

ANN MCNAMARA

CURRICULUM VITAE

Ann McNamara, Ph.D.

Associate Dean For Research, College of Architecture

Associate Professor, Department of Visualization

Presidential Impact Fellow

Fellow, Center for Health and Nature

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Google Scholar Profile: <https://scholar.google.com/Citations?user=hfPIOAYAAAAJ&hl=en>

ACM Digital Library Profile: <https://dl.acm.org/profile/81100069081>

EDUCATION

2020, **Certificate** Data Analytics & Visualization, Rice University

2000, **Ph.D.** Computer Science, University of Bristol, United Kingdom

1996, **BSc.** Computer Science, University of Bristol, United Kingdom

2003, **MA** Education *jure officii*, University of Dublin, Trinity College, Dublin, Ireland

AWARDS & HONORS

2018, Presidential Impact Fellow, Texas A&M University Press Release

2015, College Level Award for Distinguished Teaching, Texas A&M University

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

The Association for Computing Machinery (ACM), ACM CHI & ACM SIGGRAPH, SIGGRAPH, The Institute of Electrical & Electronics Engineers (IEEE) and IEEE Computer Society Member, The Society of Women Engineers (SWE).

RESEARCH

EXTERNAL GRANTS

External research funding	\$2,661,546
Directly Attributable funding	\$1,309,779

THE NATIONAL SCIENCE FOUNDATION:

Augmenting Spatial Cognition Capabilities of Future Workforce to Enhance Work Performance in Altered Environments Using Virtual Reality \$1,201,560
PI: Manish Dixit CoPI: Ann McNamara 2019-2022
The National Science Foundation NSF CNS-1928695

THE NATIONAL SCIENCE FOUNDATION CAREER AWARD:

Advancing Interaction Paradigms in Mobile AR using Eye Tracking \$539,862
Research Experience for Undergraduates (REU Supplement) \$8000
PI: Ann McNamara 2013-2020
The National Science Foundation NSF IIS-1253432

THE NATIONAL SCIENCE FOUNDATION:

Generating Animal Avatar Animation with Specific Identifiable Traits \$499,997
PI: Timothy McLaughlin, Co PI: Ann McNamara 2010-2014
The National Science Foundation NSF IIS-1016795

THE NATIONAL SCIENCE FOUNDATION:

The Effect of Tiled Display on Performance in Multi-Screen Immersive Virtual Environments \$262,172
PI: Ann McNamara, Co PI: Frederic Parke 2008-2012
The National Science Foundation NSF IIS-0917232

PRIVATE GRANTS

- **Department of Defense, Army (Passenger Incorporated):**
Deep Immersion Extended Reality Flight Simulation Development \$150,000
Co-PIs: Darren Hartl & Ann McNamara 2020-2021

INTERNAL GRANTS

Internal research funding	\$468,000
Directly Attributable funding	\$135,200

TEXAS A&M UNIVERSITY SCHOOL OF INNOVATION

Innovation X Project Grant: Real Time Analytics for Data Visualization \$20,000
 PI: Ann McNamara 2021-2022

TEXAS A&M UNIVERSITY SCHOOL OF INNOVATION

Innovation X Project Grant: Human Brain Processes During Complex Locomotor Navigation \$20,000
 Team Contributor: Ann McNamara 2021-2022

TEXAS A&M UNIVERSITY:

Secure Technologies for Aggie Researchers (STAR) \$3,000
 PI: Ann McNamara 2021-2022

TEXAS A&M UNIVERSITY INSTITUTE FOR DATA SCIENCE:

Data Science Course Development Fund \$15,000
 PI: Ann McNamara 2021-2022

TEXAS A&M UNIVERSITY:

Presidential Impact Award \$75,000
 PI: Ann McNamara 2018-2021

TEXAS A&M UNIVERSITY TRIADS (T3):

Walk A Mile In Their Shoes: Using Virtual Reality
 To Increase Empathy & Improve Transport Safety \$30,000
 PIs: Ann McNamara, Tara Goddard 2020-2022

TEXAS A&M UNIVERSITY TIER ONE PROGRAM (TOP):

SimCRAFT: A Virtual Design Platform for Experimental Learning and
 Collaborative Engineering Design \$300,000
 PIs: Gregory Chamitoff, Sharath Grimaji, Ann McNamara 2017-2021

