## **CURRICULUM VITAE**

# MARIA M. KLAWE September 2021

#### **EDUCATION**

B.Sc., Mathematics, University of Alberta, 1973 Ph.D., Mathematics, University of Alberta, 1977 Graduate Studies, Computer Science, University of Toronto, 1979

# **PROFESSIONAL EMPLOYMENT RECORD**

- 2006 present President, Harvey Mudd College 2003 - 2006 Dean of Engineering and Professor of Computer Science, Princeton U. 1998 - 2002 Dean of Science, University of British Columbia (UBC) 1997 - 2002 NSERC-IBM Chair for Women in Science and Eng. for BC and the Yukon 1995 - 1998 Vice President, Student & Academic Services, UBC 1988 - 2002 Professor, Department of Computer Science, UBC 1988 - 1995 Head, Department of Computer Science, UBC 1980 - 1989 IBM Almaden Research Centre, San Jose, California - 1985-87 Manager, Mathematics and Related Computer Science Department - 1984-88 Manager (and founder), Discrete Mathematics Group - 1980-84 Research Staff Member, Foundations of Computer Science Group 1978 - 1980 University of Toronto, Toronto, Ontario - 1978-79 Part-time Lecturer, Department of Computer Science - 1979-80 Assistant Professor, Department of Computer Science
- 1977 1978 Oakland University, Rochester, Michigan, Assistant Professor Department of Mathematical Sciences

## **PROFESSIONAL ACTIVITIES**

Academic or professional awards and distinctions: a. Weiss Cup, Strathcona Composite High School, Edmonton, 1968 INCO Scholarship, 1968-71 NRC Postgraduate Fellowship, 1973-77 NRC Postdoctoral Fellowship 1977 IBM Outstanding Innovation Award for Matrix Searching, 1989 IBM Canada Centre for Advanced Studies Award for Contributions to University-Industry Relations, 1992 Counting on Frank (EA Kids, 1994) selected by PC Magazine as a top ten educational CD-ROM in 1995 Fellow of ACM, 1996. YWCA Woman of Distinction in Science and Technology, Vancouver, 1997 NSERC-IBM Chair for Women in Science & Eng. for BC and the Yukon, 1997-2002 Wired Woman Pioneer Award, 2001 Canadian New Media Association Educator of the Year Award, 2001 Honorary Doctorate, Ryerson Polytechnic University, 2001 BC Science Council Champion of the Year, 2001 Regent's Lecturer, UC Berkeley 2002 Commencement speaker, Mathematics Convocation, UC Berkeley, 2002 Distinguished Alumni Award, University of Alberta, 2003 Honorary Doctorate of Mathematics, University of Waterloo, 2003 Honorary Doctorate of Science, Queen's University, 2004 Nico Habermann Award, Computing Research Association, 2004 Honorary Doctorate, Dalhousie University, 2005 Honorary Doctorate, Acadia University, 2006 Founding Fellow Canadian Information Processing Society, 2006 Honorary Doctorate, University of Alberta, 2007 Honorary Doctorate, University of Ottawa, 2008 Honorary Doctorate, Mount Saint Vincent University, 2009 Fellow, American Academy of Arts and Sciences, 2009 Honorary Doctorate, University of British Columbia, 2010 Honorary Doctorate of Public Service, University of Maryland, Baltimore County, 2011 Denice Denton Hall of Fame, Portland State University, 2012 Inaugural Fellow, American Mathematical Society, 2013 Women of Vision ABIE Award for Leadership, 2014 No. 17, Fortune's list of the World's 50 Greatest Leaders, 2014 Lifetime Achievement Award, Canadian Association of Computer Science, 2015 American Association of University Women Achievement Award, 2015 Honorary Doctorate, University of Toronto, 2015 US News STEM Solutions Leadership Hall of Fame Honoree, 2015 Honorary Doctorate, McMaster University, 2016 Honorary Doctorate, Concordia University, Montreal, 2016 Computing Research Association Distinguished Service Award, 2016 Honorary Doctorate, University of Lethbridge, 2017 Carnegie Corporation Academic Leadership Award, 2017 Epiphany Science Inspiration Award, Novim Group, 2018 Honorary Doctorate, McGill University, 2018

Honorary Doctorate, University of Ontario Institute of Technology, 2018
Honorary Doctorate, Western University, 2018
Fellow, Association for Women in Mathematics, 2019
Women in Tech Athena Award, 2019
Fellow, American Association for the Advancement of Science, 2020
Honorary Doctorate, University of Calgary, 2020
Honorary Doctorate, Thompson Rivers University, 2021

