee, 19th Annual Symposium on Computational Geometry, San Diego, California, June 2003.

28. Video committee chair, 12th Annual Video Review of Computational Geometry, 19th Annual Symposium on Computational Geometry, San Diego, California, June 2003.
29. Program committee, 5th Workshop on Algorithm Engineering and Experiments, Baltimore, Maryland, January 2003.
30. Program committee, 12th Annual Fall Workshop on Computational Geometry, Piscataway, New Jersey, November 2002.
31. Program committee, 13th Annual ACM-SIAM Symposium on Discrete Algorithms, San Francisco, California, January 2002.
32. Co-organizer, Seminar on Algorithmic Combinatorial Game Theory, Schloss Dagstuhl, Germany, February 2002.
33. Program and organizing committee, 13th Canadian Conference on Computational Geometry, Waterloo, Canada, August 2001.
34. Video committee, 9th Annual Video Review of Computational Geometry, 16th Annual ACM Symposium on Computational Geometry, Hong Kong, June 2000.

University Committees

1. MIT 150 Curatorial Board (2010–present)
2. Theory of Computing Colloquium Committee (2005–present)
3. CSAIL Executive Committee (2005–2006, 2009–present)
4. Editorial board of MIT Faculty Newsletter (2004–present)
5. Curator of CSAIL Collection (2003–present)
6. Graduate student admissions for MIT EECS, 2004.
7. Graduate student admissions for MIT EECS, 2003.
8. Graduate student admissions for MIT EECS, 2002.

Visitors Hosted

1. Micah Adler (U. Massachusetts, Amherst): Mar. 2005
2. Nancy Amato (Texas A&M): Apr. 2007
3. Nina Amenta (U.C. Davis): Apr. 2007
4. Lars Arge (U. Aarhus): Dec. 2006
5. Esther Arkin (SUNY Stony Brook): May 2005, Mar. 2005
6. Boris Aronov (Polytechnic U.): Oct. 2006
7. Tetsuo Asano (JAIST): Jan. 2010
8. Brad Ballinger (Davis School for Independent Study): Aug. 2008
9. Alex Bateman (Wellcome Trust Sanger Institute): Oct. 2003, Oct. 2002
10. sarah-marie belcastro (Xavier U.): July 2006, May 2006, Apr. 2006, Mar. 2006, Feb. 2006, Jan. 2006, Dec. 2005
11. Michael Bender (SUNY Stony Brook): July 2007, Oct. 2002, Sept. 2001
12. Prosenjit Bose (Carleton U.): Apr. 2004
13. David Bremner (U. New Brunswick, Fredericton): July 2006, Dec. 2004, Mar. 2004
14. Jason Cantarella (U. Georgia, Athens): Dec. 2002
15. Barry Cipra (Minnesota): July 2006, Apr. 2004, Jan. 2004, Aug. 2003
16. Sébastien Collete (U. Libre de Bruxelles): Jan. 2008
17. Robert Connelly (Cornell U.): Dec. 2002
18. Satyan Devadoss (Williams College): Nov. 2006
19. Vida Dujmović (Carleton U.): Oct. 2009
20. Martin Farach-Colton (Rutgers U.): Apr. 2005, Oct. 2004, May 2004, Oct. 2003, Aug. 2003, Feb. 2003
21. Sándor Fekete (Technische U. Braunschweig): May 2005, Aug. 2002
22. Mauro Ferrari (U. Texas Houston): Dec. 2009
23. Paula Ferrari (Houston): Dec. 2009
24. Jo Fleischhauer (Houston): Jan. 2010, Oct. 2009
25. Saul Griffith (SQUID Labs): Mar. 2006
26. George Hart (SUNY Stony Brook): June 2008, Nov. 2004, Feb. 2004, Oct.-Nov. 2003 (artist-in-residence)

27. Michael Hoffmann (ETH Zürich): Nov. 2006
28. Thomas Hull (Merrimack College): July 2006, May 2006, Apr. 2006, Mar. 2006, Feb. 2006, Jan. 2006, Dec. 2005, Sept. 2004
29. Ferran Hurtado (U. Politècnica de Catalunya): July 2007
30. Takehiro Ito (Tohoku U.): Mar. 2007, June–Oct. 2005
31. John Iacono (Polytechnic U.): Jan. 2006, Oct. 2005, July 2005, Mar. 2005, Nov. 2004, Sept. 2004, June 2004, Mar. 2004, July 2003, Apr. 2002
32. Allan Jørgensen (U. Aarhus): Feb.–June 2008
33. Ken-ichi Kawarabayashi (Tohoku U.): May 2005
34. Robert Lang (Origami Art & Engineering): Apr. 2008, Aug. 2004, July 2002
35. Stefan Langerman (U. Libre de Bruxelles): Jan. 2008, Jan. 2007, Feb. 2005, Jan. 2004, Apr. 2002
36. Alejandro López-Ortiz (U. Waterloo): Sept. 2008, July 2006, May 2006, Oct. 2002, Jan. 2002
37. Tyler Lu (U. Waterloo): June 2005
38. Joseph Mitchell (SUNY Stony Brook): May 2005, Mar. 2005, Feb. 2003
39. Ian Munro (U. Waterloo): Jan. 2002
40. Joseph O'Rourke (Smith College): Jan. 2006, July 2005, Dec. 2004, Oct. 2004, Sept. 2004, May 2004, Aug. 2003, Feb. 2003, Jan. 2003, Dec. 2002, Nov. 2002, Aug. 2002, Apr. 2002, Dec. 2001
41. Belén Palop (U. Valladolid): Nov. 2007
42. Jean-Jacques Quisquater (Catholic U. Louvain): Apr. 2007, Dec. 2006, July 2006
43. Robert Schweller (Northwestern U.): Aug. 2009, May 2006
44. Diane Souvaine (Tufts U.): July 2005–June 2006
45. Tomohiro Tachi (U. Tokyo): July 2009, June–Aug. 2008
46. Ennio Tasciotti (U. Texas Houston): Dec. 2009
47. Perouz Taslakian (McGill U.): Dec. 2006, Dec. 2005, Apr. 2005
48. Dimitrios Thilikos (U. Politècnica de Catalunya): Nov. 2002
49. Mikkel Thorup (AT&T Research): Sept. 2004
50. Godfried Toussaint (McGill U.): July 2008, Apr. 2005
51. Ryuhei Uehara (JAIST): Jan. 2010, Dec. 2005–Jan. 2006
52. Yushi Uno (Osaka Prefecture U.): Jan. 2006
53. Zhong You (Oxford U.): Oct. 2005–Apr. 2006
54. Stefanie Wuhrer (Carleton U.): May 2007

Collaborators

I have published papers with the following 264 co-authors: Timothy G. Abbott (MIT), Zachary Abel (Harvard U.), Micah Adler (U. Massachusetts, Amherst), Oswin Aichholzer (TU Graz), Noga Alon (Tel Aviv U.), Greg Aloupis (McGill U.), Stephen Alstrup (IT U. Copenhagen), Lars Arge (U. Aarhus), Esther Arkin (SUNY Stony Brook), Boris Aronov (Polytechnic Inst. NYU), Will Arora (MIT), Mihai Bădoiu (Google), Hari Balakrishnan (MIT), Devin Balkcom (Dartmouth), Brad Ballinger (U. California, Davis), Ziv Bar-Joseph (Carnegie Mellon U.), Ilya Baran (MIT), George Barbastathis (MIT), MohammadHossein Bateni (Sharif U. Technology), Nadia M. Benbernou (MIT), Carl Bender (Washington U.), Michael Bender (SUNY Stony Brook), David Benoit (InfoInteractive Inc.), Marshall Bern (PARC), Therese Biedl (U. Waterloo), Glencora Borradaile (U. Waterloo), Prosenjit Bose (Carleton U.), Jonathan Bredin (Colorado College), Broňa Brejová (U. Waterloo), David Bremner (U. New Brunswick, Fredericton), Ron Breukelaar (U. Leiden), Gerth Brodal (U. Aarhus), Andrej Brodnik (Luleø Technical U.), Kevin Buchin (Freie U. Berlin), Maike Buchin (Freie U. Berlin), David Bunde (Knox College), Michael A. Burr (New York U.), Jonathan Buss (U. Waterloo), Sergio Cabello (IMFM), Jason Cantarella (U. Georgia, Athens), Jean Cardinal (U. Libre de Bruxelles), Svante Carlsson (Luleø Technical U.), Eowyn Čenek (U. Waterloo), Timothy M. Chan (U. Waterloo), David Charlton (Boston U.), Barry Cipra (Minnesota), Stelian Ciurea (U. Lucian Blaga), Austin Clements (MIT), Richard Cole (New York U.), Sébastien Collette (U. Libre de Bruxelles), Robert Connelly (Cornell U.), Carmen Cortés (U. Sevilla), Mirela Damian (Villanova U.), David DeHaan (U. Waterloo), Martin L. Demaine (MIT), Ajay Deshpande (MIT), Satyan Devadoss (Williams College), Vida Dujmović (McGill U.), Muriel Dulieu (Polytechnic Inst. NYU), Christian Duncan (U. Miami), Alan Edelman (MIT), Dania El-Khechen (Concordia U.), Dotan Emanuel (Tel Aviv U.), David Eppstein (U. California, Irvine), Jeff Erickson (U. Illinois, Urbana-Champaign), Ruy Fabila-Monroy (U.

