

# Yotam Gingold

CONTACT Department of Computer Science                      Creativity and Graphics Lab (CraGL)  
**George Mason University**  
4400 University Drive MSN 4A5                      email: [ygingold@gmu.edu](mailto:ygingold@gmu.edu)  
Fairfax, VA 22030                      voice: +1-703-993-9196  
USA                      web: <http://cs.gmu.edu/~ygingold/>

RESEARCH Computer graphics, geometric modeling, interaction, creative tools,  
INTERESTS human computation, crowdsourcing, topology for computation.

EDUCATION **New York University**  
Ph.D. in Computer Science (2009)  
Thesis: 2D-Centric Interfaces and Algorithms for 3D Modeling  
Advisor: Denis Zorin

**New York University**  
M.Sc. equivalency in Computer Science (2005)  
Qualifying exam topic: Topology for Computation  
Advisor: Denis Zorin

**Brown University**  
B.Sc. in Computer Science & Mathematics (2002)

TOTAL CITATIONS 521

H-INDEX 11

		Impact Factor	Accept Rate
REFEREED PAPERS	Jiaxian Yao, Danny M. Kaufman, <b>Yotam Gingold</b> , Maneesh Agrawala. 2017. Interactive Design and Stability Analysis of Decorative Joinery for Furniture. <i>ACM Transactions on Graphics (TOG)</i> 36(2).	4.2	
(TOP VENUES IN FIELD)	<b>Jianchao Tan</b> , Jyh-Ming Lien, <b>Yotam Gingold</b> . 2016. Decomposing Images into Layers via RGB-space Geometry. <i>ACM Transactions on Graphics (TOG)</i> 36(1).	4.2	
	Ming Jin, Daniel Gopstein, <b>Yotam Gingold</b> , Andrew Nealen. 2015. AniMesh: Interleaved Animation, Modeling, and Editing. <i>ACM Transactions on Graphics (TOG)</i> 34(6). Also in <i>Proceedings of SIGGRAPH Asia 2015</i> .	4.2	28%

REFEREED PAPERS (TOP VENUES, CONTINUED)	<p><b>Jianchao Tan</b>, Marek Dvoroznak, Daniel Sykora, <b>Yotam Gingold</b>. 2015. Recovering Painted Strokes from Time-Lapse Paintings. <i>ACM Transactions on Graphics (TOG)</i> 34(4). Also in <i>Proceedings of SIGGRAPH 2015</i>. <b>Invited presentation</b> at <i>FMX 2016 Highlights of SIGGRAPH</i>.</p> <p>Guilin Liu, <b>Yotam Gingold</b>, Jyh-Ming Lien. 2015. Continuous Visibility Feature. In <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i>.</p> <p><b>Songrun Liu</b>, Alec Jacobson, <b>Yotam Gingold</b>. 2014. Skinning Cubic Bézier Splines and Catmull-Clark Subdivision Surfaces. <i>ACM Transactions on Graphics (TOG)</i> 33(6). Also in <i>Proceedings of SIGGRAPH Asia 2014</i>.</p> <p>Peter Borosan, Ming Jin, Doug DeCarlo, <b>Yotam Gingold</b>, Andrew Nealen. 2012. RigMesh: Automatic Rigging for Part-Based Shape Modeling and Deformation. <i>ACM Transactions on Graphics (TOG)</i> 31(6): 198:1–198:9. Also in <i>Proceedings of SIGGRAPH Asia 2012</i>.</p> <p><b>Yotam Gingold</b>, Ariel Shamir, Daniel Cohen-Or. 2012. Micro Perceptual Human Computation for Visual Tasks. <i>ACM Transactions on Graphics (TOG)</i> 31(5):119:1–119:12. Presented at <i>SIGGRAPH 2012</i>.</p> <p><b>Yotam Gingold</b>, Denis Zorin, Takeo Igarashi. 2009. Structured Annotations for 2D-to-3D Modeling. <i>ACM Transactions on Graphics (TOG)</i> 28(5):148:1–148:9. Also in <i>Proceedings of SIGGRAPH Asia 2009</i>.</p> <p><b>Yotam Gingold</b> and Denis Zorin. 2008. Shading-Based Surface Editing. <i>ACM Transactions on Graphics (TOG)</i> 27(3):95:1–95:9. Also in <i>Proceedings of SIGGRAPH 2008</i>.</p> <p><b>Yotam I. Gingold</b>, Philip L. Davidson, Jefferson Y. Han, Denis Zorin. 2006. A Direct Texture Placement and Editing Interface. In <i>Proceedings of the 19th annual ACM Symposium on User Interface Software and Technology (UIST)</i>, Montreux, Switzerland.</p>	<p>4.2 25%</p> <p>28%</p> <p>4.1 18%</p> <p>3.4 24%</p> <p>3.4</p> <p>3.6 25%</p> <p>3.4 17%</p> <p>23%</p>
REFEREED PAPERS (ADDITIONAL)	<p>Qiuying Xu, <b>Songrun Liu</b>, <b>Yotam Gingold</b>, Karan Singh. 2016. Using Isophotes and Shadows to Interactively Model Normal and Height Fields. <i>Computers &amp; Graphics</i>, to appear.</p> <p>Qiuying Xu, <b>Yotam Gingold</b>, Karan Singh. 2015. Inverse Toon Shading: Interactive Normal Field Modeling with Isophotes. In <i>Proceedings of Sketch-Based Interfaces and Modeling. (Best Paper Award)</i></p> <p>Jakub Fišer, Michal Lukáč, Ondřej Jamriška, Martin Čadík, <b>Yotam Gingold</b>, Paul Asente, Daniel Sýkora. 2014. Synthesis of Hand-colored Animations with Temporal Noise Control. <i>Computer Graphics Forum</i> 33(4): 1–10. Also in <i>Proceedings of Eurographics Symposium on Rendering (EGSR) 2014</i>.</p> <p>Alex Shtof, Alexander Agathos, <b>Yotam Gingold</b>, Ariel Shamir, Daniel Cohen-Or. 2013. Geosemantic Snapping for Sketch-Based Modeling. <i>Computer Graphics Forum</i> 32(2):245–253. Also in <i>Proceedings of Eurographics 2013. (Best Paper Award Nominee)</i></p>	<p>1.1</p> <p>51%</p> <p>1.6 37%</p> <p>1.6 25%</p>