# b. Membership on editorial Boards:

1985-1998	Member of editorial board of Combinatorica
1994-2006	Electronic Journal of Combinatorics
1987-93	Co-founder, member editorial board, SIAM Journal on Disc. Math.
1986-93	Member of editorial board of SIAM Journal on Computing

# g. Membership of peer review committees:

MIT Schwarzman College of Computing External Advisory Group, 2020-2022 NSF Alan T. Waterman Award Committee, 2019-2021 Stanford Computer Science Visiting Committee, 2017, 2022 Review of Department of Computing and Information Services, Spelman College, 2016 Canada Excellence Research Chairs Selection Board, 2012 – 2016 ACM Fellows Committee, 2014 Engineering Advisory Council, Stanford, 2011 – 2015 Review of CITRIS, U.C. Berkeley, 2011 Committee of Visitors on Undergraduate Education, MIT, 2006 - 2012 Committee of Visitors on Sponsored Research, MIT, 2005 - 2009 Review of Strategic Plan of Engineering, Waterloo University, 2006 Review of Faculty of Computer Science, Dalhousie University, 2001 Review of Department of Psychology, University of Toronto, 1999 Review of the Faculty of Graduate Studies, University of Alberta, 1997 Review of Department of Computer Science, University of Victoria, 1995 President's Ad Hoc Committee, Harvard University, 1991 Review of Department of Computer Science, University of Manitoba, 1990 Review of Department of Computer & Information Science, Queen's University, 1990

# d. *Positions as officer in professional societies and organizations (since 1996):*

American Association for the Advancement of Science Board of Directors
Director, Glowforge Company
Founding Board of Advisors for Parity.org
Alliance for Southern California Innovation Board of Directors
Board of Directors, Chair, EdReports.org
Director, Math for America Board
Trustee, Mathematical Sciences Research Institute, CA
Fulbright Canada Board of Directors
Co-Chair, Scientific Advisory Board, Simons Institute, UC Berkeley
Director, Broadcom Corporation
Director, Microsoft Corporation
Trustee, Anita Borg Inst. for Women in Technology, Palo Alto
Executive Advisory Council, National Center for Women in IT

2004-2012	Advisory Board, Computer Science Teachers Association (CST	A)
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- 2003-2008 Chair of Trustees, Anita Borg Inst. for Women in Technology, Palo Alto
- 2004-2006 Past President, Association of Computing Machinery, NY
- 2003-2006 Trustee, Institute for Pure and Applied Mathematics, UCLA
- 2002-2004 President, Association of Computing Machinery, NY
- 2000-2002 Vice-President, Assoc. Computing Machinery, NY
- 2000-2006 International Advisory Committee, Alberta Ingenuity Foundation
- 1998-2003 Trustee, Institute for Women in Technology, Palo Alto
- 1992-2001 British Columbia Premier's Advisory Council on Science & Technology
- 1997-2001 Western Technologies Seed Investment Fund Advisory Board
- 1998-2000 ACM Council, Member at Large
- 1995-97 Board of Post-Secondary Application Service of British Columbia
- 1990-97 Board of Governors, Science World, British Columbia
- 1992-97 Board of Trustees, American Mathematical Society (Chair 95-96)
- 1990-96 Board of the Computing Research Association (Vice-Chair 93-95)

### **Conference Organization (since 1996):**

- 2019 Building Recruiting and Inclusion for Diversity Conference, Claremont, CA
- 2018 Building Recruiting and Inclusion for Diversity Conference, Claremont, CA
- 2017 Group on Inclusion and Diversity in Venture Capital, Mountain View, CA
- 2017 Building Recruiting and Inclusion for Diversity Conference, Claremont, CA
- 2016 Building Recruiting and Inclusion for Diversity Conference, Snowbird, Utah
- 2015 Building Recruiting and Inclusion for Diversity Conference, Claremont, CA
- 2012 Sunnylands Retreat on Reforming U.S. Mathematics Education
- 2011 HMC President's Circle of Women Leaders in Tech, Facebook, Palo Alto
- 2005 ABI TechLeaders Workshop, Microsoft Research, Redmond
- 2004 Institute for Women and Technology Leadership Workshop, Los Angeles
- 2002 International Conf. Women in Engineering and Science, Ottawa
- 2001 Educators Day, ACM1, San Jose
- 2000 Senior Summit, Grace Hopper Celebration Women in Comp., Cape Cod
- 2000 Getting I.T. (more representative), Vancouver
- 1999 Women, Work and Computerization 2000, Vancouver
- 1998 Honorary Chair: Women in the Workplace, Vancouver
- 1997 Associate Chair, Papers, CHI'97 Conf. on Human Factors in Comp. Syst.
- 1996 Co-chair, BC Conference on Electronic Highway
- 1996 Moderator, B.C. Premier's Forum on Youth