Nacional Autónoma de México), Martin Farach-Colton (Rutgers U.), Uriel Feige (Weizmann Institute), Sándor Fekete (TU Braunschweig), Thomas Fevens (Concordia U.), Amos Fiat (Tel Aviv U.), Jeremy T. Fineman (MIT), Samuel Fiorini (U. Libre de Bruxelles), Robin Flatland (Siena College), Rudolf Fleischer (Fudan U.), Fedor Fomin (U. Bergen), Ian Foster (U. Chicago), Aviezri Fraenkel (Weizmann Institute), Greg Frederickson (Purdue U.), Erich Friedman (Stetson U.), Shmuel Gal (U. Haifa), Blaise Gassend (MIT), Mohammad Ghodsi (Sharif U. Technology), David Gifford (MIT), Lukasz Golab (U. Waterloo), Mordecai Golin (Hong Kong U. Science and Technology), Alexander Golynski (U. Waterloo), Francisco Gomez-Martin (U. Politécnica de Madrid), Joachim Gudmundsson (National ICT Australia), Gregory Gutin (Royal Holloway U. London), MohammadTaghi Hajiaghayi (AT&T Labs — Research), Angéle Hamel (Laurier U.), Dion Harmon (New England Complex Systems Institute), George Hart (SUNY Stony Brook), Vi Hart (SUNY Stony Brook), Nicholas J. A. Harvey (U. Waterloo), Barry Hayes (PlaceWare Inc.), Robert A. Hearn (Dartmouth), Michael Hoffmann (ETH Zurich), Susan Hohenberger (Johns Hopkins U.), Bryan Holland-Minkley (Duke University), Markus Holzer (Technische U. München), Hendrik Jan Hoogeboom (U. Leiden), Joseph Horton (U. New Brunswick, Fredericton), John Hugg (Tufts U.), Ferran Hurtado (U. Politècnica de Catalunya), John Iacono (Polytechnic Inst. NYU), Hayley Iben (U. California, Berkeley), Shinji Imahori (U. Tokyo), Nicole Immorlica (Northwestern U.), Piotr Indyk (MIT), Mashhood Ishaque (Tufts U.), Takehiro Ito (Tohoku U.), Tommi Jaakkola (MIT), Lars Jacobsen (U. Southern Denmark), Thouis Jones (MIT), Gwenaël Joret (U. Libre de Bruxelles), Marcin Kamiński (U. Libre de Bruxelles), Daniel Kane (MIT), Craig Kaplan (U. Waterloo), Dmitriy A. Katz (MIT), Ken-ichi Kawarabayashi (National Inst. Informatics), Carl Kesselman (U. Southern California), Taejung Kim (MIT), James King (U. Waterloo), Philip N. Klein (Brown U.), Christian Knauer (Freie U. Berlin), Stephen Kobourov (U. Arizona), Scott D. Kominers (Harvard U.), Goran Konjevod (Arizona State U.), Duks Koschitz (MIT), Walter A. Kosters (U. Leiden), Evangelos Kranakis (Carleton U.), Hannes Krasser (TU Graz), Danny Krizanc (Wesleyan U.), Jason Ku (MIT), Eric Kuo (Numerica Corporation), Gad M. Landau (U. Haifa), Robert J. Lang (Lang Origami), Arthur Langerman (Langerman Diamonds), Stefan Langerman (U. Libre de Bruxelles), Sylvain Lazard (INRIA Lorraine), Charles E. Leiserson (MIT), Ben Leong (National U. Singapore), Vitus Leung (Sandia National Laboratories), David Liben-Nowell (Carleton U.), Jeffrey Lindy (New York U.), Barbara Liskov (MIT), Ching-Hao Liu (National Tsing-Hua University), Alejandro López-Ortiz (U. Waterloo), Anna Lubiw (U. Waterloo), Hamid Mahini (Sharif U. Technology), Andrea Mantler (U. North Carolina, Chapel Hill), Dániel Marx (Tel Aviv U.), James McLurkin (Rice U.), Henk Meijer (Queens U.), Antonio Mesa (U. Habana), Friedhelm Meyer auf der Heide (U. Paderborn), Joseph Mitchell (SUNY Stony Brook), Bojan Mohar (Simon Fraser U.), Mohammad Moharrami (Sharif U. Technology), Pat Morin (McGill U.), Shay Mozes (Cambridge, MA), J. Ian Munro (U. Waterloo), Jelani Nelson (MIT), Ilan Newman (U. Haifa), Paul Nijjar (U. Waterloo), Naomi Nishimura (U. Waterloo), Takao Nishizeki (Tohoku U.), Richard Nowakowski (Dalhousie U.), James O'Brien (U. California, Berkeley), Joseph O'Rourke (Smith College), John A. Ochsendorf (MIT), Timo von Oertzen (U. Saarbrücken), Aviv Ovadya (MIT), Shayan Oveisgharan (Sharif U. Technology), Mark Overmars (Utrecht U.), Rasmus Pagh (IT U. Copenhagen), A. Laurie Palmer (Art Inst. Chicago), Belén Palop (U. Rey Juan Carlos), Christos H. Papadimitriou (U. California, Berkeley), Jun-geun Park (MIT), Irena Pashchenko (Stanford U.), Mihai Pătraşcu (MIT), Per-Olof Persson (MIT), Cynthia Phillips (Sandia National Laboratories), Val Pinciu (Southern Connecticut State U.), Guillaume Poirier (U. Waterloo), Sheung-Hung Poon (National Tsing Hua U.), Dan R. K. Ports (MIT), Eric Price (MIT), Gregory N. Price (MIT), Nissanka Priyantha (MIT), Claude-Guy Quimper (U. Waterloo), Eynat Rafalin (Google), Prabhakar Ragde (U. Waterloo), Rajeev Raman (U. Leicester), Venkatesh Raman (Inst. Mathematical Sciences), Suneeta Ramaswami (Rutgers U.), S. Srinivasa Rao (U. Waterloo), David Rappaport (Queens U.), Theis Rauhe (IT U. Copenhagen), Ares Ribó (Freie U. Berlin), Steven Robbins (McGill U.), Tom Rodgers (Georgia), Benjamin Rossman (MIT), Günter Rote (Freie U. Berlin), Daniela Rus (MIT), Vera Sacristán (U. Politècnica de Catalunya), Mohammad R. Salavatipour (U. Alberta), Sanjay E. Sarma (MIT), Maria Saumell (U. Politècnica de Catalunya), Amin S. Sayedi-Roshkhar (Sharif U. Technology), André Schulz (Freie U. Berlin), Nils Schweer (TU Braunschweig), Robert T. Schweller (Northwestern U.), Daria Schymura (Freie U. Berlin), Carlos Seara (U. Politècnica de Catalunya), Robert Sedgewick (Princeton U.), Saurabh Sethia (SoftJin Tech.), Kathryn Seyboth (Tufts U.), Martha Sideri (Athens U. Economics and Business), Anastasios Sidiropoulos (U. Toronto), Steven Skiena (SUNY Stony Brook), Michiel Smid (Carleton U.), Marc Snir (U. Illinois, Urbana-Champaign),

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98. "All Polygons Flip Finitely... Right?" (joint work with Blaise Gassend, Joseph O'Rourke, and Godfried T. Toussaint), in *Surveys on Discrete and Computational Geometry: Twenty Years Later*, J. Goodman, J. Pach, and R. Pollack, eds., Contemporary Mathematics 453, pages 231–255, 2008, American Mathematical Society. Proceedings of the AMS-IMS-SIAM Joint Summer Research Conference, June 18–22, 2006, Snowbird, Utah.
99. "A Survey of Folding and Unfolding in Computational Geometry" (joint work with Joseph O'Rourke), in *Combinatorial and Computational Geometry*, J. E. Goodman, J. Pach, and E. Welzl, eds., Mathematical Sciences Research Institute Publications 52, pages 167–211, Aug. 2005, Cambridge University Press.

100. "Facet Ordering and Crease Assignment in Uniaxial Bases" (joint work with Robert J. Lang), in *Origami^4: Proceedings of the 4th International Meeting of Origami Science, Math, and Education*, pages 189–205, Pasadena, CA, Sept. 2006, A K Peters.
101. "Folding Paper Shopping Bags" (joint work with Devin J. Balkcom, Martin L. Demaine, John A. Ochsendorf, and Zhong You), in *Origami^4: Proceedings of the 4th International Meeting of Origami Science, Math, and Education*, pages 315–334, Pasadena, CA, Sept. 2006, A K Peters.
102. "Sliding-Coin Puzzles" (joint work with Martin L. Demaine), in *Tribute to a Mathemagician*, pages 63–72, 2004, A K Peters.
103. "Fold-and-Cut Magic" (joint work with Martin L. Demaine), in *Tribute to a Mathemagician*, pages 23–30, 2004, A K Peters.
104. "Geometry and Topology of Polygonal Linkages" (joint work with Robert Connelly), in *CRC Handbook of Discrete and Computational Geometry*, Second Edition, pages 197–218, 2004, chapter 9.
105. "Vertex-Unfolding of Simplicial Manifolds" (joint work with David Eppstein, Jeff Erickson, George W. Hart, and Joseph O'Rourke), in *Discrete Geometry: In Honor of W. Kuperberg's 60th Birthday*, pages 215–228, 2003, Marcer Dekker Inc..
106. "Infinitesimally Locked Self-Touching Linkages with Applications to Locked Trees" (joint work with Robert Connelly and Günter Rote), in *Physical Knots: Knotting, Linking, and Folding of Geometric Objects in* $\mathbb{R}^3$, J. Calvo, K. Millett, and E. Rawdon, eds., pages 287–311, 2002, American Mathematical Society. Collection of papers from the Special Session on Physical Knotting and Unknotting at the AMS Spring Western Section Meeting, Las Vegas, Nevada, April 21–22, 2001.
107. "Cache-Oblivious Algorithms and Data Structures", in *Lecture Notes from the EEF Summer School on Massive Data Sets*, Lecture Notes in Computer Science, to appear, BRICS, Denmark, June 2002.
108. "The Complexity of Clickomania" (joint work with Therese C. Biedl, Martin L. Demaine, Rudolf Fleischer, Lars Jacobsen, and J. Ian Munro), in *More Games of No Chance*, R. J. Nowakowski, ed., pages 389–404, 2002, Cambridge University Press. Collection of papers from the MSRI Combinatorial Game Theory Research Workshop, Berkeley, California, July 24–28, 2000.
109. "Phutball Endgames are Hard" (joint work with Martin L. Demaine and David Eppstein), in *More Games of No Chance*, R. J. Nowakowski, ed., pages 351–360, 2002, Cambridge University Press. Collection of papers from the MSRI Combinatorial Game Theory Research Workshop, Berkeley, California, July 24–28, 2000.
110. "Coin-Moving Puzzles" (joint work with Martin L. Demaine and Helena A. Verrill), in *More Games of No Chance*, R. J. Nowakowski, ed., pages 405–431, 2002, Cambridge University Press. Collection of papers from the MSRI Combinatorial Game Theory Research Workshop, Berkeley, California, July 24–28, 2000.

Refereed Conference Publications

Conference papers that have been accepted as journal articles or book chapters are only listed above (so each paper is listed once).

111. "Matching Points with Things" (joint work with Greg Aloupis, Jean Cardinal, Sébastien Collette, Martin L. Demaine, Muriel Dulieu, Ruy Fabila-Monroy, Vi Hart, Ferran Hurtado, Stefan Langerman, Maria Saumell, Carlos Seara, and Perouz Taslakian), in *Proceedings of the 9th Latin American Theoretical Informatics Symposium*, to appear, Oaxaca, Mexico, Apr. 2010.
112. "Shape Replication Through Self-Assembly and RNase Enzymes" (joint work with Zachary Abel, Nadia Benbernou, Mirela Damian, Martin L. Demaine, Robin Flatland, Scott Kominers, and Robert Schweller), in *Proceedings of the 21st Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1045–1064, Austin, TX, Jan. 2010.
113. "Cache-Oblivious Dynamic Dictionaries with Optimal Update/Query Tradeoff" (joint work with Gerth Stølting Brodal, Jeremy T. Fineman, John Iacono, Stefan Langerman, and J. Ian Munro), in *Proceedings of the 21st Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1448–1456, Austin, TX, Jan. 2010.
114. "Decomposition, Approximation, and Coloring of Odd-Minor-Free Graphs" (joint work with MohammadTaghi Hajiaghayi and Ken-ichi Kawarabayashi), in *Proceedings of the 21st Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 329–344, Austin, TX, Jan. 2010.