TEXAS A&M CENTER FOR HEALTH AND NATURE:

The Impact of Virtual Reality/Biophillic Environment on distress
 and pain in Oncology Patients \$25,000
 PIs: Renee Stubbins, Ashley Verzwylt, Xiaohui Xu, Ann McNamara 2019-2020

TEXAS A&M UNIVERSITY:

ITS Faculty Institute: Flipping Your Course \$2,000
 PI: Ann McNamara 2013

PENDING GRANTS

- **EAGER: SAI: Exploring Time Production Impacts of Ultra-High-Speed Travel in Hyperloop and Maglev-based Rapid Transit Infrastructure Systems Using Virtual Reality** \$300,000
 PI: Manish Dixit, Co-PI: Ann McNamara *submitted March 2021*
- **DOC-National Institute of Standards and Technology, DAAR: Drone-Augmented AR for Firefighting Missions and Training** \$1,621,471.00
 PI: Radu Stoleru, Co-PIs: Ann McNamara, I-Hong Hou *submitted January 2021*

PUBLICATION RECORD

GOOGLE SCHOLAR: [Ann McNamara, Google Scholar Page](#)

CITATION COUNTS: A total of 852 Citations with a **h-index of 16** and an i10 index of 21 as of July 1, 2021

SUMMARY: 6 peer-reviewed journal articles (with an additional one under review); 26 peer reviewed full-papers in conference proceedings (three currently under review), 19 peer-reviewed conference presentations (Extended Abstracts) and 11 peer-reviewed Educational publications.

PUBLICATIONS WITH STUDENTS:

* indicates *graduate student* at time of publication

** indicates *undergraduate student* at time of publication

JOURNAL ARTICLES

- J1. Mason Smith*, Hannah Park*, Manish Dixit, Ann McNamara, 2021, Time Production Impacts, IEEE Transactions on Visualization and Computer Graphics, **[Under Review]** 2021
- J2. Reynold Bailey*, Ann McNamara, Nisha Sudarsanam, and Cindy Grimm. Subtle gaze direction, ACM Transactions on Graphics 28, 4, Article 100, (September 2009), 1-14
Acceptance Rate 15%, Impact Factor 6.495, [Citations 96, Downloads 1693] 2009
- J3. Ann McNamara, Reynold Bailey*, and Cindy Grimm. 2009. Search task performance using subtle gaze direction with the presence of distractions. ACM Transactions on Applied Perception, 6, 3, Article 17 (September 2009), 1-19, **Acceptance Rate 12.8%, Impact Factor 2.12**, [Citations 18, Downloads 459] 2009
- J4. Ann McNamara, Exploring visual and automatic measures of perceptual fidelity in real and simulated imagery, ACM Transactions on Applied Perception, 3(3), 217-238
Acceptance Rate 11.7%, Impact Factor 1.167, [Citations 7, Downloads 558] 2006
- J5. Ann McNamara, Visual Perception in Realistic Image Synthesis, Computer Graphics Forum, 20: 211-224
Acceptance Rate 31.0%, Impact Factor 2.116, [Citations 91] 2002
- J6. Ann McNamara, Alan Chalmers, Tom Troscianko, Iain Gilchrist. Comparing Real & Synthetic Scenes using Human Judgments of Lightness, In Rendering Techniques 2000: 207-218, **Acceptance Rate 39.2%**, [Citations 15, Downloads 215] 2000

- J7. Ann McNamara, Alan Chalmers, Tom Troscianko, Erik Reinhard, *Fidelity of Graphics Reconstructions: A Psychophysical Investigation*, In *Rendering Techniques 1998*: 237-246, **Acceptance Rate 33.75%**, [Citations 4, Downloads 366] 1998

CONFERENCE PROCEEDINGS (Peer Reviewed Full Papers)