## f. Invited symposia lectures (since 1996):

Panelist, Assembly Select Committee on STEM, Sacramento, CA, 2020 Speaker, Ontario Women in Engineering Workshop, Hamilton, Ontario, 2019 Panelist, NSF Designing Higher Education Systems with Access and Equity as the Foundational

Principles, Washington, D.C., 2019

Speaker, Ewha-Luce International Seminar, Seoul, 2019

Panelist, MIT Schwarzman College of Computing Celebration, TEACH, 2019

Panelist, Silicon Slopes Tech Summit, Salt Lake City, 2019

Speaker and Panelist, Gender and Technology: How to Debias the Workplace conference,

Harvard's Women in Public Policy Program, Cambridge, MA, 2018

Panelist, ASU+GSV Summit, San Diego, 2018

Speaker, Women in Data Science Conference, Stanford, 2018

Invited Address, Joint Mathematics Meetings, Mathematical Association of America, 2018 Speaker, Congresa Internacional de Innovación Educativa, Tecnológico de Monterrey, 2017 Panelist, In Pursuit: An Atlantic Summit on Women and Science, Washington, D.C., 2017 Speaker, Nueva Innovative Learning Conference, Hillsborough, CA, 2017 IEEE Women in Engineering International Leadership Conference, San Jose, CA, 2017 Times Higher Education Young Universities Summit, Brisbane, Australia, 2017 Panelist, Accenture International Women's Day Event, 2017 California Higher Education Innovation Council, Santa Clara, CA, 2017 SC16 Conference, Plenary Session, 2016 Stanford SAILORS Conference, Palo Alto, CA, 2016 Women in Science and Engineering (WISE), Stanford University, Palo Alto, CA, 2016 Collision Conference, New Orleans, 2016 International Women's Forum World Leadership Conference, Boston, 2015 Panelist, Fortune Most Powerful Women Summit, Washington, D.C., 2015 National Coalition of Girls' Schools Conference, Richmond, VA, 2015 American Society for Engineering Education Annual Conference, Seattle, 2015 ITechLaw Conference, San Diego, 2015 ASU + GSV Summit, Scottsdale, AZ, 2015 ACM Richard Tapia Celebration of Diversity in Computing, 2015 EDUCAUSE Connect, San Diego, 2015 National Council of University Women in Mathematics Conference, Lincoln, NE, 2015 Milken Institute Summit, Santa Monica, CA, 2014 Grace Hopper Celebration of Women in Computing, 2014 Silicon Valley Education Summit, Mountain View, CA, 2014 Computing Research Association Conference, Snowbird, UT, 2014 Fortune Brainstorm Tech Conference, Aspen, CO, 2014 White House Working Families Summit, Washington, D.C., 2014 Union College Engineering Symposium, Schenectady, NY, 2014 WISEST Symposium, University of Alberta, Canada, 2014 The Code Conference, Rancho Palos Verdes, CA, 2014 American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, 2014 New America Foundation Event, Washington, D.C., 2014 Consortium for Computing Sciences in Colleges South Western Region Conference, Northridge, CA, 2014 MAKERS Conference, Rancho Palos Verdes, CA, 2014 Ontario Celebration of Women in Computing, Waterloo, 2013 Women in STEM Luncheon, GSV Advisors, Chicago, 2013 Grace Hopper Celebration of Women in Computing, Minneapolis, MN, 2013 Stanford Changemakers Symposium Keynote, Anaheim, CA, 2013 Tapestry Symposium Keynote, Miami, FL, 2013 WEPAN Keynote, Atlanta, GA, 2013 USNWR STEM Summit, Austin, TX, 2013 Smithsonian Centenary Summit, Washington, D.C., 2013 UBC Computer Science 45<sup>th</sup> Anniversary Keynote, BC, 2013 ASU/GSV Education Innovation Summit, Scottsdale, AZ 2013 Amazon Women in Engineering (AWEsome) Conference Keynote, Seattle, WA, 2013 Computing Education 21 Keynote, Portland, OR, 2013 ASTE Keynote, Charleston, SC, 2013 ELATE at Drexel, Lafayette, PA, 2012