115. "Folding a Better Checkerboard" (joint work with Martin L. Demaine, Goran Konjevod, and Robert J. Lang), in *Proceedings of the 20th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 5878, pages 1074–1083, Hawaii, USA, Dec. 2009.
116. "Algorithmic Folding Complexity" (joint work with Jean Cardinal, Martin L. Demaine, Shinji Imahori, Stefan Langerman, and Ryuhei Uehara), in *Proceedings of the 20th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 5878, pages 452–461, Hawaii, USA, Dec. 2009.
117. "The Stackelberg Minimum Spanning Tree Game on Planar and Bounded-Treewidth Graphs" (joint work with Jean Cardinal, Samuel Fiorini, Gwenaël Joret, Ilan Newman, and Oren Weimann), in *Proceedings of the 5th Workshop on Internet & Network Economics*, Lecture Notes in Computer Science 5929, pages 125–136, Rome, Italy, Dec. 2009.
118. "A Distributed Boundary Detection Algorithm for Multi-Robot Systems" (joint work with James McLurkin), in *Proceedings of the 2009 IEEE/RSJ International Conference on Intelligent RObots and Systems*, pages 4791–4798, St. Louis, MO, Oct. 2009.
119. "Efficient Reconfiguration of Lattice-Based Modular Robots" (joint work with Greg Aloupis, Nadia Benbernou, Mirela Damian, Robin Flatland, John Iacono, and Stefanie Wuhrer), in *Proceedings of the 4th European Conference on Mobile Robots*, to appear, Mlini/Dubrovnik, Croatia, Sept. 2009.
120. "Minimizing Movement: Fixed-Parameter Tractability" (joint work with MohammadTaghi Hajiaghayi and Dániel Marx), in *Proceedings of the 17th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 5757, pages 718–729, Copenhagen, Denmark, Sept. 2009.
121. "Minimal Locked Trees" (joint work with Brad Ballinger, David Charlton, Martin L. Demaine, John Iacono, Ching-Hao Liu, and Sheung-Hung Poon), in *Proceedings of the 11th Algorithms and Data Structures Symposium*, Lecture Notes in Computer Science 5664, pages 61–73, Banff, Canada, Aug. 2009.
122. "A pseudopolynomial algorithm for Alexandrov's Theorem" (joint work with Daniel Kane and Gregory N. Price), in *Proceedings of the 11th Algorithms and Data Structures Symposium*, Lecture Notes in Computer Science 5664, pages 435–446, Banff, Canada, Aug. 2009.
123. "Reconfiguration of List Edge-Colorings in a Graph" (joint work with Takehiro Ito and Marcin Kamiński), in *Proceedings of the 11th Algorithms and Data Structures Symposium*, Lecture Notes in Computer Science 5664, pages 375–386, Banff, Canada, Aug. 2009.
124. "Mathematics Is Art" (joint work with Martin L. Demaine), in *Proceedings of 12th Annual Conference of BRIDGES: Mathematics, Music, Art, Architecture, Culture*, pages 1–10, Banff, Canada, July 2009.
125. "Approximation Algorithms via Structural Results for Apex-Minor-Free Graphs" (joint work with MohammadTaghi Hajiaghayi and Ken-ichi Kawarabayashi), in *Proceedings of the 36th International Colloquium on Automata, Languages and Programming*, Lecture Notes in Computer Science 5555, pages 316–327, Rhodes, Greece, July 2009.
126. "Node-Weighted Steiner Tree and Group Steiner Tree in Planar Graphs" (joint work with MohammadTaghi Hajiaghayi and Philip Klein), in *Proceedings of the 36th International Colloquium on Automata, Languages and Programming*, Lecture Notes in Computer Science 5555, pages 328–340, Rhodes, Greece, July 2009.
127. "On Cartesian Trees and Range Minimum Queries" (joint work with Gad Landau and Oren Weimann), in *Proceedings of the 36th International Colloquium on Automata, Languages and Programming*, Lecture Notes in Computer Science 5555, pages 341–353, Rhodes, Greece, July 2009.
128. "Polynomial-Time Approximation Schemes for Subset-Connectivity Problems in Bounded-Genus Graphs" (joint work with Glencora Borradaile and Siamak Tazari), in *Proceedings of the 26th International Symposium on Theoretical Aspects of Computer Science*, pages 171–182, Freiburg, Germany, Feb. 2009.
129. "The Geometry of Binary Search Trees" (joint work with Dion Harmon, John Iacono, Daniel Kane, and Mihai Pătraşcu), in *Proceedings of the 20th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 496–505, New York, NY, Jan. 2009.
130. "Additive Approximation Algorithms for List-Coloring Minor-Closed Class of Graphs" (joint work with Ken-ichi Kawarabayashi and MohammadTaghi Hajiaghayi), in *Proceedings of the 20th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1166–1175, New York, NY, Jan. 2009.
131. "Realistic Reconfiguration of Crystalline (and Telecube) Robots" (joint work with Greg Aloupis,

Sébastien Collette, Mirela Damian, Dania El-Khechen, Robin Flatland, Stefan Langerman, Joseph O'Rourke, Val Pinciu, Suneeta Ramaswami, Vera Sacristán, and Stefanie Wuhrer), in *Proceedings of the 8th International Workshop on the Algorithmic Foundations of Robotics*, Springer Tracts in Advanced Robotics 57, pages 433–447, Guanajuato, México, Dec. 2008.

132. "On the Complexity of Reconfiguration Problems" (joint work with Takehiro Ito, Nicholas J. A. Harvey, Christos H. Papadimitriou, Martha Sideri, Ryuhei Uehara, and Yushi Uno), in *Proceedings of the 19th Annual International Symposium on Algorithms and Computation*, pages 28–39, Gold Coast, Australia, Dec. 2008.
133. "Reconfiguration of Cube-Style Modular Robots Using $O(\log n)$ Parallel Moves" (joint work with Greg Aloupis, Sébastien Collette, Stefan Langerman, Vera Sacristán, and Stefanie Wuhrer), in *Proceedings of the 19th Annual International Symposium on Algorithms and Computation*, pages 342–353, Gold Coast, Australia, Dec. 2008.
134. "Ordinal Embedding: Approximation Algorithms and Dimensionality Reduction" (joint work with Mihai Bădoiu, MohammadTaghi Hajiaghayi, Anastasios Sidiropoulos, and Morteza Zadimoghaddam), in *Proceedings of the 11th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems*, pages 21–34, Boston, MA, Aug. 2008.
135. "Confluently Persistent Tries for Efficient Version Control" (joint work with Stefan Langerman and Eric Price), in *Proceedings of the 11th Scandinavian Workshop on Algorithm Theory*, Lecture Notes in Computer Science 5124, pages 160–172, Gothenburg, Sweden, July 2008. Invited to special issue of *Algorithmica*.
136. "Constraint Logic: A Uniform Framework for Modeling Computation as Games" (joint work with Robert A. Hearn), in *Proceedings of the 23rd Annual IEEE Conference on Computational Complexity*, pages 149–162, College Park, MD, June 2008.
137. "Hinged Dissections Exist" (joint work with Timothy G. Abbott, Zachary Abel, David Charlton, Martin L. Demaine, and Scott D. Kominers), in *Proceedings of the 24th Annual ACM Symposium on Computational Geometry*, pages 110–119, College Park, MD, June 2008.
138. "Moving-Baseline Localization" (joint work with Jun-geun Park and Seth J. Teller), in *Proceedings of the 7th International Conference on Information Processing in Sensor Networks*, pages 15–26, St. Louis, MO, Apr. 2008.
139. "The Stackelberg Minimum Spanning Tree Game" (joint work with Jean Cardinal, Samuel Fiorini, Gwenaël Joret, Stefan Langerman, Ilan Newman, and Oren Weimann), in *Proceedings of the 10th Workshop on Algorithms and Data Structures*, Lecture Notes in Computer Science 4619, pages 64–76, Halifax, Canada, Aug. 2007.
140. "A Pseudopolynomial Time $O(\log^2 n)$-Approximation Algorithm for Art Gallery Problems" (joint work with Ajay Deshpande, Taejung Kim, and Sanjay E. Sarma), in *Proceedings of the 10th Workshop on Algorithms and Data Structures*, Lecture Notes in Computer Science 4619, pages 163–174, Halifax, Canada, Aug. 2007.
141. "Revising Quorum Systems for Energy Conservation in Sensor Networks" (joint work with Daniela Tulone), in *Proceedings of the International Conference on Wireless Algorithms, Systems and Applications*, pages 147–157, Chicago, IL, Aug. 2007.
142. "An Optimal Decomposition Algorithm for Tree Edit Distance" (joint work with Shay Mozes, Benjamin Rossman, and Oren Weimann), in *Proceedings of the 34th International Colloquium on Automata, Languages and Programming*, pages 146–157, Wroclaw, Poland, July 2007. Invited to special issue of *Theoretical Computer Science*.
143. "Deflating The Pentagon" (joint work with Martin L. Demaine, Thomas Fevens, Antonio Mesa, Michael Soss, Diane L. Souvaine, Perouz Taslakian, and Godfried Toussaint), in *Revised Papers from the Kyoto International Conference on Computational Geometry and Graph Theory*, Lecture Notes in Computer Science 4535, pages 56–67, Kyoto, Japan, June 2007.
144. "Scheduling to Minimize Gaps and Power Consumption" (joint work with Mohammad Ghodsi, MohammadTaghi Hajiaghayi, Amin S. Sayedi-Roshkhar, and Morteza Zadimoghaddam), in *Proceedings of the 19th ACM Symposium on Parallelism in Algorithms and Architectures*, pages 46–54, San Diego, CA, June 2007.
145. "Tight Bounds for Dynamic Convex Hull Queries (Again)" (joint work with Mihai Pătraşcu), in *Pro-*

ceedings of the 23rd Annual ACM Symposium on Computational Geometry, pages 354–363, Gyeongju, South Korea, June 2007.