- C1. Rennee Stubbins, Ashley Verzwylt, Ann McNamara, Xiaohui Xu, Eric Bernicker, *Nature and Human Well-Being*, *University of Washington Earthlab, Nature and Health Conference, [To Appear]* 2021
- C2. Hannah Park*, Manish Dixit, Nafiseh Faghihi*, Ann McNamara and Jyotsna Vaid, *Understanding Spatial Abilities and Spatial Strategy Under Extreme Visual and Gravitational Environments*, *ASCE Earth & Space* 2021.
- C3. Ann McNamara, Katherine Boyd*, Joanne George*, Somyung Oh*, Weston Jones*, Annie Suther*, *Information Presentation in Virtual Reality*, 2019 *IEEE Conference on Virtual Reality and 3D User Interfaces*, [Citations 2, Downloads 235] 2019
- C4. Ann McNamara, 2019, *Information Presentation in Virtual Reality*, *Grace Hopper Celebration of Women in Computer Science 2019*, Houston, TX 2019
- C5. Ann McNamara, Chethna Kabeerdoss*, 2018, *Mobile Eye Tracking for Augmented Reality*, *Grace Hopper Celebration of Women in Computer Science 2018*, Houston, TX 2018
- C6. Ann McNamara, Chethna Kabeerdoss*, and Conrad Egan*. 2015. *Mobile User Interfaces based on User Attention*. In *Proceedings of the 2015 Workshop on Future Mobile User Interfaces (FutureMobile UI '15)*. ACM, New York, NY, USA [Downloads 332] 2015
- C7. Danielle Ellyse Crowley**, Robin R. Murphy, Ann McNamara, Tim D. McLaughlin, and Brittany Anne Duncan*, *AR browser for points of interest in disaster response in UAV imagery*, In *CHI 2014 Extended Abstracts on Human Factors in Computing Systems (CHI EA '14)*. ACM, New York [Citations 1, Downloads 291] 2014
- C8. Su Xue*, Minghui Tan*, Ann McNamara, Julie Dorsey, Holly E. Rushmeier, *Exploring the use of memory colors for image enhancement*, *SPIE Human Vision and Electronic Imaging 2014*, San Francisco, USA [Citations 16] 2014
- C9. Ann McNamara, *New Paradigms for Mobile Augmented Reality*, *Grace Hopper Celebration of Women in Computer Science* 2013
- C10. Thomas Booth*, Srinivas Sridharan*, Ann McNamara, Cindy Grimm, and Reynold Bailey. 2013. *Guiding attention in controlled real-world environments*. In *Proceedings of the ACM Symposium on Applied Perception (SAP '13)* [Citations 20, Downloads 213] 2013
- C11. Donghui Han*, Shu-wei Hsu*, Ann McNamara, and John Keyser. 2013. *Believability in simplifications of large scale physically based simulation*. In *Proceedings of the ACM Symposium on Applied Perception (SAP '13)*. ACM, New York, NY, USA, 99-106. [Citations 5, Downloads 158] 2013
- C12. Ann McNamara, *Gaze informed View Management in Mobile Augmented Reality*, *Proceedings of the SIGCHI Workshop on Gaze Interaction in a Post-WIMP world*. ACM, New York, NY, USA 2013