On-Ramps into Academia Conference, Seattle, WA, 2012 Grace Hopper Celebration of Women in Computing, Baltimore, MD, 2012 Fortune Most Powerful Women Summit, Laguna Niguel, CA, 2012 Facebook Technical Women Retreat Keynote, San Francisco, CA, 2012 Intel Women's Principal Engineers and Fellow Forum, Hillsboro, OR, 2012 Women in Theory, Princeton, NJ, 2012 White House Forum on Women and the Economy, Washington, D.C., 2012 Stanford She++ Conference, Palo Alto, CA, 2012 Boston University Graduate Women in Science and Engineering, Boston, MA, 2012 Annenberg Retreat at Sunnylands Moment Symposium, Rancho Mirage, CA, 2012 Renaissance Institute Weekend, Santa Monica, CA, 2012 AAUW San Diego, 2011 WCF IFIP World CIO Forum Plenary, Shenzhen, China, 2011 NCRW Conference Keynote Panel, Claremont, CA, 2011 Grace Hopper Celebration of Women in Computing, Portland, 2011 Computer Science College Conference Keynote, Richland, WA, 2011 Creating Connection 2.0 Keynote, Vancouver, BC, 2011 M-Best Keynote, Menlo Park, CA, 2011 Sparks Forum (DLS), Georgia Tech, Atlanta, GA, 2011 Festival of Teaching Keynote, University of Alberta, Edmonton, AB, 2011 Ohio Celebration of Women in Computing Keynote, Perrysville, OH, 2011 Directors College, Stanford Law School, 2010 Walt Disney Animation Studios, Burbank, CA, 2010 The Trusteeship, Cal State Northridge, 2010 Heinz Ethics Dinner (Keynote), Pasadena, CA, 2010 Microsoft Women's leadership and Development Conference (Keynote), Redmond, 2009 Tapia Celebration of Minorities in Computing (Keynote), Orlando, 2007 Grace Hopper Celebration of Women in Computing (Keynote), Orlando, 2007 MSRA Gaming and Graphics Workshop (Keynote), Beijing, 2007 Microsoft Academic Days on Game Development (Keynote), Orlando, 2007 Amazon Developer's Conference, Seattle, 2007 MSRI Tech Vista (Keynote), Bangalore, 2006 ITICSE (Keynote), Lisbon, Portugal, 2005 SIGCSE (Keynote), St. Louis, 2005 Girl Power (Keynote), Annual Meeting of Nat. Coal. Girls Schools, San Francisco, 2004 Anita Borg Celebration (Keynote), Stanford University, CA, 2003 OWLS Workshop (Keynote), Northampton, MA, 2003 University of Michigan Women in Science and Engineering Leadership Retreat (Keynote), Ypsilanti, MI, 2003 Girls, Technology and Education, Pittsburgh 2001 Richmond Schools Prof. Development Day on Social Responsibility 2001 Gordon Conference on Innovation in Chemistry Teaching, Ventura 2001 BC Principals and Vice-Principals Annual Conference (Keynote), Burnaby 2000 Horizons 2000 (Keynote) Annual Conf. Computer Using Educators, Burnaby 2000. IEEE Annual Conference, Vancouver 2000 AMTEC 2000 (Keynote), Vancouver 2000 NISE Forum, Detroit, 2000 Countdown (Keynote), Burnaby Principals Conference, Burnaby, 2000 Catalyst 2000, BC Science Teachers Annual Meeting, Whistler, 2000

STARS Conference, (Keynote) Regina, 2000 Exploring IT (Keynote), Calgary, AB 1999 Society for Computers in Psychology, Los Angeles, CA 1999 Gender and Computer Science (Keynote), Saskatoon, 1999 IBM America's Women's Leadership Conference, Vancouver, BC 1999 NSF Workshop on Improving Undergraduate Education in the Mathematical and Physical Sciences through Use of Technology, Arlington, VA 1999 Olga Taussky Todd Celebration (Panel), Berkeley, CA 1999 Graphics Interface 99 (Keynote), Kingston, Ontario 1999 FCRC Computing Research Association Workshop on Research Careers for Women in Computer Science and Engineering. Atlanta, GA 1999. IT Implementation Forum, Burnaby, BC 1999. Celebration of Women in Math., Stat. & Comp. Sci. (Public Lecture), Waterloo 1998 NCTM Standards 2000 Technology Conference, Arlington, VA 1998 NCTM Annual Meeting (Keynote), Washington, DC 1998 Can. Math. Soc. Winter Meeting (Public Lecture), Victoria, BC 1997 M.A.A. Pacific Northwest Section Meeting (Keynote), Bellingham, WA, 1997. Western Can. Conf. Computing Education (Keynote), Malaspina, BC, 1997. BC Technology Planning Institute (Keynote), Vernon, BC, 1996 BC Childcare Symposium (Keynote), Richmond, BC, 1996 National Council of Teachers of Mathematics (Keynote), Vancouver, BC, 1996 Can. Information Proc. Soc. Annual Meeting, Vancouver, BC, 1996 Power-Up Symposium, Vancouver, BC, 1996 Educational Computing Organization of Ontario, Toronto, ONT, 1996

