Yotam Gingold

CONTACT

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RESEARCH INTERESTS

Computer graphics, geometric modeling, interaction, creative tools, color, fabrication, 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)

EMPLOYMENT

George Mason University, Assistant Professor	Fall 2012–present
Columbia University/Rutgers University, Post-Doctoral Researcher Mentors: Eitan Grinspun, Andrew Nealen	Summer 2011–Summer 2012
Tel-Aviv University/Herzliya IDC, Post-Doctoral Researcher Mentors: Daniel Cohen-Or, Ariel Shamir	Feb. 2010–Summer 2011
JST ERATO Design UI Project, Visiting Researcher Mentor: Takeo Igarashi	Summer 2008
Adobe Systems Creative Technologies Lab, Research Intern Mentor: David Salesin	Summer 2006
gameLab, Software Engineer & Game Design Intern	Summer 2005
Brown University Computer Graphics Group, Researcher	Spring 2003

PUBLICATIONS

Advisees in **bold**

TOTAL CITATIONS 621*

* Google Scholar

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		Impact Factor	Accept Rate
REFEREED PAPERS (TOP VENUES IN FIELD)	1 **Songrun Liu**, **Zachary Ferguson**, Alec Jacobson, **Yotam Gingold**. 2017. Seamless: Seam erasure and seam-aware decoupling of shape from mesh resolution. *ACM Transactions on Graphics (TOG)* 36(6). Also in *Proceedings of SIGGRAPH Asia 2017*.	4.1	
	2 Jiaxian Yao, Danny M. Kaufman, **Yotam Gingold**, Maneesh Agrawala. 2017. Interactive Design and Stability Analysis of Decorative Joinery for Furniture. *ACM Transactions on Graphics (TOG)* 36(2). Presented at *SIGGRAPH 2017*.	4.1	
	3 **Jianchao Tan**, Jyh-Ming Lien, **Yotam Gingold**. 2016. Decomposing Images into Layers via RGB-space Geometry. *ACM Transactions on Graphics (TOG)* 36(1). Presented at *SIGGRAPH 2017*.	4.1	
	4 Ming Jin, Daniel Gopstein, **Yotam Gingold**, Andrew Nealen. 2015. AniMesh: Interleaved Animation, Modeling, and Editing. *ACM Transactions on Graphics (TOG)* 34(6). Also in *Proceedings of SIGGRAPH Asia 2015*.	4.2	28%
	5 **Jianchao Tan**, Marek Dvoroznak, Daniel Sykora, **Yotam Gingold**. 2015. Decomposing Time-Lapse Paintings into Layers. *ACM Transactions on Graphics (TOG)* 34(4). Also in *Proceedings of SIGGRAPH 2015*. **Invited for presentation** at *FMX 2016 Highlights of SIGGRAPH*.	4.2	25%
	6 Guilin Liu, **Yotam Gingold**, Jyh-Ming Lien. 2015. Continuous Visibility Feature. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.		28%
	7 **Songrun Liu**, Alec Jacobson, **Yotam Gingold**. 2014. Skinning Cubic Bézier Splines and Catmull-Clark Subdivision Surfaces. *ACM Transactions on Graphics (TOG)* 33(6). Also in *Proceedings of SIGGRAPH Asia 2014*.	4.1	18%
	8 Peter Borosan, Ming Jin, Doug DeCarlo, **Yotam Gingold**, Andrew Nealen. 2012. RigMesh: Automatic Rigging for Part-Based Shape Modeling and Deformation. *ACM Transactions on Graphics (TOG)* 31(6). Also in *Proceedings of SIGGRAPH Asia 2012*.	3.4	24%
	9 **Yotam Gingold**, Ariel Shamir, Daniel Cohen-Or. 2012. Micro Perceptual Human Computation for Visual Tasks. *ACM Transactions on Graphics (TOG)* 31(5). Presented at *SIGGRAPH 2012*.	3.4	
	10 **Yotam Gingold**, Denis Zorin, Takeo Igarashi. 2009. Structured Annotations for 2D-to-3D Modeling. *ACM Transactions on Graphics (TOG)* 28(5). Also in *Proceedings of SIGGRAPH Asia 2009*.	3.6	25%