REFEREED PAPERS (ADDITIONAL, CONTINUED)	<p>Timothy Gerstner, Doug DeCarlo, Marc Alexa, Adam Finkelstein, <b>Yotam Gingold</b>, Andrew Nealen. 2013. Pixelated Image Abstraction with Integrated User Constraints. <i>Computers &amp; Graphics</i> 37(5):333–347. 1.0</p> <p><b>Yotam I. Gingold</b> and Harry Gingold. 2013. Simulation of Perspective by Nonlinear Transformations. <i>Mathematical Modelling and Analysis</i> 18(3):346–357. 0.5</p> <p><b>Yotam Gingold</b>, Etienne Vouga, Eitan Grinspun, Haym Hirsch. 2012. Diamonds From the Rough: Improving Drawing, Painting, and Singing via Crowdsourcing. In <i>Proceedings of the AAAI Workshop on Human Computation (HCOMP)</i>, Toronto, Canada.</p> <p>Timothy Gerstner, Doug DeCarlo, Marc Alexa, Adam Finkelstein, <b>Yotam Gingold</b>, Andrew Nealen. 2012. Pixelated Image Abstraction. In <i>Proceedings of the International Symposium on Non-Photorealistic Animation and Rendering (NPAR)</i>, Annecy, France. 43%</p> <p>Tino Weinkauff, <b>Yotam Gingold</b>, Olga Sorkine. 2010. Topology-based Smoothing of 2D Scalar Fields with C1-Continuity. <i>Computer Graphics Forum</i> 29(3):1221–1230. Also in <i>Proceedings of EuroVis 2010</i>, Bordeaux, France. 1.5 29%</p> <p>Elif Tosun, <b>Yotam I. Gingold</b>, Jason Reisman, Denis Zorin. 2007. Shape Optimization Using Reflection Lines. In <i>Proceedings of the fifth Eurographics Symposium on Geometry Processing (SGP)</i>, Barcelona, Spain. 28%</p> <p><b>Yotam I. Gingold</b>, Denis Zorin. 2007. Controlled-Topology Filtering. <i>Computer-Aided Design</i> 39(8):676–684. 1.2</p> <p><b>Yotam I. Gingold</b>, Harry Gingold. 2007. Geometrical Properties of a Family of Compactifications. <i>Balkan Journal of Geometry and Its Applications (BJGA)</i> 12(1):44–55. 0.8</p> <p>Eitan Grinspun, <b>Yotam Gingold</b>, Jason Reisman, Denis Zorin. 2006. Computing Discrete Shape Operators on General Meshes. In <i>Computer Graphics Forum</i> 25(3):547–556. Also in <i>Proceedings of Eurographics 2006</i>, Vienna, Austria. <b>(Best Paper Award, 3rd)</b> 1.2 17%</p> <p><b>Yotam I. Gingold</b>. 2006. From Rock, Paper, Scissors to Street Fighter II: Proof By Construction. In <i>Proceedings of the ACM SIGGRAPH Symposium on Videogames (Sandbox)</i>, Boston, MA. <b>(Best Paper Award)</b> 22%</p> <p><b>Yotam I. Gingold</b>, Denis Zorin. 2006. Controlled-Topology Filtering. In <i>Proceedings of the ACM Symposium on Solid and Physical Modeling (SPM)</i>, Cardiff, Wales. <b>(Best Paper Award, 2nd)</b> 38%</p>
OTHER PUBLICATIONS	<p>Shay Sheinfeld, <b>Yotam Gingold</b>, Ariel Shamir. 2016. Video Summarization Using Crowdsourced Causality Graphs. Poster presented at the <i>AAAI Conference on Human Computation and Crowdsourcing (HCOMP)</i>, Austin, USA. Paper presented at the <i>Workshop on Human Computation for Image and Video Analysis (GroupSight @ HCOMP)</i>, <b>Best Paper Award</b>.</p>