h. Invited lectures: (since 1996, DLS denotes Distinguished Lecture Series) University of Carleton, Herzberg Lecture, 2021 Peking University, Beijing, 2020 University of Washington Allen School, Commencement, Seattle, 2019 Denison University, Anderson Lecture Series, Granville, OH, 2019 University of British Columbia, DLS, Vancouver, B.C., 2018 Sandia National Labs, Albuquerque, NM, 2018 University of California, Berkeley, Berkeley Forum, 2018 University of Denver, DLS, 2018 Yoshin Lecture, Habib University, Karachi, Pakistan, 2018 University of Riverside, DLS, 2018 North Carolina State University, Triangle Computer Science DLS, 2017 Simon Fraser University, President's Dream Colloquium, 2017 Castilleja Girls' School, Commencement, 2017 University of California, Los Angeles, DLS, 2017 Stony Brook University, DLS, 2017 San Francisco State University, DLS, 2017 University of Illinois at Chicago, DLS, 2016 Université de Montréal, 2016 University of Washington, Richmond, Commencement, 2016 Missouri University of Science and Technology, DLS, 2016 University of Notre Dame, Building Bridges Lecture Series, South Bend, IL, 2016 Smith College, Presidential Colloquium, Northampton, MA, 2016 University of Texas, Dallas, DLS, 2016

University of St. Andrews, Carnegie Lecture, Fife, Scotland, U.K., 2016 University of Southern California, Bedrosian Center Lunch with a Leader series, 2016 University of California, Berkeley, EECS Colloquium, 2016 Caltech, Oringer Seminar series, Pasadena, CA, 2015 National Science Foundation, DLS, 2015 Microsoft Research Diversity Lecture Series, Seattle, 2015 Pixar Animation Studios, Emeryville, CA, 2015 Community School of Music and Art, Mountain View, CA, 2015 Georgia Institute of Technology, WST Distinguished Lecture, 2015 Harvard University Askwith Forum, Boston, 2015 University of California, Los Angeles, ACM Speaker Series, 2015 University of Washington, Women in the Chemical Sciences, 2014 Broadcom Corporation, 2014 University of Wisconsin, Madison, Denice Denton Memorial Lecture, 2014 Trinity University, Lennox Seminar, 2014 Legacy Venture Annual Meeting, 2014 Google, 2014 Marymount School for Girls, Commencement, 2014 Lehigh University, 2014 Twitter WomEng Group, 2014 University of California, Santa Barbara, 2014 University of Waterloo (DLS), 2013 University of Maryland, College Park, 2013 Purdue University (DLS), 2013 George Washington University, Bromley Memorial Lecture, 2013 University of British Columbia, Green College Founder's Dinner, 2013 California Institute of Technology (DLS), 2013 University of California at Irvine (DLS), 2013 Rochester Institute of Technology (DLS), 2013 University of Washington (DLS), 2012 Portland State University (DLS), 2012 Elmhurst College (DLS), 2012 University of Minnesota, Minneapolis, College of Engineering, Commencement, 2012 Stanford Women in Computer Science (DLS), 2012 Colorado Mesa University (DLS), 2012 University of California at San Diego (DLS), 2012 University of California at Santa Barbara (DLS), 2012 Morgan Stanley, NYC, 2011 Jane Street Capital, NYC, 2011 Facebook, Palo Alto, CA, 2011 Google, Mountain View, CA, 2011 University of Maryland, Baltimore County Commencement, 2011 University of Oregon (DLS), 2010 University of Scranton (DLS), 2010 University of Buffalo (DLS), 2010 Cal Poly San Luis Obispo, 2010 Loyola University, 2009 U. Delaware (DLS), 2009 Stanford University, 2009