- C13. Ann McNamara, Thomas Booth*, Srinivas Sridharan*, Stephen Caffey, Cindy Grimm, and Reynold Bailey. 2012. *Directing gaze in narrative art*. In *Proceedings of the ACM Symposium on Applied Perception, SAP 2012*. ACM, New York, NY, USA, 63-70, [Citations 13, Downloads 352] 2012
- C14. Reynold Bailey, Ann McNamara, Aaron Costello*, Srinivas Sridharan*, and Cindy Grimm. 2012. *Impact of subtle gaze direction on short-term spatial information recall*. In *Proceedings of the Symposium on Eye Tracking Research and Applications (ETRA '12)*, Stephen N. Spencer (Ed.). ACM, New York, NY, USA, 67-74, [Citations 10, Downloads 346] 2012
- C15. Srinivas Sridharan*, Reynold Bailey, Ann McNamara, and Cindy Grimm. 2012. *Subtle gaze manipulation for improved mammography training*. In *Proceedings of the Symposium on Eye Tracking Research and Applications (ETRA '12)*, Stephen N. Spencer (Ed.). ACM, New York, NY, USA, 74-82, [Citations 16, Downloads 345] 2012
- C16. Ann M. McNamara. 2011. *Enhancing art history education through mobile augmented reality*, *Proceedings of the 10th International Conference on Virtual Reality Continuum and Its Applications in Industry (VRCAI '11)*. ACM, New York, NY, USA, 507-512, [Citations 5, Downloads 657] 2011
- C17. Ann M. McNamara, Frederic Parke, and Mat Sanford*. 2011. *Evaluating performance in tiled displays: navigation and way finding*, In *Proceedings of the 10th International Conference on Virtual Reality Continuum and Its Applications in Industry (VRCAI '11)*. ACM, New York, NY, USA, 483-490, [Citations 4, Downloads 275] 2011
- C18. Ann McNamara, *View Management: Developing Eye-tracking Based Mobile Augmented Reality*, In *Proceedings of the 2011 10th IEEE International Symposium on Mixed and Augmented Reality (ISMAR '11)*. IEEE Computer Society, Washington, DC, USA 2011
- C19. Meredith McLendon*, Ann McNamara, Tim McLaughlin, and Ravindra Dwivedi. 2010. *Using eye tracking to investigate important cues for representative creature motion*. In *Proceedings of the 2010 Symposium on Eye-Tracking Research and Applications, 38; Applications (ETRA '10)*. ACM, New York, NY, USA, 85-88, [Downloads 282] 2010
- C20. Ann McNamara, Reynold Bailey*, and Cindy Grimm. 2008. *Improving search task performance using subtle gaze direction*, In *Proceedings of the 5th symposium on Applied perception in Graphics and Visualization (APGV '08)*. ACM, New York, NY, USA). 51-56, [Citations 15, Downloads 362] 2008
- C21. Ann McNamara, *Exploring perceptual equivalence between real and simulated imagery*, *ACM Applied Perception in Graphics and Visualization*, ACM, New York, NY, USA (now the ACM Symposium on Applied Perception), [Citations 12, Downloads 387] 2005
- C22. Yann Morvan* and Ann McNamara, *Assessing the visual perception impact of indirect lighting*. In *Proceedings of the 2003 Eurographics Ireland Workshop*. Eurographics Ireland 87-103 2003
- C23. Rachel McDonnell* and Ann McNamara, *Application of the Golden Ratio to 3D Facial Models*, In *Proceedings of the 2003 Eurographics Ireland Workshop*. Eurographics Ireland 39-51 (Best Paper Award) 2003
- C24. Carol O'Sullivan, John Dingliana*, Gareth Bradshaw* and Ann McNamara, *Eye-tracking for Interactive Computer Graphics*, *European Conference on Eye Movements (ECEMo1)* pp-S45, 2001

- C25. Tom Troscianko, Ann McNamara, Alan Chalmers, Measures of Lightness Constancy as an index to the perceptual fidelity of computer graphics., European Conference on Visual Perception 1998, Perception Volume 27 Supplement, 22-25 1998
- C26. Light and the Culture of Medieval Pottery, Ann McNamara, Alan Chalmers, Duncan Brown, In Proceedings of the International Conference on Medieval Archaeology, Brugge, Belgium, October 1997, 54-60 1997

EXTENDED ABSTRACTS (Peer Reviewed Conference Presentations)

- EA1. Grigoris Daskalogrigorakis, Ann McNamara, Katerina Mania, Holo-Box: Level-of-detail Glanceable Interfaces for Augmented Reality, ACM SIGGRAPH 2021 Posters, 2021
- EA2. Ann McNamara, Ranjana Mehta, Additional Insights: Using Eye Tracking and Brain Sensing in Virtual Reality, Extended Abstracts of the 2020 ACM CHI Conference on Human Factors in Computing, [Downloads 163] 2020
- EA3. Ann McNamara, Katherine Boyd*, Joanne George*, David Oh*, Weston Jones*, Annie Suther*, Information Presentation in Augmented and Virtual Reality, 2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR), 1-2, 2019. [Downloads 193] 2019
- EA4. Ann McNamara, Somyung Oh*, Sarah Suther*, Katherine Boyd*, and Ryan Sharpe*. Using eye tracking to improve information retrieval in virtual reality. In Adjunct Proceedings of the IEEE International Symposium for Mixed and Augmented Reality, (ISMAR), 2018 [Citations 1, Downloads 279] 2018
- EA5. Mason Smith*, Ann McNamara, Gaze Direction in a Virtual Environment via a Dynamic Full-Image Color Effect, IEEE Conference on Virtual Reality and 3D User Interfaces (VR), 2018 [Citations 2, Downloads 202] 2018
- EA6. Ann McNamara, Chethna Kabeerdoss*, Mobile Augmented Reality: Placing Labels Based on Gaze Position. IEEE International Symposium for Mixed and Augmented Reality, (ISMAR) 2016 [Citations 5, Downloads 513] 2016
- EA7. Ann McNamara, Eye-tracking Mobile Augmented Reality, Proceedings of AR and VR Conference: Perspectives on Business Realities, Dublin, Ireland 2016
- EA8. Ann McNamara, Laura Murphy*, Conrad Egan*, Investigating the use of eye-tracking for view management. SIGGRAPH Posters, ACM SIGGRAPH 2014 [Downloads 183] 2014
- EA9. Ann McNamara, Frederic I. Parke, Mat Sanford*, Garrett Broussard*, Kourtney Kebedoux*. Investigating spatial understanding in multi-component displays. In Proceedings of the ACM Symposium on Applied Perception (SAP '13). ACM, New York, NY, USA. [Downloads 73] 2013
- EA10. Su Xue*, Ann McNamara*, Holly E. Rushmeier, Julie Dorsey, Crowd sourcing memory colors for image enhancement. SIGGRAPH Talks, ACM SIGGRAPH 2012, ACM, New York, NY, USA. [Citations 1, Downloads 213] 2012