146. "Algorithmic Graph Minor Theory: Improved Grid Minor Bounds and Wagner's Contraction" (joint work with MohammadTaghi Hajiaghayi and Ken-ichi Kawarabayashi), in *Proceedings of the 17th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 4288, pages 3–15, Calcutta, India, Dec. 2006. Awarded Best Paper. Invited to special issue of *Algorithmica*.
147. "Necklaces, Convolutions, and $X + Y$" (joint work with David Bremner, Timothy M. Chan, Jeff Erickson, Ferran Hurtado, John Iacono, Stefan Langerman, and Perouz Taslakian), in *Proceedings of the 14th Annual European Symposium on Algorithms*, pages 160–171, Zürich, Switzerland, Sept. 2006.
148. "Locked and Unlocked Chains of Planar Shapes" (joint work with Robert Connelly, Martin L. Demaine, Sándor Fekete, Stefan Langerman, Joseph S. B. Mitchell, Ares Ribó, and Günter Rote), in *Proceedings of the 22nd Annual ACM Symposium on Computational Geometry*, pages 61–70, Sedona, AZ, June 2006.
149. "Voronoi game on graphs and its complexity" (joint work with Sachio Teramoto and Ryuhei Uehara), in *Proceedings of the 2nd IEEE Symposium on Computational Intelligence and Games*, pages 265–271, Reno, NV, May 2006.
150. "De Dictionariis Dynamicis Pauco Spatio Utentibus (*lat.* On Dynamic Dictionaries Using Little Space)" (joint work with Friedhelm Meyer auf der Heide, Rasmus Pagh, and Mihai Pătraşcu), in *Proceedings of the 7th Latin American Symposium on Theoretical Informatics*, pages 349–361, Valdivia, Chile, Mar. 2006.
151. "Data Structures for Halfplane Proximity Queries and Incremental Voronoi Diagrams" (joint work with Boris Aronov, Prosenjit Bose, Joachim Gudmundsson, John Iacono, Stefan Langerman, and Michiel Smid), in *Proceedings of the 7th Latin American Symposium on Theoretical Informatics*, pages 80–92, Valdivia, Chile, Mar. 2006.
152. "Lower Bounds for Asymmetric Communication Channels and Distributed Source Coding" (joint work with Micah Adler, Nicholas J. A. Harvey, and Mihai Pătraşcu), in *Proceedings of the 17th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 251–260, Miami, FL, Jan. 2006.
153. "Kinematics and Dynamics of Nanostructured Origami" (joint work with Paul Stellman, Will Arora, Satoshi Takahashi, and George Barbastathis), in *Proceedings of the ASME International Mechanical Engineering Congress and Exposition*, pages 541–548, Orlando, FL, Nov. 2005.
154. "Design and Control of Nanostructured Origami" (joint work with Paul Stellman, Will Arora, Satoshi Takahashi, and George Barbastathis), in *Proceedings of the 3rd International Symposium on Nanomanufacturing*, pages 4, Orlando, FL, Nov. 2005.
155. "PersiFS: A Versioned File System with an Efficient Representation" (joint work with Dan R. K. Ports and Austin T. Clements), in *Proceedings of the 20th ACM Symposium on Operating Systems Principles*, Brighton, United Kingdom, Oct. 2005.
156. "Algorithmic Graph Minor Theory: Decomposition, Approximation, and Coloring" (joint work with MohammadTaghi Hajiaghayi and Ken-ichi Kawarabayashi), in *Proceedings of the 46th Annual IEEE Symposium on Foundations of Computer Science*, pages 637–646, Pittsburgh, PA, Oct. 2005.
157. "Optimizing a 2D Function Satisfying Unimodality Properties" (joint work with Stefan Langerman), in *Proceedings of the 13th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 3669, pages 887–898, Mallorca, Spain, Oct. 2005.
158. "Hinged Dissection of Polypolyhedra" (joint work with Martin L. Demaine, Jeffrey F. Lindy, and Diane L. Souvaine), in *Proceedings of the 9th Workshop on Algorithms and Data Structures*, Lecture Notes in Computer Science 3608, pages 205–217, Waterloo, Canada, Aug. 2005.
159. "Deploying Sensor Networks with Guaranteed Capacity and Fault Tolerance" (joint work with Jonathan L. Bredin, MohammadTaghi Hajiaghayi, and Daniela Rus), in *Proceedings of the 6th ACM International Symposium on Mobile Ad Hoc Networking and Computing*, pages 309–319, Urbana-Champaign, IL, May 2005.
160. "Mobile-Assisted Localization in Wireless Sensor Networks" (joint work with Nissanka B. Priyantha, Hari Balakrishnan, and Seth Teller), in *Proceedings of the 24th Annual Joint Conference of the IEEE Communications Society on Computer Communications*, volume 1, pages 172–183, Miami, FL, Mar.

2005.

161. "Bidimensionality: New Connections between FPT Algorithms and PTASs" (joint work with MohammadTaghi Hajiaghayi), in *Proceedings of the 16th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 590–601, Vancouver, Canada, Jan. 2005.
162. "EpiChord: Parallelizing the Chord Lookup Algorithm with Reactive Routing State Management" (joint work with Ben Leong and Barbara Liskov), in *Proceedings of the IEEE International Conference on Networks*, volume 1, pages 270–276, Singapore, Nov. 2004. Awarded Best Paper.
163. "Fast Algorithms for Hard Graph Problems: Bidimensionality, Minors, and Local Treewidth" (joint work with MohammadTaghi Hajiaghayi), in *Proceedings of the 12th International Symposium on Graph Drawing*, Lecture Notes in Computer Science 3383, pages 517–533, Harlem, NY, Sept. 2004.
164. "An Energy-Driven Approach to Linkage Unfolding" (joint work with Jason Cantarella, Hayley Iben, and James O'Brien), in *Proceedings of the 20th Annual ACM Symposium on Computational Geometry*, pages 134–143, Brooklyn, NY, June 2004. Invited to special issue of *Discrete & Computational Geometry*.
165. "Finding a Divisible Pair and a Good Wooden Fence" (joint work with Stelian Ciurea, Corina E. Pătraşcu, and Mihai Pătraşcu), in *Proceedings of the 3rd International Conference on Fun with Algorithms*, pages 206–219, Isola d'Elba, Italy, May 2004.
166. "PushPush-k is PSPACE-Complete" (joint work with Michael Hoffmann and Markus Holzer), in *Proceedings of the 3rd International Conference on Fun with Algorithms*, pages 159–170, Isola d'Elba, Italy, May 2004.
167. "Equivalence of Local Treewidth and Linear Local Treewidth and its Algorithmic Applications" (joint work with MohammadTaghi Hajiaghayi), in *Proceedings of the 15th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 833–842, New Orleans, LA, Jan. 2004.
168. "Interpolation Search for Non-Independent Data" (joint work with Thouis Jones and Mihai Pătraşcu), in *Proceedings of the 15th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 522–523, New Orleans, LA, Jan. 2004.
169. "Anchor-Free Distributed Localization in Sensor Networks" (joint work with Nissanka B. Priyantha, Hari Balakrishnan, and Seth Teller), in *Proceedings of the 1st International Conference on Embedded Networked Sensor Systems*, pages 340–341, Los Angeles, USA, Nov. 2003.
170. "Identifying Frequent Items in Sliding Windows over On-Line Packet Streams" (joint work with Lukasz Golab, David DeHaan, Alejandro López-Ortiz, and J. Ian Munro), in *Proceedings of the ACM SIGCOMM Internet Measurement Conference*, pages 173–178, Miami, FL, Oct. 2003.
171. "Optimal Dynamic Video-On-Demand using Adaptive Broadcasting" (joint work with Therese Biedl, Alexander Golynski, Joseph D. Horton, Alejandro López-Ortiz, Guillaume Poirier, and Claude-Guy Quimper), in *Proceedings of the 11th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 2832, pages 90–101, Budapest, Hungary, Sept. 2003.
172. "Flat-State Connectivity of Linkages under Dihedral Motions" (joint work with Greg Aloupis, Vida Dujmović, Jeff Erickson, Stefan Langerman, Henk Meijer, Joseph O'Rourke, Mark Overmars, Michael Soss, Ileana Streinu, and Godfried Toussaint), in *Proceedings of the 13th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 2518, pages 369–380, Vancouver, Canada, Nov. 2002.
173. "Frequency Estimation of Internet Packet Streams with Limited Space" (joint work with Alejandro López-Ortiz and J. Ian Munro), in *Proceedings of the 10th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 2461, pages 348–360, Rome, Italy, Sept. 2002.
174. "Two Simplified Algorithms for Maintaining Order in a List" (joint work with Michael A. Bender, Richard Cole, Martin Farach-Colton, and Jack Zito), in *Proceedings of the 10th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 2461, pages 152–164, Rome, Italy, Sept. 2002.
175. "Scanning and Traversing: Maintaining Data for Traversals in a Memory Hierarchy" (joint work with Michael A. Bender, Richard Cole, and Martin Farach-Colton), in *Proceedings of the 10th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 2461, pages 139–151, Rome, Italy, Sept. 2002.
176. "Efficient Tree Layout in a Multilevel Memory Hierarchy" (joint work with Michael A. Bender and

Martin Farach-Colton), in *Proceedings of the 10th Annual European Symposium on Algorithms*, Lecture Notes in Computer Science 2461, pages 165–173, Rome, Italy, Sept. 2002.

177. "Robot Localization without Depth Perception" (joint work with Alejandro López-Ortiz and J. Ian Munro), in *Proceedings of the 8th Scandinavian Workshop on Algorithm Theory*, Lecture Notes in Computer Science 2368, pages 249–259, Turku, Finland, July 2002.
178. "Interlocked Open Linkages with Few Joints" (joint work with Stefan Langerman, Joseph O'Rourke, and Jack Snoeyink), in *Proceedings of the 18th Annual ACM Symposium on Computational Geometry*, pages 189–198, Barcelona, Spain, June 2002.
179. "Recent Results in Computational Origami" (joint work with Martin L. Demaine), in *Origami^3: Proceedings of the 3rd International Meeting of Origami Science, Math, and Education*, pages 3–16, Monterey, CA, Mar. 2001, A K Peters. Translated into Japanese in a book of selected papers from OSME 2001, Morikita Publishing Co., 2005, 3–16.
180. "A Disk-Packing Algorithm for an Origami Magic Trick" (joint work with Marshall Bern, David Eppstein, and Barry Hayes), in *Origami^3: Proceedings of the 3rd International Meeting of Origami Science, Math, and Education*, pages 17–28, Monterey, CA, Mar. 2001, A K Peters. Translated into Japanese in a book of selected papers from OSME 2001, Morikita Publishing Co., 2005, 17–28.
181. "Experiments on Adaptive Set Intersections for Text Retrieval Systems" (joint work with Alejandro López-Ortiz and J. Ian Munro), in *Proceedings of the 3rd Workshop on Algorithm Engineering and Experiments*, Lecture Notes in Computer Science 2153, pages 91–104, Washington, DC, Jan. 2001.
182. "Folding and Unfolding Linkages, Paper, and Polyhedra", in *Revised Papers from the Japan Conference on Discrete and Computational Geometry*, Lecture Notes in Computer Science 2098, pages 113–124, Tokyo, Japan, Nov. 2000.
183. "Adaptive Set Intersections, Unions, and Differences" (joint work with Alejandro López-Ortiz and J. Ian Munro), in *Proceedings of the 11th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 743–752, San Francisco, CA, Jan. 2000.
184. "Convexifying Monotone Polygons" (joint work with Therese C. Biedl, Sylvain Lazard, Steven M. Robbins, and Michael A. Soss), in *Proceedings of the 10th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 1741, pages 415–424, Chennai, India, Dec. 1999.
185. "Resizable Arrays in Optimal Time and Space" (joint work with Andrej Brodnik, Svante Carlsson, J. Ian Munro, and Robert Sedgewick), in *Proceedings of the 6th International Workshop on Algorithms and Data Structures*, Lecture Notes in Computer Science 1663, pages 37–48, Vancouver, Canada, Aug. 1999.
186. "Polyhedral Sculptures with Hyperbolic Paraboloids" (joint work with Martin L. Demaine and Anna Lubiw), in *Proceedings of the 2nd Annual Conference of BRIDGES: Mathematical Connections in Art, Music, and Science*, pages 91–100, Winfield, KS, July 1999.
187. "Metamorphosis of the Cube" (joint work with Martin Demaine, Anna Lubiw, Joseph O'Rourke, and Irena Pashchenko), in *8th Annual Video Review of Computational Geometry, Proceedings of the 15th Annual ACM Symposium on Computational Geometry*, pages 409–410, Miami Beach, FL, June 1999.
188. "Folding and One Straight Cut Suffice" (joint work with Martin L. Demaine and Anna Lubiw), in *Proceedings of the 10th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 891–892, Baltimore, MD, Jan. 1999.
189. "Folding and Cutting Paper" (joint work with Martin L. Demaine and Anna Lubiw), in *Revised Papers from the Japan Conference on Discrete and Computational Geometry*, Lecture Notes in Computer Science 1763, pages 104–117, Tokyo, Japan, Dec. 1998.
190. "Planar Drawings of Origami Polyhedra" (joint work with Martin L. Demaine), in *Proceedings of the 6th Symposium on Graph Drawing*, Lecture Notes in Computer Science 1547, pages 438–440, Montréal, Canada, Aug. 1998.
191. "A Disk-Packing Algorithm for an Origami Magic Trick" (joint work with Marshall Bern, David Eppstein, and Barry Hayes), in *Proceedings of the International Conference on Fun with Algorithms*, pages 32–42, Isola d'Elba, Italy, June 1998.
192. "Protocols for Non-Deterministic Communication over Synchronous Channels", in *Proceedings of the 12th International Parallel Processing Symposium and 9th Symposium on Parallel and Distributed Processing*, pages 24–30, Orlando, FL, Mar. 1998.