U.C. Riverside, 2009 University of Maryland Baltimore County, 2008 Yahoo Research (DLS), 2008 Oakland University (DLS), 2008 Cal Poly Pomona (DLS), 2008 Haverford College (DLS), 2008 George Washington University (Welling Lecture), 2008 University of Southern California (DLS), 2008 George Washington University (Welling Lecture), 2007 Northwestern University (DLS), 2006 University of Illinois Urbana-Champaign (DLS), 2006 Fermi Lab (DLS), 2006 Tufts University, 2005 University of Washington, 2005 Lehigh University, 2005 University of Pennsylvania (DLS), 2005 University of Kentucky (DLS), 2004 Lynda Shaw Memorial Lecture, University of Western Ontario, 2004 Women's Leadership Conference, New York, 2004 Columbia University (DLS), 2004 University of Minnesota (DLS), 2003 Microsoft Research, Redmond, 2003 Google, Mountain View, 2003 Cal Tech, Pasadena, 2003 Stanford University, Palo Alto, 2003 Mathematics Colloquium, UC Berkeley, Berkeley CA, 2002 UC Berkeley (Regents Lecture), Berkeley CA, 2002 Xavier University, Cincinnati, 2002 Dalhousie University (DLS), Halifax, 2000 Microsoft Research, Redmond, 2000 University of Wisconsin, Madison, 2000 American Film Institute, Los Angeles, 1999 University of Calgary (DLS), Calgary, 1999 DePaul University, (DLS) Chicago, 1999 University of Montana (DLS, Public Lecture), MT 1999. University of Victoria (WISE chapter), 1999 University of Saskatchewan, (Public Lecture) 1998 University of Northern British Columbia (Public Lecture), 1998 Texas A&M. (DLS), 1997 University of Victoria (DLS, Public Lecture), 1997 University of Waterloo, 1996 Oregon Graduate Institute, 1996 University of Texas (DLS, Public Lecture), 1996 York University, 1996

# **Research Interests:**

Theoretical computer science (data structures, algorithms, complexity); discrete mathematics (graph theory), interactive multi-media (education: mathematics, programming, literacy; art-therapy); human-computer interaction; gender issues related to information technology.

## **PUBLICATIONS**

- 1. C. Karamchedu, M. Klawe (2021). On the Ramsey Numbers of Odd-Linked Double Stars. arXiv:2110.07779
- 2. M. Klawe (2013). Increasing Female Participation in Computing: The Harvey Mudd College Story. Computer Vol. 46 (3), March 2013.
- 3. R.N. Coger, J. Cuny, M. Klawe, M.McGann, and K.D. Purcell (2012). Why STEM Fields Still Don't Draw More Women. Chronicle of Higher Education, October 2012.
- 4. M. Klawe (2012). Females, Games and Learning Math, Op Ed, Computers in Entertainment, June 2012.
- 5. M. Klawe (2011). Increasing the Participation of Females in Computing Careers. Journal of Computing Sciences in Colleges Vol. 27 (1), October 2011.
- 6. D. Grasso, M. Brown Burkins, eds.; forewords by C. Judson King, R. Miller and M. Klawe (2010). Holistic Engineering Education: Beyond Technology.
- 7. M. Klawe, T. Whitney, C.Simard (2009). Women in Computing, Take 2. CACM Vol. 52 (2), February 2009.
- 8. M. Klawe (2007). Lumines Forever, Math Horizons 2007.
- Boyd-Graber, J., Nikolova, S., Moffatt, K., Kin, K., Lee, J., Mackey, L., Tremaine, M., and Klawe, M. (2006). Participatory Design with Proxies: Developing a Desktop-PDA System to Support People with Aphasia. Proc. of ACM CHI 2006.
- 10. K. Moffatt, J. McGrenere, B. Purves, and M. Klawe. (2004), The Participatory Design of a Sound and Image Enhanced Daily Planner for People with Aphasia, Proceedings of CHI 2004.
- J. McGrenere, R. Davies, L. Findlater, P. Graf, M. Klawe, K. Moffatt, B. Purves, S. Yang (2003). Insights from the Aphasia Project: Designing Technology For and With People who have Aphasia, Proc. ACM Conference on Universal Usability, Vancouver, BC.
- 12. James Dai, Michael Wu, Jonathan Cohen, and Maria Klawe. (2003). PrimeClimb: Designing to Facilitate Mediated Collaborative Inquiry, in Proceedings of CSCL 2003, Bergen, Norway. Kluwer Academic Publishers: 31-35.
- 13. Gauthier J, Fisher B, and Klawe M. (2003) Peer Presence and Real-Time Assessment: A Symbiotic Relationship in Proceedings of ED-MEDIA 2003, Honolulu, HI.