Refereed Papers (top venues in field, continued)

11	**Yotam Gingold** and Denis Zorin. 2008. Shading-Based Surface Editing. *ACM Transactions on Graphics (TOG)* 27(3). Also in *Proceedings of SIGGRAPH 2008*.	3.4	17%
12	**Yotam I. Gingold**, Philip L. Davidson, Jefferson Y. Han, Denis Zorin. 2006. A Direct Texture Placement and Editing Interface. In *Proceedings of the 19th annual ACM Symposium on User Interface Software and Technology (UIST)*, Montreux, Switzerland.		23%

Refereed Papers (additional)

1	Qiuying Xu, **Songrun Liu**, **Yotam Gingold**, Karan Singh. 2016. Using Isophotes and Shadows to Interactively Model Normal and Height Fields. *Computers & Graphics*, 59.	1.2	
2	Qiuying Xu, **Yotam Gingold**, Karan Singh. 2015. Inverse Toon Shading: Interactive Normal Field Modeling with Isophotes. In *Proceedings of Sketch-Based Interfaces and Modeling (SBIM)*. **(Best Paper Award)**		51%
3	Jakub Fišer, Michal Lukáč, Ondřej Jamriška, Martin Čadík, **Yotam Gingold**, Paul Asente, Daniel Sýkora. 2014. Synthesis of Hand-colored Animations with Temporal Noise Control. *Computer Graphics Forum* 33(4). Also in *Proceedings of Eurographics Symposium on Rendering (EGSR) 2014*.	1.6	37%
4	Alex Shtof, Alexander Agathos, **Yotam Gingold**, Ariel Shamir, Daniel Cohen-Or. 2013. Geosemantic Snapping for Sketch-Based Modeling. *Computer Graphics Forum* 32(2). Also in *Proceedings of Eurographics 2013*. **(Best Paper Award Nominee)**	1.6	25%
5	Timothy Gerstner, Doug DeCarlo, Marc Alexa, Adam Finkelstein, **Yotam Gingold**, Andrew Nealen. 2013. Pixelated Image Abstraction with Integrated User Constraints. *Computers & Graphics* 37(5).	1.0	
6	**Yotam I. Gingold** and Harry Gingold. 2013. Simulation of Perspective by Nonlinear Transformations. *Mathematical Modelling and Analysis* 18(3).	0.5	
7	**Yotam Gingold**, Etienne Vouga, Eitan Grinspun, Haym Hirsch. 2012. Diamonds From the Rough: Improving Drawing, Painting, and Singing via Crowdsourcing. In *Proceedings of the AAAI Workshop on Human Computation (HCOMP)*, Toronto, Canada.		
8	Timothy Gerstner, Doug DeCarlo, Marc Alexa, Adam Finkelstein, **Yotam Gingold**, Andrew Nealen. 2012. Pixelated Image Abstraction. In *Proceedings of the International Symposium on Non-Photorealistic Animation and Rendering (NPAR)*, Annecy, France.		43%
9	Tino Weinkauf, **Yotam Gingold**, Olga Sorkine. 2010. Topology-based Smoothing of 2D Scalar Fields with C1-Continuity. *Computer Graphics Forum* 29(3). Also in *Proceedings of EuroVis 2010*, Bordeaux, France.	1.5	29%
10	Elif Tosun, **Yotam I. Gingold**, Jason Reisman, Denis Zorin. 2007. Shape Optimization Using Reflection Lines. In *Proceedings of the fifth Eurographics Symposium on Geometry Processing (SGP)*, Barcelona, Spain.		28%

Refereed Papers (additional, continued)