193. "A Threads-Only MPI Implementation for the Development of Parallel Programs", in *Proceedings of the 11th International Symposium on High Performance Computing Systems*, pages 153–163, Winnipeg, Canada, July 1997.
194. "Higher-Order Concurrency in Java", in *Proceedings of the Parallel Programming and Java Conference*, pages 34–47, Enschede, the Netherlands, Apr. 1997. Awarded Best Student Paper.
195. "Higher-Order Concurrency in PVM", in *Proceedings of the Cluster Computing Conference*, Atlanta, GA, Mar. 1997.
196. "First-Class Communication in MPI", in *Proceedings of the 2nd MPI Developer's Conference*, pages 189–194, Notre Dame, IN, July 1996.
197. "Evaluating the Performance of Parallel Programs in a Pseudo-Parallel MPI Environment", in *Proceedings of the 10th International Symposium on High Performance Computing Systems*, Ottawa, Canada, June 1996.
198. "Direction-First e-cube: A New Routing Algorithm for k-ary n-cube Networks" (joint work with Sampalli Srinivas), in *Proceedings of the 9th International Symposium on High Performance Computing Systems*, pages 329–338, Montréal, Canada, July 1995.

Other Publications

199. "Universal Hinge Patterns to Fold Orthogonal Shapes" (joint work with Nadia M. Benbernou, Martin L. Demaine, and Aviv Ovadya), in *Abstracts from the 5th International Conference on Origami in Science, Mathematics and Education*, to appear, Singapore, July 2010.
200. "Folding Any Orthogonal Maze" (joint work with Martin L. Demaine and Jason Ku), in *Abstracts from the 5th International Conference on Origami in Science, Mathematics and Education*, to appear, Singapore, July 2010.
201. "Reconstructing David Huffman's Legacy in Curved-Crease Origami" (joint work with Martin L. Demaine and Duks Koschitz), in *Abstracts from the 5th International Conference on Origami in Science, Mathematics and Education*, to appear, Singapore, July 2010.
202. "Degenerative Coordinates in 22.5° Grid System" (joint work with Tomohiro Tachi), in *Abstracts from the 5th International Conference on Origami in Science, Mathematics and Education*, to appear, Singapore, July 2010.
203. "On the Complexity of Origami Design" (joint work with Sándor P. Fekete and Robert J. Lang), in *Abstracts from the 5th International Conference on Origami in Science, Mathematics and Education*, to appear, Singapore, July 2010.
204. "Open Problems from Dagstuhl Seminar 09511: Parameterized Complexity and Approximation Algorithms" (joint work with MohammadTaghi Hajiaghayi and Dániel Marx), Manuscript, Dec. 2009.
205. "(Non)existence of Pleated Folds: How Paper Folds Between Creases" (joint work with Martin L. Demaine, Vi Hart, Gregory N. Price, and Tomohiro Tachi), in *Abstracts from the 7th Japan Conference on Computational Geometry and Graphs*, to appear, Kanazawa, Japan, Nov. 2009.
206. "Continuous Blooming of Convex Polyhedra" (joint work with Martin L. Demaine, Vi Hart, John Iacono, Stefan Langerman, and Joseph O'Rourke), in *Abstracts from the 7th Japan Conference on Computational Geometry and Graphs*, pages 123–124, Kanazawa, Japan, Nov. 2009.
207. "Algorithms Meet Art, Puzzles, and Magic", in *Proceedings of the 11th Algorithms and Data Structures Symposium*, Lecture Notes in Computer Science 5664, pages 193, Banff, Canada, Aug. 2009.
208. "Integer Point Sets Minimizing Average Pairwise ℓ_1 Distance: What is the Optimal Shape of a Town?" (joint work with Sándor P. Fekete, Günter Rote, Nils Schweer, Daria Schymura, and Mariano Zelke), in *Proceedings of the 21st Canadian Conference on Computational Geometry*, pages 145–148, Vancouver, Canada, Aug. 2009.
209. "Open Problems from CCCG 2008" (joint work with Joseph O'Rourke), in *Proceedings of the 21st Canadian Conference on Computational Geometry*, pages 75–78, Vancouver, Canada, Aug. 2009.
210. "Relaxed Gabriel Graphs" (joint work with Prosenjit Bose, Jean Cardinal, Sébastien Collette, Belén Palop, Perouz Taslakian, and Norbert Zeh), in *Proceedings of the 21st Canadian Conference on Computational Geometry*, pages 169–172, Vancouver, Canada, Aug. 2009.
211. "Locked Thick Chains" (joint work with Martin L. Demaine, Stefan Langerman, and Jérôme Vervier), in *Abstracts from the 25th European Workshop on Computational Geometry*, pages 65–68, Brussels, Belgium, Mar. 2009.

212. "Curved Crease Origami" (joint work with Duks Koschitz and Martin L. Demaine), in *Abstracts from Advances in Architectural Geometry*, pages 29–32, Vienna, Austria, Sept. 2008.
213. "Computational Balloon Twisting: The Theory of Balloon Polyhedra" (joint work with Martin L. Demaine and Vi Hart), in *Proceedings of the 20th Canadian Conference on Computational Geometry*, Montréal, Canada, Aug. 2008. Invited to special issue of *Computational Geometry: Theory and Applications*.
214. "Open Problems from CCCG 2007" (joint work with Joseph O'Rourke), in *Proceedings of the 20th Canadian Conference on Computational Geometry*, pages 183–190, Montréal, Canada, Aug. 2008.
215. "Vertex Pops and Popturns" (joint work with Greg Aloupis, Brad Ballinger, Prosenjit Bose, Mirela Damian, Martin L. Demaine, Robin Flatland, Ferran Hurtado, Stefan Langerman, Joseph O'Rourke, Perouz Taslakian, and Godfried Toussaint), in *Proceedings of the 19th Canadian Conference on Computational Geometry*, pages 137–140, Ottawa, Canada, Aug. 2007.
216. "On Rolling Cube Puzzles" (joint work with Kevin Buchin, Maike Buchin, Martin L. Demaine, Dania El-Khechen, Sándor Fekete, Christian Knauer, André Schulz, and Perouz Taslakian), in *Proceedings of the 19th Canadian Conference on Computational Geometry*, Ottawa, Canada, Aug. 2007.
217. "Disjoint Segments have Convex Partitions with 2-Edge Connected Dual Graphs" (joint work with Nadia M. Benbernou, Martin L. Demaine, Michael Hoffmann, Mashhood Ishaque, Diane L. Souvaine, and Csaba D. Tóth), in *Proceedings of the 19th Canadian Conference on Computational Geometry*, pages 13–16, Ottawa, Canada, Aug. 2007.
218. "Open Problems from CCCG 2006" (joint work with Joseph O'Rourke), in *Proceedings of the 19th Canadian Conference on Computational Geometry*, pages 277–280, Ottawa, Canada, Aug. 2007.
219. "Open Problems from Dagstuhl Seminar 07281: Structure Theory and FPT Algorithmics for Graphs, Digraphs and Hypergraphs" (joint work with Gregory Gutin, Dániel Marx, and Ulrike Stege), Manuscript, July 2007.
220. "Wrapping the Mozartkugel" (joint work with Martin L. Demaine, John Iacono, and Stefan Langerman), in *Abstracts from the 24th European Workshop on Computational Geometry*, pages 14–17, Graz, Austria, Mar. 2007. Invited to special issue of *Computational Geometry: Theory and Applications*.
221. "Deflating The Pentagon" (joint work with Martin L. Demaine, Diane L. Souvaine, and Perouz Taslakian), in *Abstracts from the 24th European Workshop on Computational Geometry*, pages 10–13, Graz, Austria, Mar. 2007.
222. "Computational Geometry through the Information Lens", in *Abstracts from the 24th European Workshop on Computational Geometry*, pages 81, Graz, Austria, Mar. 2007.
223. "Origami, Linkages, and Polyhedra: Folding with Algorithms", in *Proceedings of the 14th Annual European Symposium on Algorithms*, pages 1, Zürich, Switzerland, Sept. 2006.
224. "Curves in the Sand: Algorithmic Drawing" (joint work with Mirela Damian, Martin L. Demaine, Vida Dujmović, Dania El-Khechen, Robin Flatland, John Iacono, Stefan Langerman, Henk Meijer, Suneeta Ramaswami, Diane L. Souvaine, Perouz Taslakian, and Godfried T. Toussaint), in *Proceedings of the 18th Canadian Conference on Computational Geometry*, pages 11–14, Aug. 2006.
225. "Open Problems from CCCG 2005" (joint work with Joseph O'Rourke), in *Proceedings of the 18th Canadian Conference on Computational Geometry*, pages 75–80, Aug. 2006.
226. "Linkage Folding: From Erdős to Proteins", in *Proceedings of the 18th Canadian Conference on Computational Geometry*, pages 1, Aug. 2006.
227. "Open Problems from CCCG 2004" (joint work with Joseph O'Rourke), in *Proceedings of the 17th Canadian Conference on Computational Geometry*, pages 303–306, Windsor, Canada, Aug. 2005.
228. "Building Blocks and Excluded Sums" (joint work with Martin L. Demaine, Alan Edelman, Charles E. Leiserson, and Per-Olof Persson), *SIAM News*, volume 38, number 1, pages 1, 4, 6, Jan. 2005.
229. "Puzzles, Art, and Magic with Algorithms" (joint work with Martin L. Demaine), in *Proceedings of the 15th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 3341, pages 1, Hong Kong, China, 2004.
230. "Finding a Divisible Pair" (joint work with Stelian Ciurea, Corina E. Pătraşcu, and Mihai Pătraşcu), *ACM SIGSAM Bulletin*, volume 38, number 3, pages 98–100, Sept. 2004.
231. "Continuous Foldability of Polygonal Paper" (joint work with Satyan L. Devadoss, Joseph S. B. Mitchell, and Joseph O'Rourke), in *Proceedings of the 16th Canadian Conference on Computational*

Geometry, pages 64–67, Montréal, Canada, Aug. 2004.