- Cohen J, Dai J, Wu M, Wu T, and Klawe M. (2002) Promoting Peer-to-Peer Discourse for Collaborative Mathematics in Canadian Grade 7 Classrooms, Proceedings of ED-MEDIA 2002, Denver, CO. AACE: 325-326.
- 15. Cohen J, Dai J, Wu M, Wu T, and Klawe M. (2002) Sharing Toys on the Electronic Playground: Documenting Collaborative Classroom Interactions, Proceedings of Computers and Advanced Technology in Education 2002, Cancun, Mexico. May 2002. IASTED: 38-42
- 16. Dai J, Wu M, Cohen J, Wu T., and Klawe M. (2002) Toys to Teach Mathematics as a Collaborative Climbing Exercise, ACM SIGGRAPH 2002 Conference Abstracts and Applications, San Antonio, TX. July 2002. ACM Press: 117-119.
- 17. M. Klawe, Girls, boys and computers, Inroads (the SIGCSE Bulletin), vol. 33, no. 2, 2002.
- 18. W. Duplantis, E. MacGregor, M. Klawe and M. Ng, 'Virtual Family': an Approach to Introducing Java Programming, Inroads (the SIGCSE Bulletin), vol. 33, no. 2, 2002.
- 19. M. Klawe, K. Inkpen, E. Phillips, R.Upitis, A. Rubin, E-GEMS : A Project on Computer Games, Mathematics, and Gender, in *Ghosts in the Machine, eds. A. Rubin, N. Yelland*, 2002.
- M.Wu, J. Dai, J. Cohen, T. Wu, J. Sze, K.Wong, S.Yang, M. Klawe, Colorful Hints for Collaborative Climbing, CSCL 2002 Workshop on Documenting Collaborative Learning, Boulder, 2002.
- K. Sedig, M. Klawe and M.Westrom, (2001) Role of interface manipulation style and scaffolding on cognition and concept learning in learnware. *ACM Transactions on Computer-Human Interaction.* 8(1) 34-59.
- 22. M. Klawe, Refreshing of the Nerds, Comm. ACM, 2001.
- 23. C. Conati, M. Klawe, Socially Intelligent Agents in Educational Games, *AAAI Fall Symposium*, 2000.
- 24. A.R. Davies, M. Klawe, C. Nyhus, H. Sullivan, M. Ng, Gender issues in computer science education, *Proc. National Inst. Science Education Forum*, Detroit, 2000.
- E. Law, M. Klawe, C. Conati, J. Meech, Team-paced versus Self-paced: The effects of educational game design on collaboration, learning and attitude towards information technology, *Proc. ED-MEDIA 2000*, Montreal, 2000.
- 26. R. Davies, M. Klawe, K. Muldner, C. Nyhus, H. Sullivan, Virtual Family: Including girls in the world of programming, *Proc. ED-MEDIA 2000*, Montreal, 2000.
- V. Chan, K. Stafford, M.Klawe, and G. Chen, Gender Differences in Vancouver Secondary Students' Interests Related to Information Technology Careers, *Proc. WWC 2000*, Vancouver, 2000.

- 28. M. Klawe, I. Cavers, F. Popowich and G. Chen, ARC: A Computer Science Post-Baccalaureate Diploma Program that Appeals to Women, *Proc. WWC 2000*, Vancouver, 2000.
- 29. M. Klawe, Computer Games, Education And Interfaces: The E-GEMS Project, *Proc. Graphics Interface '99*, Kingston, 1999.
- 30. M. Klawe, Designing Game-based Interactive Multimedia Mathematics Learning Activities, *Proc. 4th UCSMP International Conference on Math. Educ.*, Chicago, 1998.
- M. Klawe, When does the use of computer games and other interactive multimedia software help students learn mathematics? *Technology and NCTM Standards 2000 Conference, Arlington*, 1998.
- 32. D. Graves and M. Klawe, Supporting learners in a remote computer-supported collaborative learning environment: the importance of task and communication, *Proc. CSCL* '97, Toronto, 1997.
- 33. K. Inkpen, J. McGrenere, K.S. Booth, and M. Klawe, Turn-Taking Protocols for Mouse-Driven Collaborative Environments, *Proc. Graphics Interface* '97, 138-145.
- Klawe, M., Westrom, M., Super, M. and Davidson, K. Phoenix Quest: Lessons from developing an educational computer game, *Int. Conf. on Multimedia Tech. Man.*, Hong Kong, 1996.
- 35. Super D., Westrom M., and Klawe, M., "Design Issues Involving Entertainment Click-ons", *Computer-Human Interaction '96 Conference Companion*, Vancouver, 1996, pp. 177-178.
- Sedighian K. and Klawe M., "An Interface Strategy for Promoting Reflective Cognition in Children", Computer-Human Interaction '96 Conference Companion, Vancouver, 1996, pp. 179-180.
- 37. Sedighian K. and Klawe M., "Super Tangrams: A Child-Centered Approach to Designing a Computer Supported Mathematics Learning Environment", Proceedings of *ICLS* '96, 1996.
- 38. Klawe, M. and Philips, E., "A classroom study: electronic games engage children as researchers", *Proc. Computer Support for Collaborative Learning* '95, Indiana, 1995.
- 39. Inkpen, K., Booth, K.S. and Klawe, M., "Playing together beats playing apart, especially for girls", *Proc. Computer Support for Collaborative Learning '95*, Indiana, 1995.
- 40. Inkpen, K., Booth, K.S., Gribble, S.D., and Klawe, M., "Give and take: children collaborating on one computer", *CHI'95 Conference Companion*, Denver, CO, 1995.1.
- 41. Klawe, M. and Leveson, N., "Women in computing: where are we now?" *Communications of the ACM* 38(1) (1995) pp. 29-35.
- 42. Lawry, J., Upitis, R., Klawe, M., Anderson, A., Inkpen, K., Ndunda, M., Hsu, D., Leroux, S. and Sedighian, K., "Exploring common conceptions about boys and electronic games". *Journal of Computers in Mathematics and Science Teaching* 14(4), (1995) pp. 439-459.