11	**Yotam I. Gingold**, Denis Zorin. 2007. Controlled-Topology Filtering. *Computer-Aided Design* 39(8).	1.2	
12	**Yotam I. Gingold**, Harry Gingold. 2007. Geometrical Properties of a Family of Compactifications. *Balkan Journal of Geometry and Its Applications (BJGA)* 12(1).	0.8	
13	Eitan Grinspun, **Yotam Gingold**, Jason Reisman, Denis Zorin. 2006. Computing Discrete Shape Operators on General Meshes. In *Computer Graphics Forum* 25(3). Also in *Proceedings of Eurographics 2006*, Vienna, Austria. **(Best Paper Award, 3rd)**	1.2	17%
14	**Yotam I. Gingold**. 2006. From Rock, Paper, Scissors to Street Fighter II: Proof By Construction. In *Proceedings of the ACM SIGGRAPH Symposium on Videogames (Sandbox)*, Boston, MA. **(Best Paper Award)**		22%
15	**Yotam I. Gingold**, Denis Zorin. 2006. Controlled-Topology Filtering. In *Proceedings of the ACM Symposium on Solid and Physical Modeling (SPM)*, Cardiff, Wales. **(Best Paper Award, 2nd)**		38%

Other Publications

1	Shay Sheinfeld, **Yotam Gingold**, Ariel Shamir. 2016. Video Summarization Using Crowdsourced Causality Graphs. Poster presented at the *AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Austin, USA. Paper presented at the *Workshop on Human Computation for Image and Video Analysis (GroupSight @ HCOMP)*, **Best Paper Award**.	
2	**Yotam Gingold**. 2016. Review of *A sampler of useful computational tools for applied geometry, computer graphics, and image processing* by Daniel Cohen-Or, Chen Greif, Tao Ju, Niloy J. Mitra, Ariel Shamir, Olga Sorkine-Hornung, Hao (Richard) Zhang, and Gil Hoffer. *American Mathematical Society MathSciNet Mathematical Reviews*.	Invited
3	Tim Balint, **Yotam Gingold**, Jan Allbeck. 2014. Agent Script Generation Using Descriptive Text Documents. Poster presented at the *ACM SIGGRAPH Conference on Motion in Games (MIG)*, Los Angeles, USA.	
4	**Yotam Gingold**, Adrian Secord, Jefferson Y. Han, Eitan Grinspun, Denis Zorin. 2004. A Discrete Model for Inelastic Deformation of Thin Shells. Poster presented at the *ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA)*, Grenoble, France; also an NYU Computer Science Technical Report.	

Grants Awarded		Total Amount	Share	My Share	Date
Total		$698,694	100%	$698,694	
1	**National Science Foundation**, "CAREER: Direct Manipulation of Nonlinear Optimization for Structured Geometry Creation". PI: **Yotam Gingold**, co-PI's: none.	$549,373	100%	$549,373	2015–2020
2	**National Science Foundation**, REU supplement for "CAREER: Direct Manipulation of Nonlinear Optimization for Structured Geometry Creation". PI: **Yotam Gingold**, co-PI's: none.	$32,000	100%	$32,000	2015–2020
3	**Adobe**, Unrestricted gift	$14,000	100%	$14,000	2017–2018
4	**Google Faculty Research Award**, "Diamonds from the Rough: Improving Creative Performance via Aggregation". PI: **Yotam Gingold**, co-PI's: none.	$42,205	100%	$42,205	2014–2015
5	**National Science Foundation**, "EAGER: Improving the Quality and Editability of 2D and 3D Shapes via Crowdsourcing and Self-Crowdsourcing". PI: **Yotam Gingold**, co-PI's: none.	$70,116	100%	$70,116	2014–2016
6	**George Mason University**, "Improving Creative Performance via Crowdsourcing". PI: **Yotam Gingold**, co-PI's: none.	$5,000	100%	$5,000	2013

Awards	**George Mason University** Teaching Excellence Award	2017
	George Mason University Computer Science Department Outstanding Teaching Award	2016
	George Mason University Emerging Researcher/Scholar/Creator finalist	2016
	George Mason University Emerging Researcher/Scholar/Creator finalist	2015
	National Science Foundation Faculty Early Career Award (CAREER)	2015–2020
	George Mason University Computer Science Department Outstanding Young Faculty Researcher	2015
	Tel-Aviv University Vatat Post-doctoral Research Scholarship	2010–2011

AWARDS (CONTINUED)