232. "Unfolding Polyhedral Bands" (joint work with Greg Aloupis, Stefan Langerman, Pat Morin, Joseph O'Rourke, Ileana Streinu, and Godfried Toussaint), in *Proceedings of the 16th Canadian Conference on Computational Geometry*, pages 60–63, Montréal, Canada, Aug. 2004. Invited to special issue of *Computational Geometry: Theory and Applications*.
233. "Open Problems from CCCG 2003" (joint work with Joseph O'Rourke), in *Proceedings of the 16th Canadian Conference on Computational Geometry*, pages 209–211, Montréal, Canada, Aug. 2004.
234. "Refolding Planar Polygons" (joint work with Hayley N. Iben and James F. O'Brien), in *Technical Sketchs of the 31st International Conference on Computer Graphics and Interactive Techniques*, Los Angeles, CA, Aug. 2004.
235. "Optimizing a 2D Function Satisfying Unimodality Properties" (joint work with Stefan Langerman), in *Abstracts from the 20th European Workshop on Computational Geometry*, pages 107–110, Seville, Spain, Mar. 2004.
236. "Open Problems at the 2002 Dagstuhl Seminar on Algorithmic Combinatorial Game Theory" (joint work with Rudolf Fleischer, Aviezri S. Fraenkel, and Richard J. Nowakowski), *Theoretical Computer Science*, volume 313, number 3, pages 539–543, Feb. 2004. Special issue on algorithmic combinatorial game theory.
237. "Hinged Dissection of Polygons is Hard" (joint work with Robert A. Hearn and Greg N. Frederickson), in *Proceedings of the 15th Canadian Conference on Computational Geometry*, pages 98–102, Halifax, Canada, Aug. 2003.
238. "On the Complexity of Halfspace Volume Queries" (joint work with Jeff Erickson and Stefan Langerman), in *Proceedings of the 15th Canadian Conference on Computational Geometry*, pages 159–160, Halifax, Canada, Aug. 2003.
239. "Open Problems from CCCG 2002" (joint work with Joseph O'Rourke), in *Proceedings of the 15th Canadian Conference on Computational Geometry*, pages 178–181, Halifax, Canada, Aug. 2003.
240. "Quartering a Square Optimally" (joint work with Prosenjit Bose, John Iacono, and Stefan Langerman), in *Abstracts from the Japan Conference on Discrete and Computational Geometry*, pages 5–6, Tokyo, Japan, Dec. 2002.
241. "Open Problems from CCCG 2001" (joint work with Joseph O'Rourke), in *Proceedings of the 14th Canadian Conference on Computational Geometry*, Lethbridge, Canada, Aug. 2002.
242. "Tighter Bounds on the Genus of Nonorthogonal Polyhedra Built from Rectangles" (joint work with Therese Biedl, Timothy M. Chan, Martin L. Demaine, Paul Nijjar, Ryuhei Uehara, and Ming-wei Wang), in *Proceedings of the 14th Canadian Conference on Computational Geometry*, pages 105–108, Lethbridge, Canada, Aug. 2002.
243. "Push-2-F is PSPACE-Complete" (joint work with Robert A. Hearn and Michael Hoffmann), in *Proceedings of the 14th Canadian Conference on Computational Geometry*, pages 31–35, Lethbridge, Canada, Aug. 2002.
244. "Computing Signed Permutations of Polygons" (joint work with Greg Aloupis, Prosenjit Bose, Stefan Langerman, Henk Meijer, Mark Overmars, and Godfried T. Toussaint), in *Proceedings of the 14th Canadian Conference on Computational Geometry*, Lethbridge, Canada, Aug. 2002.
245. "Flat-State Connectivity of Chains with Fixed Acute Angles" (joint work with Greg Aloupis, Henk Meijer, Joseph O'Rourke, Ileana Streinu, and Godfried Toussaint), in *Proceedings of the 14th Canadian Conference on Computational Geometry*, pages 27–30, Lethbridge, Canada, Aug. 2002.
246. "Open Problems from CCCG 2000" (joint work with Joseph O'Rourke), in *Proceedings of the 13th Canadian Conference on Computational Geometry*, pages 185–187, Waterloo, Canada, Aug. 2001.
247. "Reaching Folded States of a Rectangular Piece of Paper" (joint work with Joseph S. B. Mitchell), in *Proceedings of the 13th Canadian Conference on Computational Geometry*, pages 73–75, Waterloo, Canada, Aug. 2001.
248. "The CCCG 2001 Logo" (joint work with Martin L. Demaine and Anna Lubiw), in *Proceedings of the 13th Canadian Conference on Computational Geometry*, pages iv–v, Waterloo, Canada, Aug. 2001.
249. "PushPush and Push-1 are NP-hard in 2D" (joint work with Martin L. Demaine and Joseph O'Rourke), in *Proceedings of the 12th Annual Canadian Conference on Computational Geometry*, pages 211–219, Fredericton, Canada, Aug. 2000.

250. "Computational Geometry Column 37" (joint work with Joseph O'Rourke), *International Journal of Computational Geometry and Applications*, volume 10, number 1, pages 103–107, Feb. 2000. Also appears in SIGACT News, volume 30, number 3, issue #112, September 1999, pages 39–42.
251. "Open Problems from CCCG'99" (joint work with Joseph O'Rourke), in *Proceedings of the 11th Canadian Conference on Computational Geometry*, Vancouver, Canada, Aug. 1999.
252. "Hiding Disks in Folded Polygons" (joint work with Therese C. Biedl, Martin L. Demaine, Anna Lubiw, and Godfried T. Toussaint), in *Proceedings of the 10th Canadian Conference on Computational Geometry*, Montréal, Canada, Aug. 1998.
253. "Unfolding Some Classes of Orthogonal Polyhedra" (joint work with Therese Biedl, Martin Demaine, Anna Lubiw, Mark Overmars, Joseph O'Rourke, Steve Robbins, and Sue Whitesides), in *Proceedings of the 10th Canadian Conference on Computational Geometry*, Montréal, Canada, Aug. 1998.

Plenary Talks

July 2010 "Computational Origami from Science to Sculpture", Plenary talk, 5th International Conference on Origami in Science, Mathematics and Education, Singapore.

June 2010 "To Be Announced", Plenary talk, 36th International Workshop on Graph-Theoretic Concepts in Computer Science, Crete, Greece.

June 2010 "To Be Announced", Plenary talk, 16th International Meeting on DNA Computing and Molecular Programming, Hong Kong, China.

Apr. 2010 "Algorithms Meet Art, Puzzles, and Magic", Plenary talk, 26th British Colloquium for Theoretical Computer Science, Edinburgh, Scotland.

Jan. 2010 "Mathematics Is Art: Art Is Mathematics" (presented with Martin L. Demaine), Plenary talk, The Entertainment Gathering, Monterey, CA.

Nov. 2009 "Algorithms Meet Art, Puzzles, and Magic", Plenary talk, 7th Japan Conference on Computational Geometry and Graphs, Kanazawa, Japan.

Sept. 2009 "Algorithms Meet Art, Puzzles, and Magic", Plenary talk, 17th Annual European Symposium on Algorithms, Copenhagen, Denmark.

Aug. 2009 "Algorithms Meet Art, Puzzles, and Magic", Plenary talk, 11th Algorithms and Data Structures Symposium, Banff, Canada.

July 2009 "Mathematics Is Art", Plenary talk, 12th Annual Conference of BRIDGES: Mathematical Connections in Art, Music, and Science, Banff, Canada.

July 2009 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Women's Technology Program, Massachusetts Institute of Technology, Cambridge, MA.

July 2009 "Actuator Nets: Folding, Reconfiguring, and Deploying Sensors", Plenary talk, 5th International Workshop on Algorithmic Aspects of Wireless Sensor Networks, Rhodes, Greece.

May 2009 "Between the Folds: The Art and Science of Origami", Plenary talk, The Graduate Center, City University of New York, New York, NY.

Apr. 2009 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, MIT Club of Belgium Gala Honoring Ferdinand Dierkens, Brussels, Belgium.

Mar. 2009 "Linkage Folding: From Erdős to Proteins", Plenary talk, International Francqui Chair Lectures, Faculté Universitaire des Sciences Agronomiques de Gembloux, Gembloux, Belgium.

Feb. 2009 "Origami, Linkages, and Polyhedra: Geometric Folding Algorithms", Plenary talk, International Francqui Chair Lectures, Vrije Universiteit Brussel, Brussels, Belgium.

Dec. 2008 "(Theoretical) Computer Science is Everywhere", Plenary talk, International Francqui Chair Lectures, Université Catholique de Louvain, Louvain, Belgium.

Nov. 2008 "Mathematics meets Art, Puzzles, and Magic: Fun with Algorithms", Plenary talk, International Francqui Chair Lectures, Université Libre de Bruxelles, Brussels, Belgium.

Oct. 2008 "Folding Matter", Plenary talk, DARPA InfoChemistry meeting, Cambridge, MA.

Sept. 2008 "(Theoretical) Computer Science is Everywhere", Plenary talk, Microsoft Research New England, Cambridge, MA.

Aug. 2008 "Fun with Algorithms and Folding III: Transformers: Reconfigurable Robots and Hinged Dissections", Plenary talk, Earle Raymond Hedrick Lecture Series, MathFest 2008, Madison, WI.

Aug. 2008 "Fun with Algorithms and Folding II: Origami, Linkages, and Polyhedra: Geometric Folding Algorithms", Plenary talk, Earle Raymond Hedrick Lecture Series, MathFest 2008, Madison,

WI.

July 2008 "Fun with Algorithms and Folding I: Mathematics Meets Art, Puzzles, and Magic", Plenary talk, Earle Raymond Hedrick Lecture Series, MathFest 2008, Madison, WI.

July 2008 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Women's Technology Program, Massachusetts Institute of Technology, Cambridge, MA.

May 2008 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Katayanagi Prize Lecture, Tokyo University of Technology, Tokyo, Japan.

May 2008 "Algorithmic Graph Minors and Bidimensionality", Plenary talk, 3rd International Workshop on Parameterized and Exact Computation (IWPEC 2008), Victoria, Canada.

Apr. 2008 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Katayanagi Prize Lecture, Carnegie Mellon University, Pittsburgh, PA.

Apr. 2008 "Computational Origami", Plenary talk, The Design and the Elastic Mind Symposium (MIND 2008), New York, NY.

Oct. 2007 "Geometric Folding Algorithms: Linkages, Origami, Polyhedra", Plenary talk, IDEAS Boston, Boston, MA.

June 2007 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Women's Technology Program, Massachusetts Institute of Technology, Cambridge, MA.

Apr. 2007 "Linkage Folding: From Erdős to Proteins", Plenary talk, Cantrell Lecture Series, University of Georgia, Athens, GA.

Apr. 2007 "Mathematics Meets Art, Puzzles, and Magic: Fun with Algorithms", Plenary talk, Cantrell Lecture Series, University of Georgia, Athens, GA.

Apr. 2007 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Cantrell Lecture Series, University of Georgia, Athens, GA.

Mar. 2007 "Computational Geometry through the Information Lens", Plenary talk, 23rd European Workshop on Computational Geometry, Graz, Austria.

Jan. 2007 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Anderson Science Lecture, Denison University, Granville, OH.

Nov. 2006 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Gerhard Herzberg Lecture, Carleton University, Ottawa, Canada.

Sept. 2006 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, 14th Annual European Symposium on Algorithms, Zürich, Switzerland.

Sept. 2006 "The Mathemagic of Origami", Plenary talk, 4th International Conference on Origami in Science, Mathematics, and Education, Pasadena, CA.

Aug. 2006 "Linkage Folding: From Erdős to Proteins", Plenary talk, Paul Erdős Memorial Lecture, 18th Canadian Conference on Computational Geometry, Kingston, Canada.

July 2006 "Folding Puzzles: Origami, Mathematics, and Algorithms", Plenary talk, International Puzzle Party 2006, Boston, MA.

July 2006 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Women's Technology Program, Massachusetts Institute of Technology, Cambridge, MA.

July 2006 "Adaptive Analysis of Algorithms: Sets and Curves", Plenary talk, Analysis of Algorithms 2006, Alden Biesen, Belgium.

June 2006 "Linkage Folding: From Steam Engines to Proteins", Plenary talk, AMS-IMS-SIAM Joint Summer Research Conference, Discrete and Computational Geometry—Twenty Years Later, Snowbird, UT.