- 43. Klawe, M. and Mumey, B., "Upper and Lower Bounds on Constructing Alphabetic Binary Trees". *SIAM J. of Disc. Math.* 8(4) (1995), pp. 638-651. Preliminary results appeared in #15.
- Inkpen, K., Upitis, R., Klawe, M., Lawry, J., Anderson, A., Ndunda, M., Sedighian, K., Leroux, S. and Hsu, D., "We have never-forgetful flowers in our garden: girls' responses to electronic games". *Journal of Computing in Mathematics and Science Education* 13(4) (1994), pp. 383-403.
- 45. Klawe, M., "Shallow Grates", Theor. Comp. Sci. 123 (1994), pp. 389-395.
- 46. Klawe, M. and Mumey, B., "Upper and lower bounds on constructing alphabetic binary trees", *Proc. 4th ACM, SIAM Symp. on Disc. Algorithms*, San Antonio, 1993.
- 47. Klawe, M., "Bringing mathematical research to life in the schools", *Proc. 7th Int. Conf. Math. Education*, Quebec, 1992.
- 48. Klawe, M. and Leighton, F.T., "A tight lower bound on the size of planar permutation networks". *SIAM J. Disc. Math.* Vol. 5, No. 4 (Nov. 1992), pp. 558-563. Preliminary results appeared in #26.
- 49. Klawe, M., "Superlinear bounds for matrix searching problems". J. Algorithms 13 (1992). pp. 55-78. Preliminary results appeared in #40.
- 50. Kirkpatrick, D.G., Klawe, M. and Tarjan, R.E., "Polygon triangulation in O(nloglogn) time with simple data-structures", *Journal on Disc. and Comp. Geom.* 7 (1992). pp. 329-346. Preliminary results appeared in #25.
- 51. Aggarwal, A.,, Klawe, M. and Shor, P., "Multi-layer grid embeddings for VLSI", *Algorithmica* 6 (1991). pp. 241-255. Preliminary results appeared in #35.
- 52. Aggarwal, A., Klawe, M., Lichtenstein, D., Linial, N. and Wigderson, A., "A lower bound on the area permutation networks", *Algorithmica* 6 (1991). pp. 129-151. Preliminary results appeared in #35.
- 53. Klawe, M. and Kleitman, D., "An Almost Linear time algorithm for generalized matrix searching", *SIAM J. Disc. Math.* 3 (1990). pp. 81-97.
- 54. Aggarwal, A. and Klawe, M., "Applications of generalized matrix searching to geometric algorithms", *Discrete Applied Mathematics* 27 (1990). pp. 3-23.
- 55. Klawe, M., "Superlinear bounds for matrix searching programs", *Proc. of 1st ACM/SIAM Symp. on Discrete Algorithms*, San Francisco, 1990.
- Kirkpatrick, D. G., Klawe, M. and Tarjan, R. E., "Polygon triangulation in O(nloglogn) time with simple data-structures", *Proc. of 6th Annual Symp. on Comp. Geom.*, Berkeley, 1990. pp. 34-43.

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# **ARTISTIC WORKS, DESIGNS**

Educational content design of "Counting on Frank," a math CD-ROM game published by Electronic Arts, 1994.

Producer and lead designer of Phoenix Quest, a mathematical computer adventure game designed for students aged 8-13 with particular attention to the interests of girls.

Several hundred watercolor paintings.