New York University Courant Institute of Mathematical Sciences Janet Fabri Prize for most outstanding dissertation	2009–2010
New York University Dean's Dissertation Fellowship	2008–2009
New York University Harold Grad Memorial Prize for outstanding performance and promise	2007–2008
Highlights of SIGGRAPH, FMX 2016: **Jianchao Tan**, Marek Dvoroznak, Daniel Sykora, **Yotam Gingold**. Recovering Painted Strokes from Time-Lapse Paintings. *SIGGRAPH 2015/ACM Transactions on Graphics (TOG)* 34(4).	2016
Best Paper: Shay Sheinfeld, **Yotam Gingold**, Ariel Shamir. 2016. Video Summarization Using Crowdsourced Causality Graphs. *Workshop on Human Computation for Image and Video Analysis (GroupSight @ HCOMP)*	2016
Best Paper: Qiuying Xu, **Yotam Gingold**, Karan Singh. 2015. Inverse Toon Shading: Interactive Normal Field Modeling with Isophotes. In *Proceedings of Sketch-Based Interfaces and Modeling*.	2015
Best Paper: **Yotam I. Gingold**. 2006. From Rock, Paper, Scissors to Street Fighter II: Proof By Construction. In *Proceedings of the 2006 ACM SIGGRAPH Symposium on Videogames (Sandbox)*, Boston, MA.	2006
Best Paper Nominee: Alex Shtof, Alexander Agathos, **Yotam Gingold**, Ariel Shamir, Daniel Cohen-Or. 2013. Geosemantic Snapping for Sketch-Based Modeling. *Computer Graphics Forum*, 32(2). Also in *Proceedings of Eurographics 2013*.	2013
Best Paper, 2nd Place: **Yotam I. Gingold**, Denis Zorin. 2006. Controlled-Topology Filtering. In *Proceedings of the 2006 ACM Symposium on Solid and Physical Modeling (SPM)*, Cardiff, Wales.	2006
Best Paper, 3rd Place: Eitan Grinspun, **Yotam Gingold**, Jason Reisman, Denis Zorin. 2006. Computing Discrete Shape Operators on General Meshes. In *Proceedings of Eurographics 2006*, Vienna, Austria.	2006

SELECTED TALKS

SIGGRAPH Asia Course (refereed) "Sketch-based Modeling"	Dec. 2016
Eurographics Tutorial (refereed) "Sketch-based Modeling"	May 2016
University of Tokyo, Japan. "Editable Computer Graphics"	Oct. 2015
Adobe Creative Technology Lab, USA "Editable Computer Graphics"	Aug. 2015
American University, USA "Making and Editing Computer Graphics, with and without a Crowd"	Apr. 2015

Selected Talks (continued)

University of California, Berkeley, USA "Making and Editing Computer Graphics, with and without a Crowd"	Feb. 2015
SIGGRAPH Asia 2014 Invited Course, China. "Skinning: Real-time Shape Deformation"	Dec. 2014
City University of Hong Kong, China "Making and Editing Computer Graphics, with and without a Crowd"	Dec. 2014
Zhejiang University, China "Making and Editing Computer Graphics, with and without a Crowd"	Dec. 2014
University of Pennsylvania, USA. "Rescuing computers from hard problems in graphics"	Nov. 2013
University of Tokyo, Japan. "Rescuing computers from hard problems in graphics"	July 2013
Inria IMAGINE, France. "Rescuing computers from hard problems in graphics"	May 2013
Virginia Tech, National Capital Region, USA. "Geometric Modeling for Humans"	Nov. 2012
Adobe Creative Technologies Lab, USA. "Perceptual Micro Human Computation for Visual Tasks"	Dec. 2011
Massachusetts Institute of Technology, USA. "Perceptual Micro Human Computation for Visual Tasks"	Nov. 2011
Princeton University, USA. "Perceptual Micro Human Computation for Visual Tasks"	Nov. 2011
Hebrew University of Jerusalem, Israel. "2D-Centric Interfaces and Algorithms for 3D Modeling"	Dec. 2010
University of Toronto, Canada. "2D-Centric Interfaces and Algorithms for 3D Modeling"	April 2009
JST ERATO Design UI Project, Japan. "2D-Centric Interfaces and Algorithms for 3D Modeling"	June 2008