June 2005 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Women's Technology Program, Massachusetts Institute of Technology, Cambridge, MA.

June 2005 "Solving Puzzles with Algorithms: Coins, Telescopes, and Tetris", Plenary talk, BIRS Combinatorial Game Theory Workshop, Banff, Canada.

Feb. 2005 "Mathematics Meets Origami, Art, Puzzles, and Magic: Fun with Algorithms", Plenary talk, Annual Meeting of the American Association for Advancement of Science, Washington, DC.

Jan. 2005 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Joint Mathematics Meetings of the American Mathematical Society and Mathematical Association of America, Atlanta, GA.

Dec. 2004 "Puzzles, Art, and Magic with Algorithms", Plenary talk, 15th Annual International Symposium on Algorithms and Computation, Hong Kong, China.

Oct. 2004 "Fast Algorithms for Hard Graph Problems: Bidimensionality, Minors, and Local Treewidth", Plenary talk, 12th International Symposium on Graph Drawing, Harlem, NY.

Oct. 2004 "Puzzles, Art, and Magic with Algorithms", Plenary talk, Computer Science Invitational Lecture Series, University of Waterloo, Waterloo, Canada.

July 2004 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Plenary talk, Distinguished Colloquium Speaker, Oakland University Summer Mathematics Institute, Rochester, MI.

May 2004 "Puzzles, Art, and Magic with Algorithms", Plenary talk, 3rd International Conference on FUN with Algorithms, Isola d'Elba, Italy.

Apr. 2004 "Paper, Polyhedra, and Linkages: Folding with Algorithms" and "Linkages: From Steam Engines to Protein Folding", Plenary talk, 2004 Arnold Dresden Lectures, Swarthmore College, Swarthmore, PA.

Dec. 2003 "Folding and Unfolding in Computational Geometry", Plenary talk, VIGRE Undergraduate Mathematics Colloquium, University of Michigan, Ann Arbor, MI.

Aug. 2003 "Folding and Unfolding: Linkage Folding" and "Folding and Unfolding: Computational Origami", Plenary talk, MSRI Introductory Workshop in Discrete and Computational Geometry, Berkeley, CA.

May 2003 "Origami, linkages, and polyhedra: Folding with algorithms", Plenary talk, National Science Bowl Science Day, Chevy Chase, MD.

Dec. 2002 "Folding and Unfolding in Computational Geometry", Plenary talk, IBM/NYU/Columbia Theory Day, New York, NY.

Aug. 2002 "Infinitesimally Locked Linkages with Applications to Locked Trees", Plenary talk, Conference on Discrete, Combinatorial and Computational Geometry, Beijing, China.

Aug. 2001 "Playing Games with Algorithms: Algorithmic Combinatorial Game Theory", Plenary talk, 26th Symposium on Mathematical Foundations in Computer Science, Marianske Lazne, Czech Republic.

June 2001 "Playing Games with Algorithms", Plenary talk, University of Waterloo Faculty of Mathematics Graduate Student Conference, Waterloo, Canada.

Nov. 2000 "Folding and Unfolding Linkages, Paper, and Polyhedra", Plenary talk, Japan Conference on Discrete and Computational Geometry 2000, Tokyo, Japan.

June 2000 "Research is Fun: A Brief Look at Some Work in Algorithms", Plenary talk, University of Waterloo Faculty of Mathematics Graduate Student Conference, Waterloo, Canada.

Invited Talks

(excluding contributed talks for the conference papers listed above)

Apr. 2010 "Algorithms Meet Art, Puzzles, and Magic", Invited talk, 17th Annual Hudson River Undergraduate Mathematics Conference, Keene, NH.

Mar. 2010 "New Models of Computation", Invited talk, Seminar on Data Structures, Schloss Dagstuhl, Wadern, Germany.

Feb. 2010 "Bidimensionality", Invited talk, Graph Theory Meeting, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach-Walke, Germany.

Jan. 2010 "Folding Matter", Invited talk, Department of Nanomedicine and Biomedical Engineering, University of Texas Health Science Center, Houston, TX.

Jan. 2010 "Computational Origami from Science to Sculpture", Invited talk, MAA Invited Paper Session on The Mathematics of Origami, Joint Mathematics Meetings of the American Mathematical Society and Mathematical Association of America, San Francisco, CA.

Jan. 2010 "Mathematics Is Art", Invited talk, MAA Session on Arts and Mathematics, I, Joint Mathematics Meetings of the American Mathematical Society and Mathematical Association of America, San Francisco, CA.

Jan. 2010 "Algorithms Meet Art, Puzzles, and Magic", Invited talk, Northwestern University, Chicago, IL.

Dec. 2009 "Overview of Bidimensionality", Invited talk, Seminar on Parameterized Complexity and Ap-

proximation Algorithms, Schloss Dagstuhl, Wadern, Germany.

Sept. 2009 "Computational Origami from Science to Sculpture", Invited talk, Session on "From Flapping Birds to Space Telescopes: The Modern Science of Origami", British Science Festival, Guildford, England.

Sept. 2009 "Computational Origami from Science to Sculpture", Invited talk, British Origami Society Autumn Convention, Winchester, England.

Aug. 2009 "The Theory and Practice of Origami", Invited talk, 5th International Fab Lab Forum and Symposium on Digital Fabrication.

Feb. 2009 "Discussant", Invited talk, Mathematics of Origami: From the Joys of Recreation to the Frontiers of Research, Annual Meeting of the American Association for Advancement of Science, Chicago, IL.

Mar. 2008 "Hinged Dissections and Coin-Flipping Magic", Invited talk, Gathering for Gardner 8, Atlanta, GA.

Dec. 2007 "Permuting Polygons" (presented with Stefan Langerman), Invited talk, Japan Advanced Institute of Science and Technology, Ishikawa, Japan.

May 2006 "Linkage Folding: From Steam Engines to Proteins", Invited talk, Theory Colloquium, Massachusetts Institute of Technology, Cambridge, MA.

Apr. 2006 "Origami, Polyhedra, and Linkages: Folding with Algorithms", Invited talk, Université Catholique de Louvain, Louvain-la-Neuve, Belgium.

May 2005 "Algorithmic Time Travel", Invited talk, The Time Traveler Convention, Cambridge, MA.

May 2005 "Computational Origami", Invited talk, MIT-CSAIL Speaker Series, Museum of Science, Boston, MA.

Apr. 2005 "Origami as the Shape of Things to Come", Invited talk, Defense Science Research Council Spring Review, Washington, DC.

Mar. 2005 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Invited talk, Departmental Seminar Series, Department of Computer and Information Science, Polytechnic University, Brooklyn, NY.

Jan. 2005 "Origami, Linkages, and Polyhedra: Folding with Algorithms", Invited talk, Seminar der Theoretischen Informatik, ETH Zürich, Zürich, Switzerland.

Aug. 2004 "Approximation Algorithms for Embedding with Extra Information and Ordinal Relaxation", Invited talk, Microsoft Research, Redmond, WA.

Apr. 2004 "Picture-Hanging and Jigsaw Puzzles", Invited talk, Gathering for Gardner VI, Atlanta, GA.

Apr. 2004 "How to Mow Your Lawn or Find a Bridge along a River: Algorithms for Geometric Optimization", Invited talk, Session on New Trends/Emerging Ideas, INFORMS Conference on OR/MS Practice, Cambridge, MA.

Mar. 2004 "Logarithmic Lower Bounds in the Cell-Probe Model", Invited talk, Seminar on Data Structures, Schloss Dagstuhl, Wadern, Germany.

Mar. 2004 "Paper, Polyhedra, and Linkages: Folding with Algorithms", Invited talk, Geometry-Algebra-Singulaties-Combinatorics Seminar, Northeastern University, Boston, MA.

Jan. 2004 "Retroactive data structures", Invited talk, Workshop on Dynamic Algorithms and Applications, New Orleans, LA.

Nov. 2003 "Folding and Unfolding in Computational Geometry", Invited talk, Theoretical Computer Science/Discrete Mathematics Seminar, Institute for Advanced Study, Princeton, NJ.

Oct. 2003 "Open problems in cache-oblivious geometric data structures", Invited talk, Eindhoven-Carleton Workshop on Computational Geometry, Hilversum, Netherlands.

May 2003 "Online Searching with Turn Cost", Invited talk, DIMACS Workshop on Geometric Optimization, Piscataway, NJ.

Mar. 2003 "Instance-optimal algorithms for black-box curve manipulation", Invited talk, Seminar on Computational Geometry, Schloss Dagstuhl, Wadern, Germany.

Feb. 2003 "Frequency Estimation of Internet Packet Streams with Limited Space", Invited talk, Computer Science Colloquium, Boston University, Boston, MA.

Jan. 2003 "Algorithms for Estimating Trends in a Stream of Network Packets Using Little Memory", Invited talk, Special Session on Discrete Models, Joint Mathematics Meetings of the American

Mathematical Society and Mathematical Association of America, Baltimore, MD.

Oct. 2002 "An Energy-Driven Approach to Linkage Unfolding", Invited talk, Special Session on Optimal Geometry of Curves and Surfaces, AMS Fall Central Section Meeting, Madison, WI.

Sept. 2002 "How Small Can You Make an Index of the Web?", Invited talk, Dipartimento di Informatica, University of Pisa, Pisa, Italy.

June 2002 "Competitive Facility Location: The Voronoi Game", Invited talk, Facility Location Optimization Workshop, Vancouver, Canada.

Apr. 2002 "Folding and Cutting Paper", Invited talk, Gathering for Gardner V, Atlanta, GA.

Apr. 2002 "Folding and Unfolding in Computational Geometry", Invited talk, College of Computing, Georgia Institute of Technology, Atlanta, GA.

Apr. 2002 "Folding and Unfolding in Computational Geometry", Invited talk, EECS Colloquium, Tufts University, Medford, MA.

Feb. 2002 "PushPush is PSPACE-complete", Invited talk, Seminar on Algorithmic Combinatorial Game Theory, Schloss Dagstuhl, Wadern, Germany.

Feb. 2002 "Cache-Oblivious Traversal of a Dynamic List", Invited talk, Seminar on Data Structures, Schloss Dagstuhl, Wadern, Germany.

Feb. 2002 "Recent Results in Computational Origami", Invited talk, Mathematics and Science of Origami: Visualize the Possibilities, Annual Meeting of the American Association for Advancement of Science, Boston, MA.

Feb. 2002 "Locked and Unlocked Polygonal Chains", Invited talk, Symposium on Robot Arm Manipulation: Geometric Challenges, Annual Meeting of the American Association for Advancement of Science, Boston, MA.

Dec. 2001 "History of Geometric Constructions by Paper Folding", Invited talk, Special Session on History of Mathematics, Canadian Mathematical Society Winter Meeting, Toronto, Canada.

Dec. 2001 "Folding and Unfolding in Computational Geometry", Invited talk, EAS Computer Science Colloquium Series, Harvard University, Cambridge, MA.

Dec. 2001 "Folding and Unfolding in Computational Geometry", Invited talk, Department of Computer Science, University of Toronto, Toronto, Canada.

Oct. 2001 "Playing Games with Algorithms: Algorithmic Combinatorial Game Theory", Invited talk, Combinatorics Seminar, Massachussets Institute of Technology.

