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ERIK D. DEMAINE and MARTIN L. DEMAINE

Permanent Collections

- 2012 *Green Waterfall*, Fuller Craft Museum, Brockton, Massachusetts
- 2011 *Natural Cycles*, Renwick Gallery, Smithsonian American Art Museum, Washington, DC
- 2010 *Floating Glass Ceiling* joint work with Jo Ann Fleischhaur, UT Health Science Center, MD Anderson Cancer Center, Houston Texas
- 2008 *Computational Origami*, Museum of Modern Art, New York, NY
- 1999 *Hyparhedra*, Southwestern College, Winfield, Kansas
- 1987 *Topological Puzzles*, Elliot Avedon Museum and Archive of Games, University of Waterloo, Ontario, Canada

Solo Exhibitions

- 2012 *Curved Crease Sculptures*, curated by Chris Byrne, Guided by Invoices, New York, NY

Group Exhibitions

- 2012 *40 Under 40: Craft Futures*, Renwick Gallery, Smithsonian American Art Museum, Washington DC
- Ocean Beasts*, curated by Flo Tarjan, Simons Center for Geometry and Physics Art Gallery, Stony Brook, NY
- Unfolding Patterns*, curated by Ombretta Agrò Andruff, Dorsky Gallery Curatorial Programs, Long Island City, NY
- Origami: Art + Mathematics*, curated by Linda Pope, Eloise Pickard Smith Gallery, University of California, Santa Cruz
- ¡AHA! Art Exhibition with a Mathematical Twist*, Central Library, Atlanta, GA
- Mens et Manus*, Fuller Craft Museum, Brockton MA
- Math + Art Collaborative* curated by Steven Broad, Moreau Center for the Arts, Saint Mary's College, Notre Dame, IN
- 2011 *Exhibition of Mathematical Art*, curated by Robert Fathauer, Joint Mathematics Meetings of the American Mathematical Society and Mathematical Association of America, Boston, MA

- 2009 *Paper: Torn Twisted & Cut*, curated by Steven Hempel, Peel Gallery, Houston, TX
Paper, Transient Matter, Lasting Impressions, curated by Isabel De Craene, Art C zar, Rotselaar, Belgium
- 2008 *Rough Cut: Design Takes a Sharp Edge*, curated by Paola Antonelli, Museum of Modern Art, New York, NY
Design and the Elastic Mind, curated by Paola Antonelli, Museum of Modern Art, New York, NY

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Bibliography

- 2010 “Shifty Science: Programmable Matter Takes Shape with Self-Folding Origami Sheets” by John Matson, *Scientific American*
“Magic numbers: A meeting of mathematical tricksters” by Alex Bellows, *New Scientist*
“The mutual inspiration of art and mathematics” by Julie Rehmeyer, *Science News*
“Power of Mathematics”, *Asahi Shimbun Globe*
- 2009 “Origami, science-inspired exhibition makes waves” by Sarah Turner, *The Daily Cougar*
“Math, Art, and Origami at MIT” by Emily Stone, *Popular Science*
“Creased lightning”, *The Economist*
“Even chimps know when they’re not getting paid enough”, by Trine Tsouderos and Robert Mitchum, *Chicago Tribune*
“To Fold a Bunny rabbit” by John Bohannon, *Science*
- 2008 “Sweet Inspiration” by Barry Cipra, *Science*
“Shapeshifting Made Easy” by Barry Cipra, *Science*
“Computer Scientists Honored with International Awards” by Josh Fischman, *The Chronicle of Higher Education*
“Exhibition: Beauty meets utility at MoMA” by Josie Glausiusz, *Nature*
- 2007 “Of greed and ants” *The Economist*
“Numerical Nomad” by Matthew Hutson, *Psychology Today*
“Not Bound By Expectation”, *Bugle-Observer*
- 2005 “Why Origami Is Critical to New Drugs” by Unmesh Kher, *Time*
“Erik Demaine” by Monica Bynre, *Atomica*
“Origami as the Shape of Things to Come” by Margaret Wertheim, *The New York Times*

- 2004 “Revolutionary Minds” by Adeline Goss, *Seed Magazine*
 “Professor Tetris” by Steve Nadis, *Wired*
- 2003 “Random Samples: People” by Yudhijit Bhattacharjee, *Science*
 “Former Halifax whiz kid wins ‘Genius Award’” by Joseph Brean, *National Post*
 “Canadian ‘genius’ wins huge U.S. grant” by Caroline Alphonso, *The Globe and Mail*
 “24 Win MacArthur ‘Genius Awards’ of \$500,000” by Felicia R. Lee, *The New York Times*
 “Boston-area thinkers get 6 of 24 ‘genius’ grants” by Gareth Cook and Katherine Lutz, *the Boston Globe*, 2003
 “Granted, They’re All Geniuses” by Natalie Hopkinson, *Washington Post*
 “PopSci’s 2nd Annual Brilliant 10” by Laurie Goldman, *Popular Science*
 “Out of the fold” by Steve Nadis, *New Scientist*
- 2002 “A prodigy on paper” by Sanjida O’Connell, *The Times*
 “Origami solves road map riddle” by Helen Pearson, *Nature*
 “Road scholar finds home at MIT” by Ellen Barry, *The Boston Globe*