Professional Memberships

ACM

Editor, Referee, & Conference Service

ACM SIGGRAPH **(2017, 2018 program committee,** 2017 technical briefs and posters program committee**)**
ACM SIGGRAPH Asia **(2015 program committee,** 2016 technical briefs and posters program committee, 2014 workshops jury**)**
AAAI Conference on Human Computation and Crowdsourcing (HCOMP) **(2015 PC)**
Eurographics (**2015, 2016, 2018 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) **(2012–2018 program committee)**
Shape Modeling International (SMI) **(2013–2015, 2017–2018 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

University Service

CS Computing Committee	Fall 2012–present
CS Web Committee	Fall 2013–present
GAME Research Assistant Professor Search Committee	Spring 2014
NSF CAREER mentoring	Spring 2015–present
CS PhD Research Symposium Organizing Committee	Spring 2015–present
CS M.Sc. Admissions Committee	Spring 2017–present
CS Undergraduate Studies Committee	Fall 2017–present
CS Tenure-Track Professor Search Committee	Fall 2017–present

Ph.D. Advisees (in progress)	**Songrun Liu**, "Skinning Parametric Curves and Surfaces". Advanced to candidacy. Expected graduation Fall 2017.	Fall 2012–present
	Jianchao Tan, "Image and Video Decomposition and Editing". Advanced to candidacy.	Fall 2013–present
	Wanwan Li	Fall 2016–present
	Joe Graus	Fall 2016–present
M.Sc. Advisees (graduated)	**Matthew Sabol**, "Improving Sculpting via Crowdsourcing". Graduated May 2014.	Fall 2012–Spring 2014
	Lisa Huynh, "Bijective Deformations in R^n via Integral Curve Coordinates". Graduated December 2013.	Fall 2012–Fall 2013
Undergraduate Mentees	Eugene Raether, *George Mason University*	Summer 2013–Spring 2014
	Bradford Webb, *George Mason University*	Fall 2013–Spring 2014
	Allegra Cohen, *Stanford University*	Summer 2014
	Nick Robinson, *University of Illinois at Urbana-Champaign*	Summer 2014
	Ananya Dhawan, *George Mason University*	Fall 2014–Spring 2015
	Jack Casebeer, *George Mason University*	Summer 2015–Summer 2016
	William Aulson, *George Mason University*	Summer 2015–Spring 2016
	Hussein Zamzani, *George Mason University*	Summer 2015
	Mingrui Han, *George Mason University*	Summer 2015
	Guilherme Schaidhauer, *Unisinos*	Summer 2015
	Zachary Ferguson, *George Mason University*	Fall 2015–Summer 2017
	Tristan Schuler, *George Mason University*	Summer 2017
	William Kang, *Purdue University*	Summer 2017
High School Mentees	Jae Yun, *Thomas Jefferson High School*	Summer 2013
	Chris Kim, *Thomas Jefferson High School*	Summer 2013
	William Xu, *Thomas Jefferson High School*	Summer 2013
	Abhishek Mishra, *Thomas Jefferson High School*	Summer 2014

	Ananya Suri, *Thomas Jefferson High School*	Summer 2015
High School Mentees (continued)	Ruben Ascoli, *Thomas Jefferson High School*	Summer 2017

Ph.D. Committee Membership

Student	Advisor	Department	Graduation
Ian Spiro	Christoph Bregler	NYU Computer Science	Sep. 2013
Hao Sun	Jim X. Chen	GMU Computer Science	Nov. 2014
Zhonghua Xi	Jyh-Ming Lien	GMU Computer Science	May 2017
Guilin Liu	Jyh-Ming Lien	GMU Computer Science	Jul. 2017
George Whelan	Neil Epstein	GMU Mathematics	Apr. 2017
J. Timothy Balint	Jan Allbeck	GMU Computer Science	Jul. 2017
Qi Xing	Qi Wei	GMU Bioengineering	–

Courses Taught and Developed at GMU

CS 325 Introduction to Game Design (undergraduate)

Description: Game design, in various electronic entertainment technologies, involves a diverse set of skills and backgrounds from narrative and art to computer programming. This course surveys the technical aspects of the field, with an emphasis on programming innovative game design.