Oct. 2001 "Folding and Unfolding in Computational Geometry", Invited talk, Applied Mathematics Colloquium, Massachussetts Institute of Technology.

Apr. 2001 "Infinitesimally Locked Linkages with Applications to Locked Trees", Invited talk, Special Session on Physical Knotting and Unknotting, AMS Spring Western Section Meeting, Las Vegas, NV.

Apr. 2001 "Folding and Unfolding Linkages, Paper, and Polyhedra", Invited talk, Michigan State University, East Lansing, MI.

Mar. 2001 "When Can You Fold a Map?", Invited talk, Seminar on Computational Geometry, Schloss Dagstuhl, Wadern, Germany.

Jan. 2001 "Cache-Oblivious Search Trees", Invited talk, Shannon Laboratory, AT&T Labs Research, Florham Park, NJ.

Jan. 2001 "Flipping Polygons", Invited talk, Department of Computer Science, State University of New York, Stony Brook, NY.

Dec. 2000 "Convexifying Polygons and Straightening Polygonal Arcs", Invited talk, Department of Information Science, University of Tokyo, Tokyo, Japan.

Dec. 2000 "Straightening Polygonal Arcs and Convexifying Polygonal Cycles", Invited talk, Department of Computer Science, Hong Kong University of Science and Technology, Hong Kong, China.

Oct. 2000 "Folding and Unfolding Linkages, Paper, and Polyhedra", Invited talk, Discrete Geometry and Graph Theory Seminar, Department of Mathematics, Cornell University, Ithaca, NY.

Oct. 2000 "Cutting Polygons with a Circular Saw", Invited talk, Department of Applied Mathematics and Statistics, State University of New York, Stony Brook, NY.

Sept. 2000 "Experience with Adaptive Set Intersection", Invited talk, Seminar on Experimental Algorithmics, Schloss Dagstuhl, Wadern, Germany.

Sept. 2000 "Minimum-Turn Milling", Invited talk, Special Session on Discrete and Applied Geometry, AMS Fall Central Section Meeting, Toronto, Canada.

Aug. 2000 "Minimum-Turn Milling", Invited talk, Session on Geometric Instances of Graph Optimization Problems, 17th International Symposium on Mathematical Programming, Atlanta, GA.

June 2000 "Convexifying Polygons and Straightening Polygonal Arcs", Invited talk, Minisymposium on Computational Geometry: Folding, 10th SIAM Conference on Discrete Mathematics, Minneapolis, MN.

May 2000 "Folding and Unfolding Linkages, Paper, and Polyhedra", Invited talk, Discrete Geometry Meeting, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach-Walke, Germany.

Apr. 2000 "Convexifying Polygons and Straightening Polygonal Arcs", Invited talk, Special Session on Discrete Geometry, 2000 AMS Spring Eastern Section Meeting #952, Lowell, MA.

Apr. 2000 "Convexifying Polygons and Straightening Polygonal Arcs", Invited talk, Algorithms seminar, Department of Computer Science, University at Stony Brook, Stony Brook, NY.

Mar. 2000 "Matchings in Cubic Planar Graphs", Invited talk, Mittagsseminars, Institut für Informatik, Freie Universität Berlin, Berlin, Germany.

Mar. 2000 "Folding and Unfolding Polyhedra", Invited talk, Informatik-Kolloquiums, Institut für Informatik, Freie Universität Berlin, Berlin, Germany.

Mar. 2000 "Convexifying Polygons and Straightening Polygonal Arcs", Invited talk, Tutte Colloquium, Department of Combinatorics and Optimization, University of Waterloo, Waterloo, Canada.

Mar. 2000 "Folding and Cutting Paper", Invited talk, Computational Geometry Lecture, Department of Computer Science, Smith College, Northampton, MA.

Mar. 2000 "PushPush is NP-hard in 2D", Invited talk, Research Seminar, Department of Computer Science, Smith College, Northampton, MA.

Feb. 2000 "Adaptive Set Intersections, Unions, and Differences", Invited talk, Seminar on Data Structures, Schloss Dagstuhl, Wadern, Germany.

Jan. 2000 "Convexifying Polygons and Straightening Polygonal Arcs", Invited talk, Geometry Seminar, Courant Institute of Mathematical Sciences, New York University, New York, NY.

Dec. 1999 "Collapsing Polyhedra", Invited talk, 4th Geometry Festival, Budapest, Hungary.

Dec. 1999 "Folding and Cutting Paper", Invited talk, Algorithmic Discrete Mathematics Graduate Program, Institut für Informatik, Freie Universität Berlin, Berlin, Germany.

Oct. 1999 "Folding and Unfolding Polyhedra", Invited talk, Department of Applied Mathematics and Statistics, University at Stony Brook, Stony Brook, NY.

Oct. 1999 "Straightening Chains and Convexifying Polygons", Invited talk, School of Computer Science, Carleton University, Ottawa, Canada.

June 1999 "Straightening Chains and Convexifying Polygons", Invited talk, Monte Verite Conference on Discrete and Computational Geometry, Ascona, Switzerland.

Apr. 1999 "Straightening Chains and Convexifying Polygons", Invited talk, Algorithms and Complexity Seminar, Department of Computer Science, University of Waterloo, Waterloo, Canada.

Apr. 1999 "Straightening Chains and Convexifying Polygons", Invited talk, Theory Seminar, Department of Computer Science, University of Illinois, Urbana-Champaign, IL.

Mar. 1999 "Straightening Chains and Convexifying Polygons", Invited talk, Department of Applied Mathematics and Statistics, State University of New York, Stony Brook, NY.

Mar. 1999 "Straightening Chains and Convexifying Polygons", Invited talk, Algorithms Seminar, School of Computer Science, McGill University, Montréal, Canada.

Nov. 1998 "Efficient Algorithms for Petersen's Matching Theorem", Invited talk, Tutte Colloquium, Department of Combinatorics and Optimization, University of Waterloo, Waterloo, Canada.

Nov. 1998 "Folding and Cutting Paper", Invited talk, Department of Applied Mathematics and Statistics, State University of New York, Stony Brook, NY.

Oct. 1998 "Folding and Cutting Paper", Invited talk, Algorithms Seminar, School of Computer Science, McGill University, Montréal, Canada.

May 1998 "Higher-Order Concurrency in Java", Invited talk, University of New Brunswick, Fredericton, Canada.

Mar. 1998 "Efficient Algorithms for Petersen's Matching Theorem", Invited talk, Data Structures Seminar,

Schloss Dagstuhl, Wadern, Germany.

Jan. 1998 "Folding and Cutting Paper", Invited talk, Special Session on Mathematical Methods in Paper Folding, Joint Mathematics Meetings of the American Mathematical Society and Mathematical Association of America, Baltimore, MD.

Sept. 1997 "Higher-Order Concurrency in Java", Invited talk, Colloquia Series, Department of Computer Science, Rochester Institute of Technology, Rochester, NY.

Served as Referee

Journals: Journal of the ACM, SIAM Journal on Computing, SIAM Review, Journal of Algorithms, Algorithmica, Discrete & Computational Geometry, Computational Geometry: Theory and Applications, International Journal of Computational Geometry and Applications, Information Processing Letters, Discrete Mathematics, Discrete Applied Mathematics, Graphs and Combinatorics, Journal of Combinatorial Mathematics and Combinatorial Computing, INTEGERS: The Electronic Journal of Combinatorial Number Theory, Operations Research Letters, International Journal of Game Theory, Nordic Journal of Computing, Microprocessors and Microsystems.

Conferences: 48th, 50th Annual IEEE Symposium on Foundations of Computer Science (2007, 2009), 15th, 17th, 18th, 21st, 25th Annual ACM Symposium on Computational Geometry (1999, 2001, 2002, 2005, 2009), 35th–39th, 41st ACM Symposium on Theory of Computing (2003–2007, 2009), 14th–21st Annual ACM-SIAM Symposium on Discrete Algorithms (2003–2010), 10th, 12th, 13th Annual European Symposium on Algorithms (2002, 2004, 2005), 29th, 36th International Colloquium on Automata, Languages and Programming (2002, 2009), 37th International Conference and Exhibition on Computer Graphics and Interactive Techniques (2010), 25th ACM Symposium on Principles of Database Systems (2006), 7th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (2004), 9th Scandinavian Workshop on Algorithm Theory (2004), 19th Annual IEEE Conference on Computational Complexity (2004), Latin American Theoretical Informatics (2000, 2002, 2004, 2008), 6th Workshop on Algorithm Engineering and Experiments (2004), 14th Annual International Symposium on Algorithms and Computation (2003), 6th, 9th, 11th Symposium on Graph Drawing (1998, 2001, 2003), 18th Canadian Conference on Computational Geometry (2006), Japan Conference on Discrete and Computational Geometry (1998, 2000, 2002), 15th Annual ACM Symposium on Parallel Algorithms and Architectures (2003), 22nd Annual Conference on the Foundations of Software Technology and Theoretical Computer Science (2002), 3rd International Conference on Computers and Games (2002), 3rd–4th Annual BRIDGES Conference: Mathematical Connections in Art, Music, and Science (2000–2001).

Book chapters: Akiyama-Chvátal Festschrift (Springer), Discrete and Computational Geometry: The Goodman-Pollack Festschrift (Springer), Physical Knots: Knotting, Linking, and Folding of Geometric Objects in 3-space (American Mathematical Society), Experimental Algorithmics — the State of the Art (Lecture Notes in Computer Science, Springer-Verlag).

Books: A K Peters, Cambridge University Press.

Grants: National Science Foundation.

Awards

George Pólya Lecturer, Mathematical Association of America, 2010–2012
Université Libre de Bruxelles Gold Medal, 2008
Featured in 56-minute documentary *Between the Folds* about origami, 2008
"Computational Origami" sculpture purchased for permanent collection of Museum of Modern Art (MoMA), New York, 2008
Earle Raymond Hedrick Lecturer, Mathematical Association of America, 2008
Katayanagi Emerging Leadership Prize, Carnegie Mellon University and Tokyo University of Technology, 2008
International Francqui Chair of Belgium and Francqui Gold Medal, 2007
Honorary Doctor of Laws degree, Dalhousie University, 2007
Alfred P. Sloan Research Fellowship, 2006–2008
Esther and Harold E. Edgerton Professor at MIT, 2005–2008

Harold E. Edgerton Faculty Achievement Award, Apr. 2005
DOE Early Career Principal Investigator Award, Sept. 2004
NSF CAREER Award, June 2004
Ruth and Joel Spira Award for Distinguished Teaching in EECS at MIT, May 2004
MacArthur Fellowship, Nov. 2003
NSERC Doctoral Prize and Silver Medal, Mar. 2003 (best PhD thesis and research in Canada, 1 of 4 awards)
Popular Science "Brilliant 10", Sept. 2003
Boston Magazine "40 Bostonians to Watch", June 2002
Governor General's Academic Gold Medal (best PhD at U. Waterloo), June 2002
NSF Mathematical Sciences Postdoctoral Research Fellowship, 2001 (declined)
NSERC Postdoctoral Fellowship, 2001 (declined)

Professional Memberships

Association for Computing Machinery (ACM)
ACM Special Interest Group on Algorithms and Computation Theory (SIGACT)
American Mathematical Society (AMS)
Canadian Mathematical Society (CMS)
Mathematical Association of America (MAA)
Society for Industrial and Applied Mathematics (SIAM)