OTHER PUBLICATIONS (CONTINUED)	<p>Tim Balint, <b>Yotam Gingold</b>, Jan Allbeck. 2014. Agent Script Generation Using Descriptive Text Documents. Poster presented at the <i>ACM SIGGRAPH Conference on Motion in Games (MIG)</i>, Los Angeles, USA.</p> <p><b>Yotam Gingold</b>, Adrian Secord, Jefferson Y. Han, Eitan Grinspun, Denis Zorin. 2004. A Discrete Model for Inelastic Deformation of Thin Shells. Poster presented at the <i>ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA)</i>, Grenoble, France; also an NYU Computer Science Technical Report.</p>	
GRANTS	<p><b>National Science Foundation</b>, \$549,373, "CAREER: Direct Manipulation of Nonlinear Optimization for Structured Geometry Creation". PI: Yotam Gingold, co-PI's: none.</p> <p><b>National Science Foundation</b>, \$32,000, REU supplement for "CAREER: Direct Manipulation of Nonlinear Optimization for Structured Geometry Creation". PI: Yotam Gingold, co-PI's: none.</p> <p><b>Google Faculty Research Award</b>, \$42,205, "Diamonds from the Rough: Improving Creative Performance via Aggregation". PI: Yotam Gingold, co-PI's: none.</p> <p><b>National Science Foundation</b>, \$70,116, "EAGER: Improving the Quality and Editability of 2D and 3D Shapes via Crowdsourcing and Self-Crowdsourcing". PI: Yotam Gingold, co-PI's: none.</p>	<p>2015–2020</p> <p>2015–2020</p> <p>2014–2015</p> <p>2014–2016</p>
THESES ADVISED	<p><b>Matthew Sabol</b>, M.Sc., "Improving Sculpting via Crowdsourcing"</p> <p><b>Lisa Huynh</b>, M.Sc., "Bijective Deformations in <math>R^n</math> via Integral Curve Coordinates"</p>	<p>2014</p> <p>2013</p>
STUDENT ADVISING (RESEARCH)	<p><b>Doctoral:</b> Songrun Liu, Jianchao Tan, Dawei Du, Joe Graus, Wanwan Li, Ming Jin, Peter Borosan, Timothy Gerstner</p> <p><b>Masters:</b> Lisa Huynh, Matthew Sabol, Songrun Liu, Qiuying Xu, Alex Schtof</p>	
AWARDS	<p><b>George Mason University</b> Teaching Excellence Award</p> <p><b>George Mason University</b> Computer Science Department Outstanding Teaching Award</p> <p><b>National Science Foundation</b> Faculty Early Career Award (CAREER)</p> <p><b>George Mason University</b> Computer Science Department Outstanding Young Faculty Researcher</p> <p><b>Tel-Aviv University</b> Vatat Post-doctoral Research Scholarship</p>	<p>2017</p> <p>2016</p> <p>2015–2020</p> <p>2015</p> <p>2010–2011</p>