Media (Video)

- 2010 Featured on *GATCHAN!*, NHK Japan
- 2009 Featured on *De Laaste Show*, Belgium
 Interviewed in *The Man Who Saved Geometry: Donald Coxeter*
- 2008 Featured in PBS documentary *Between the Folds*
- 2005 Featured on *Chronicle*, WCVB TV Boston
- 2003 Featured on *Daily Planet*, Discovery Channel Canada
- 2003 Featured on CBS Sunday Morning

Publications

- 2010 “Balloon Polyhedra” (joint work with Martin Demaine and Vi Hart) *Shaping Space: A Polyhedral Approach*, M. Senechal and G. Fleck, eds, Second Edition
 “The Distance Geometry of Music” (joint work with Francisco Gomez-Martin, Henk Meijer, David Rappaport, Perouz Taslakian, Godfried T. Toussaint, Terry Winograd, and David R. Wood), *computational Geometry: Theory and Applications*
 “Recreational Computing: Puzzles and tricks from Martin Gardner inspire math and science”, *American Scientist*, Volume 98, Number 6

- “Reconstruction David Huffman’s Legacy in Curved-Crease Folding” (joint work with Martin Demaine and Dusk Koschitz), *Origami: Proceedings of the 5th International Conference on Origami in Science, Mathematics, and Education*, Singapore, A K Peters
- “Conveyer-Belt Alphabet” (joint work with Martin Demaine and Belén Palop), *Findings in Elasticity*, H. Aardse and A. van Baalen, eds., Pars Foundation, Lars Müller Publishers
- “Conveyer Belt Puzzle Font” (joint work with Martin Demaine and Belén Palop), *Proceedings of the 9th Gathering for Gardner*, Atlanta GA
- “Origami Maze Puzzle Font” (joint work with Martin Demaine), *Proceedings of the 9th Gathering for Gardner*, Atlanta, GA
- 2009 “Algorithms Meet Art, Puzzles, and Magic”, *Proceedings of the 11th Algorithms and Data Structures Symposium*, Lecture Notes in Computer Science 5664, Baniff, Canada
- “Mathematics is Art” (joint work with Martin Demaine), in *Proceedings of 12th Annual Conference of BRIDGES: Mathematics, Music, Art, Architecture, Culture*, Baniff, Canada
- 2008 “Curved Crease Origami” (joint work with Dusk Koschitz and Martin Demaine), *Abstracts from Advances in Architectural Geometry*, Vienna, Austria
- “Computational Balloon Twisting: The Theory of Balloon Polyhedra” (joint work with Martin Demaine and Vi Hart), *Proceedings of the 20th Canadian Conference on Computational Geometry*, Montréal, CA
- 2007 *Geometric Folding Algorithms: Linkages, Origami, Polyhedra* (joint work with Joseph O’Rourke), Cambridge University Press
- “Sand Drawings and Gaussian Graphs” (joint work with Martin Demaine, Perouz Taslakian, and Godfried Toussaint), *Journal of Mathematics and the Arts*, Volume 1, Number 2
- 2006 “Curves in the Sand: Algorithmic Drawing” (joint work with Mirela Damian, Martin Demaine, Vida Dujmović, Dania El-Khechen, Robin Flatland, John Iacono, Stefan Langerman, Henk Meijer, Suneeta Ramaswami, Diane Souvaine, Perouz Taslakian, and Godfried Toussaint), *Proceedings of the 19th Canadian Conference on Computational Geometry*
- “Puzzles, Art, and Magic with Algorithms” (joint work with Martin Demaine), *Theory of Computing Systems*, volume 39, Number 3
- “The Helium Stockpile: A collaboration in Mathematical Folding Sculpture” (joint work with Martin Demaine and A. Laurie Palmer), *Leonardo*, volume 39
- 2004 “Puzzles, Art, and Magic with Algorithms” (joint work with Martin Demaine), *Proceedings of the 15th Annual International Symposium on Algorithms and Computation*, Lecture Notes in Computer Science 3341, Hong Kong, China