- EA11. Srinivas Sridharan*, Reynold Bailey, Ann McNamara, and Cindy Grimm. 2011. *Subtle gaze manipulation for improved mammography training*. Proceedings of the ACM SIGGRAPH Symposium on Applied Perception in Graphics and Visualization (APGV '11), Stephen N. Spencer (Ed.). ACM, New York, NY, USA, 112, 2011 [Citations 2, Downloads 141] 2011
- EA12. Ann McNamara, Frederic I. Parke, Mat Sanford*, "Seams" to make no difference. SIGGRAPH Posters, ACM SIGGRAPH 2011, ACM, New York, NY, USA. [Downloads 68] 2011
- EA13. Reynold J. Bailey*, Ann McNamara, Cindy Grimm, Aaron Costello, *Impact of subtle gaze direction on short-term spatial information recall*. SIGGRAPH Talks, ACM SIGGRAPH 2011, (Acceptance Rate 20%)[Citations 1, Downloads 171] 2011
- EA14. Meredith McLendon*, Ann McNamara, Tim McLaughlin, Ravindra Dwivedi*, *Lions and tigers and bears: investigating cues for expressive creature motion*, SIGGRAPH Posters, ACM SIGGRAPH 2010, (Acceptance Rate 20%)[Citations 1, Downloads 178] 2010
- EA15. Megha Davalath*, Mat Sanford*, Anton Agana*, Ann McNamara, Frederic I. Parke, *Evaluating performance in immersive displays*. SIGGRAPH Posters, ACM SIGGRAPH 2010, (Acceptance Rate 20%)[Downloads 170] 2010
- EA16. Anton Agana*, Megha Davalath*, Ann McNamara, Frederic I. Parke. *The effect of tiled display on performance in multi-screen immersive virtual environments*, IEEE Conference on Virtual Reality and 3D User Interfaces (VR), 2010 [Downloads 263] 2010
- EA17. Meredith McLendon*, Ann McNamara, Tim McLaughlin, Ravindra Dwivedi, *Connecting the dots: discovering what's important for creature motion*. SIGGRAPH Talks, ACM SIGGRAPH 2009, (Acceptance Rate 20%) [Downloads 270] 2009
- EA18. Reynold J. Bailey*, Ann McNamara, Nisha Sudarsanam*, Cindy Grimm: *Subtle gaze direction*. SIGGRAPH Sketches, ACM SIGGRAPH (Acceptance Rate 20%) [Citations 3] 2007
- EA19. Reynold J. Bailey*, Ann McNamara, Nisha Sudarsanam*, Cindy Grimm: *Subtle gaze direction*. SIGGRAPH Posters, ACM SIGGRAPH 2007 2007
- EA20. Ann McNamara, Alan Chalmers, Tom Troscianko, *Evaluating Image Quality Metrics vs. Human Evaluation*. SIGGRAPH Sketches, ACM SIGGRAPH 2000, (Acceptance Rate 20%) 2000

EDUCATIONAL PUBLICATIONS (Peer-Reviewed)