AWARDS (CONTINUED)	<p><b>New York University</b> Courant Institute of Mathematical Sciences Janet Fabri Prize for most outstanding dissertation</p> <p><b>New York University</b> Dean's Dissertation Fellowship</p> <p><b>New York University</b> Harold Grad Memorial Prize for outstanding performance and promise</p> <p><b>Highlights of SIGGRAPH, FMX 2016: Jianchao Tan</b>, Marek Dvoroznak, Daniel Sykora, <b>Yotam Gingold</b>. Recovering Painted Strokes from Time-Lapse Paintings. <i>SIGGRAPH 2015/ACM Transactions on Graphics (TOG)</i> 34(4).</p> <p><b>Best Paper:</b> Shay Sheinfeld, <b>Yotam Gingold</b>, Ariel Shamir. 2016. Video Summarization Using Crowdsourced Causality Graphs. <i>Workshop on Human Computation for Image and Video Analysis (GroupSight @ HCOMP)</i></p> <p><b>Best Paper:</b> Qiuying Xu, <b>Yotam Gingold</b>, Karan Singh. 2015. Inverse Toon Shading: Interactive Normal Field Modeling with Isophotes. In <i>Proceedings of Sketch-Based Interfaces and Modeling</i>.</p> <p><b>Best Paper:</b> <b>Yotam I. Gingold</b>. 2006. From Rock, Paper, Scissors to Street Fighter II: Proof By Construction. In <i>Proceedings of the 2006 ACM SIGGRAPH Symposium on Videogames (Sandbox)</i>, Boston, MA.</p> <p><b>Best Paper Nominee:</b> Alex Shtof, Alexander Agathos, <b>Yotam Gingold</b>, Ariel Shamir, Daniel Cohen-Or. 2013. Geosemantic Snapping for Sketch-Based Modeling. <i>Computer Graphics Forum</i>, to appear. Also in <i>Proceedings of Eurographics 2013</i>.</p> <p><b>Best Paper, 2nd Place:</b> <b>Yotam I. Gingold</b>, Denis Zorin. 2006. Controlled-Topology Filtering. In <i>Proceedings of the 2006 ACM Symposium on Solid and Physical Modeling (SPM)</i>, Cardiff, Wales.</p> <p><b>Best Paper, 3rd Place:</b> Eitan Grinspun, <b>Yotam Gingold</b>, Jason Reisman, Denis Zorin. 2006. Computing Discrete Shape Operators on General Meshes. In <i>Proceedings of Eurographics 2006</i>, Vienna, Austria.</p>	<p>2009–2010</p> <p>2008–2009</p> <p>2007–2008</p> <p>2016</p> <p>2016</p> <p>2015</p> <p>2006</p> <p>2013</p> <p>2006</p> <p>2006</p>
EMPLOYMENT	<p><b>George Mason University</b>, Assistant Professor</p> <p><b>Columbia University/Rutgers University</b>, Post-Doctoral Researcher Mentors: Eitan Grinspun, Andrew Nealen</p> <p><b>Tel-Aviv University/Herzliya IDC</b>, Post-Doctoral Researcher Mentors: Daniel Cohen-Or, Ariel Shamir</p> <p><b>JST ERATO Design UI Project</b>, Visiting Researcher Mentor: Takeo Igarashi Conducted research published as “Structured Annotations for 2D-to-3D Modeling” in <i>ACM Transactions on Graphics</i>.</p>	<p>Fall 2012– present</p> <p>Summer 2011– Summer 2012</p> <p>Feb. 2010– Summer 2011</p> <p>Summer 2008</p>

EMPLOYMENT (CONTINUED)	<b>Adobe Systems Creative Technologies Lab</b> , Research Intern Mentor: David Salesin Conducted research towards stroke-by-stroke animation of fonts.	Summer 2006
	<b>gameLab</b> , Software Engineer & Game Design Intern Prototyped game designs for LEGO Fever.	Summer 2005
	<b>Brown University Computer Graphics Group</b> , Researcher Added gestures and metadata filters to ReMarkable Texts, a document annotation system for pen-based computers.	Spring 2003
SELECTED TALKS	<b>SIGGRAPH Asia Course</b> (refereed) "Sketch-based Modeling"	Dec. 2016
	<b>Eurographics Tutorial</b> (refereed) "Sketch-based Modeling"	May 2016
	<b>University of Tokyo</b> , Japan. "Editable Computer Graphics"	Oct. 2015
	<b>Adobe Creative Technology Lab</b> , USA "Editable Computer Graphics"	Aug. 2015
	<b>University of California, Berkeley</b> , USA "Making and Editing Computer Graphics, with and without a Crowd"	Feb. 2015
	<b>SIGGRAPH Asia 2014 Invited Course</b> , China. "Skinning: Real-time Shape Deformation"	Dec. 2014
	<b>City University of Hong Kong</b> , China "Making and Editing Computer Graphics, with and without a Crowd"	Dec. 2014
	<b>Zhejiang University</b> , China "Making and Editing Computer Graphics, with and without a Crowd"	Dec. 2014
	<b>University of Pennsylvania</b> , USA. "Rescuing computers from hard problems in graphics"	Nov. 2013
	<b>University of Tokyo</b> , Japan. "Rescuing computers from hard problems in graphics"	July 2013
	<b>Inria IMAGINE</b> , France. "Rescuing computers from hard problems in graphics"	May 2013
	<b>Virginia Tech, National Capital Region</b> , USA. "Geometric Modeling for Humans"	Nov. 2012
	<b>Adobe Creative Technologies Lab</b> , USA. "Perceptual Micro Human Computation for Visual Tasks"	Dec. 2011
<b>Massachusetts Institute of Technology</b> , USA. "Perceptual Micro Human Computation for Visual Tasks"	Nov. 2011	