- 2003 “Hinged Dissection of the Alphabet” (joint work with Martin L. Demaine), *Journal of Recreational Mathematics*, Volume 31, Number 3
- 2001 “The CCCG 2001 Logo” (joint work with Martin Demaine and Anna Lubiw), *Proceedings of the 13th Canadian Conference on Computational Geomtry*, Waterloo, Canada
- 1999 “Polyhedral Sculptures with Hyperbolic Paraboloids” (joint work with Martin Demaine and Anna Lubiw), *Proceedings of the 2nd Annual Conference of BRIDGES: Mathematical Connections in Art, Music, and Science*, Winfield, KS
 “Metamorphosis of the Cube” (joint work with Martin Demaine, Anna Lubiw, Joseph O’rourke, and Irena Paschenko), *8th Annual Video Review of Computational Geometry, Proceedings of the 15th Annual ACM Symposium on Computational Geometry*, Miami Beach, FL
- 1998 “Planar Drawings of Origami Polyhedra” (joint work with Martin Demaine), Technical Report CS-98-17, Department of Computer Science, University of Waterloo, CA

Books and Catalogues

- 2010 *2010 Joint Mathematics Meetings Exhibition of Mathematical Art*, edited by Robert Fathauer and Anne Burns, mathartfun
- 2009 *Folded: Paper in Design, Art, Architecture and Industry* by Petra Schidmt and Nicola Stattmann, Birkhäuser
- 2008 *Design and the Elastic Mind* by Paola Antonelli, The Museum of Modern Art, NY
- 2001 *Fragments of Infinity* by Ivars Peterson, John Wiley and Sons, Inc.

Grants and Awards

- 2011 Nevada Film Festival Platinum Reel Winner for “Lino Tagliapietra: Glass Magician”
- 2010 Goerge Pólya Lecturer, Mathematical Association of America
- 2008 Université Libre de Burxelles Gold Medal
 Earle Raymond Hedrick Lecturer, Mathematical Association of America
 Katayanagi Emerging Leadership Prize, Carnegie Mellon University and Tokyo University of Technology
- 2007 International Francqui Chair of Belgium and Francqui Gold Medal
- 2006 Alfred P. Sloan Research Fellowship

- 2005 Esther and Harold E. Edgerton Professor at MIT
- 2004 DOE Early Career Principal Investigator Award
NSF Career Award
Ruth and Joel Spira Award for Distinguished Teaching in EECS at MIT
- 2003 MacArthur Fellowship
NSERC Doctoral Prize and Silver Medal
- 2002 Governor General's Academic Gold Medal

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- 2010 "Balloon Polyhedra" (joint work with Erik Demaine and Vi Hart), in *Shaping Space: A Polyhedral Approach*, M. Senechal and G. Fleck, eds, Second Edition.
"Reconstruction David Huffman's Legacy in Curved-Crease Folding" (joint work with Erik Demaine and Duks Koschitz), in *Origami: Proceedings of the 5th International Conference on Origami in Science, Mathematics and Education*, pages 39-52, Singapore, July 2010, A K Peters.
"Conveyer Belt Puzzle Font" (joint work with Erik Demaine and Belén), in *proceedings of the 9th Gathering for Gardner*, Atlanta GA
"Origami Maze Puzzle Font" (joint work with Erik Demaine and Jason Ku), in *Proceedings of the 9th Gathering for Gardner*, Atlanta GA
- 2009 "Mathematics is Art", *Proceedings of 12th Annual Conferences of BRIDGES: Mathematics, Music, Art, Architecture, Culture*, Baniff Canada,
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- 2006 "Curves in the Sand: Algorithmic Drawing" (joint work with Mirela Damian, Erik Demaine, Vida Dujmović, Dania El-Khechen, Robin Flatland, John Iacono, Stefan Langerman, Henc Meijer, Suneeta Ramaswami, Diane L. Souvaine, Perouz Taslakian, and Godfried T. Toussaint), in *Proceedings of the 19th Canadian Conference on Computational Geometry*
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 “Metamorphosis of the Cube” (joint work with Erik 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*, Miami Beach, FL
- 1998 “Planar Drawings of Origami Polyhedra” (joint work with Erik Demaine), *Proceedings of the 6th Symposium on Graph Drawing*, Lecture Notes in Computer Science 1547, Montréal, CA
 “Planar Drawings of Origami Polyhedra”, (joint work with Erik Demaine) Technical Report CS-98-17, Department of Computer Science, University of Waterloo, CA

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Awards

2011 Nevada Film Festival Platinum Reel Winner for “Lino Tagliapietra: Glass Magician”
Los Angeles New Wave International Film Festival Honorable Mention for “Lino Tagliapietra: Glass Magician”