Development: I revamped this course to heavily emphasize prototyping. The workload increased from 1 prototype to weekly prototypes. I introduced a new textbook, peer learning, flipped classroom discussions, a discussion of diversity or representation in games, and modern programming tools.

CS 662 Computer Graphics and Game Technologies (graduate)

Description: This course provides an introduction to technologies and techniques used in modern computer graphics, games, and animations. The homework consists of several complex and mathematics-heavy programming assignments.

Development: I transitioned to a flipped classroom and introduced reciprocal learning. I revamped the homework assignments and emphasize technological flexibility by using new and wildly different technology platforms for each.

Courses Taught and Developed at GMU (continued)

CS 451 Computer Graphics (undergraduate)

Description: This course provides an introduction to computer graphics principles and practice. The homework consists of six intensive programming assignments.

Development: I revamped the homework assignments, broadening their scope and modernizing them to ensure students are fluent in 2D and 3D computer graphics, including image processing, geometry processing, and rendering. I also introduced peer learning for in-class quizzes.

CS 426 Game Programming II (undergraduate)

Description: This course is a capstone class in our Computer Game for making a functioning and complete game. Students gain experience planning, executing, and presenting the development of a substantial game from start to finish.

Development: I introduced flipped classroom discussions based on a documentary series that parallels students' own progress in the class.

CS 112 Introduction to Computer Programming (undergraduate)

Description: This course introduces students to problem solving through the development of computer programs. The course teaches algorithmic patterns, describing problem solutions in high-level *pseudo code*, and implementing the solutions in a programming language.

Development: I introduced performance-based learning by choreographing students to physically act out computer processes and interpretation of simple programs. I also adapted an exercise from improvisational theater, word-at-a-time storytelling, to have the class perform key-at-a-time programming.

Seminars Created at GMU

CS 795 Interactive Computer Graphics and Creativity Support
I introduced this special topics course to cover research on interactive computer graphics tools for digital painting, sculpting, interior designing, video editing, architecture, etc., intended for non-experts as well as experts. Class is discussion and project-based.

SIGGRAPH Reading Group
I created this ongoing weekly seminar (2014–present) to discuss papers from SIGGRAPH and Transactions on Graphics, the premiere venue for computer graphics research. Every week a student guides attendees through a paper. I act as a naive questioner and deliver mini-tutorials on background material as needed and for context.

EVALUATIONS OF COURSES TAUGHT AT GEORGE MASON UNIVERSITY

Term	Course		Enrol.	Instructor Rating (average)				Course Rating (average)			
				me	dept	VSE	GMU	me	dept	VSE	GMU
Fall 2017	CS 451	Computer Graphics	37	4.83	4.26	4.27	4.43	4.55	4.07	4.01	4.23
Spring 2017	CS 325	Introduction to Game Design	43	4.32	4.21	4.26	4.45	4.04	4.05	4.00	4.26
Spring 2016	CS 426	Game Programming II	7	4.86	4.11	4.25	4.44	4.86	3.97	4.00	4.24
Spring 2015	CS 325	Introduction to Game Design	44	4.74	4.14	4.23	4.42	4.47	3.96	3.98	4.21
Fall 2014	CS 662	Computer Graphics and Game Technologies	15	4.79	4.17	4.24	4.39	4.50	3.91	3.97	4.18
Spring 2014	CS 325	Introduction to Game Design	42	4.97	4.18	4.25	4.41	4.82	3.97	3.99	4.21
Spring 2014	CS 795	Interactive Graphics and Creativity Support	4	4.75	4.18	4.25	4.41	4.75	3.97	3.99	4.21
Fall 2013	CS 112	Introduction to Computer Programming	43	4.50	4.30	4.25	4.38	4.17	4.12	4.01	4.18
Spring 2013	CS 325	Introduction to Game Design	38	4.73	4.29	4.26	4.41	4.48	4.13	4.03	4.22
Fall 2012	CS 662	Computer Graphics and Game Technologies	6	5.00	4.27	4.19	4.37	4.80	4.08	3.94	4.17