SELECTED TALKS (CONTINUED)	<b>Princeton University, USA.</b> “Perceptual Micro Human Computation for Visual Tasks”	Nov. 2011
	<b>Hebrew University of Jerusalem, Israel.</b> “2D-Centric Interfaces and Algorithms for 3D Modeling”	Dec. 2010
	<b>University of Toronto, Canada.</b> “2D-Centric Interfaces and Algorithms for 3D Modeling”	April 2009
	<b>JST ERATO Design UI Project, Japan.</b> “2D-Centric Interfaces and Algorithms for 3D Modeling”	June 2008
TEACHING	<b>George Mason University, Instructor</b> Interactive Graphics and Creativity Support (graduate), Computer Graphics and Game Technologies (graduate), Introduction to Game Design (undergraduate), Game Programming 2 (undergraduate), Introduction to Computer Programming (undergraduate)	Fall 2012– present
	<b>Rutgers University, Instructor</b> Hosted a discussion-based seminar on game design.	Spring 2012
	<b>Tel-Aviv University, Lecturer</b> Co-taught Introduction to Computer Graphics (lecturing, creating homework assignments and the final exam, and grading).	Fall 2010
	<b>New York University, Teaching Assistant</b> Teaching assistant for Numerical Computing, Interactive Graphics (game programming), and UNIX Tools.	Fall 2004, Fall 2007, Spring 2008
	<b>Brown University, Teaching Assistant</b> Teaching assistant for Introduction to Computer Graphics, Introduction to Systems, and Introduction to Software Engineering.	Fall 2001, Spring 2002, Fall 2002

EDITOR, ACM SIGGRAPH (2017 program committee)  
 REFEREE, & ACM SIGGRAPH Asia (2015 program committee, 2016 technical briefs and posters  
 CONFERENCE program committee, 2014 workshops jury)  
 SERVICE AAAI Conference on Human Computation and Crowdsourcing (HCOMP) (2015 PC)  
 Eurographics (2015, 2016 program committee)  
 Computers & Graphics (2015–present, associate editor)  
 Expressive (Sketch-Based Interfaces and Modeling (SBIM); Non-Photorealistic  
 Animation and Rendering (NPAR); Computational Aesthetics (CAe)) (2017 co-  
 chair, 2016 co-chair, 2011–2015 program committee)  
 ACM SIGCHI  
 ACM UIST  
 Computer Graphics Forum  
 IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)  
 IEEE Transactions on Visualization and Computer Graphics (TVCG)  
 Symposium on Geometry Processing (SGP) (2012–2017 program committee)  
 Shape Modeling International (SMI) (2013–2015, 2017 program committee)  
 Geometric & Physical Modeling (GD/SPM) (2015, 2016 program committee)  
 Computer-Aided Design and Computer Graphics (CAD/Graphics) (2013, 2015 PC)  
 3D Vision (3DV) (2015 area chair)  
 Eurographics Symposium on Rendering (EGSR)  
 Pacific Graphics (2012 program committee)  
 Computer-Aided Design (CAD)  
 Graphical Models  
 IEEE Computer Graphics and Applications (CG&A)  
 ACM Sandbox (SIGGRAPH Game Papers) (2007 program committee)  
 Foundations of Digital Games (FDG) (2015 program committee)  
 IEEE Symposium on 3D User Interfaces (3DUI)  
 Journal of Computational and Applied Mathematics (JCAM)  
 Journal of Mechanical Engineering Science  
 National Science Foundation