ACM SIGGRAPH COURSES are learning sessions in which experts from all areas of computer graphics and interactive techniques share their knowledge of industry or academia. Course presenters distill key concepts and ideas into self-contained lessons. **The acceptance rate for ACM COURSES is approximately 21%.**

- SC1. Ann McNamara, Derya Akleman, *Up and Running with R: Analytics & Visualization*, Workshop, Grace Hopper Celebration of Women in Computer Science, 2021
- SC2. Ann McNamara, *An Introduction to Python Scripting in Autodesk Maya*, in ACM SIGGRAPH Courses, (SIGGRAPH 2021), 2021

- SC3. Ann McNamara, Katerina Mania and Andrew Polychronakis* 2021, *Gaze Aware Displays and Interaction*, in ACM SIGGRAPH Courses (SIGGRAPH 2021), 2021
- SC4. Ann McNamara, *Eye Tracking and Virtual Reality*, in ACM SIGGRAPH ASIA 2019, 34 pages [Citations 1, Downloads 321] 2019
- SC5. Ann McNamara, Katerina Mania, *Attention Aware Graphics in Rendering, Mobile and Games*. In ACM SIGGRAPH 2014 Courses, ACM, New York, NY, USA, 119 pages [Citations 6, Downloads 1494] 2014
- SC6. Ann McNamara, *A Very Basic Introduction to GLKit for iOS 5: Getting Up and Running*, In ACM SIGGRAPH 2012 Studio Courses, SIGGRAPH Mobile Workshops. [no data available] 2012
- SC7. Ann McNamara, Katerina Mania, and Diego Gutierrez. 2011. *Perception in graphics, visualization, virtual environments and animation*. In SIGGRAPH Asia 2011 Courses (SIGGRAPH Asia 2011). ACM, New York, NY, USA, Article 17, 137 pages. [Citations 16, Downloads 791] 2019
- SC8. Ann McNamara, Jose Guinea Montalvo*, Dave Walvoord, and Marilyn Friedman. *Revolution - evolution: the collaboration forges on*, In ACM SIGGRAPH 2011 Studio Talks (SIGGRAPH '11). Association for Computing Machinery, New York, NY, USA, Article 5, 1 [Downloads 177] 2011
- SC9. Ann McNamara, Katerina Mania, Marty Banks, and Christopher Healey. 2010. *Perceptually Motivated Graphics, Visualization and 3D Displays*. In ACM SIGGRAPH 2010 Courses (SIGGRAPH 2010). ACM, New York, NY, USA, Article 7, 159 pages.[Citations 6, Downloads 2354] 2010
- SC10. Ann McNamara, Alan Chalmers, Scott Daly, Karol Myszkowski, and Holly Rushmeier. 2001. *Seeing is Believing: Reality Perception in Modeling, Rendering, and Animation*. In ACM SIGGRAPH 2001 Courses (SIGGRAPH 2001). ACM, New York, NY, USA, Article 44, 227 pages [Citations 11] 2001
- SC11. Ann McNamara, Alan Chalmers, Scott Daly, Karol Myszkowski & Tom Troscianko. 2000. *Image Quality Metrics*. In ACM SIGGRAPH 2000 Courses (SIGGRAPH 2000). ACM, New York, NY, USA, 2000, 117 pages [Citations 39] 2000

OTHER INTERNATIONAL PEER REVIEWED WORK

- O1. Ann McNamara, *Ready, Steady, Siggraph*. In ACM SIGGRAPH Panels 2014 & 2015
- O2. Carol LaFayette, Fred Parke, Ann McNamara, and Philip Galanter, *I'm not there: extending the range of human senses to benefit wildlife corridors*. In ACM SIGGRAPH 2009 Art Gallery (SIGGRAPH '09), Overall conference acceptance: 18% Martino (Ed.) ACM, New York, NY, USA, Article 23 [Citations 1, Downloads 99] 2009
- O3. Ann McNamara, *Realism in Computer Graphics*, ERCIM News. 2003, the publication of the European Research Consortium for Informatics and Mathematics: Special Theme: Computer Graphics & Visualization 2003
- O4. John Dingliana*, Ann McNamara & Carol O'Sullivan (Editors), *Proceedings of the Eurographics Ireland Workshop*, 2002

- O5. *Application of Visual Perception to Computer Graphics*, Eurographics-Ireland, the third Irish workshop on Computer Graphics, Dublin, Ireland 2002
- O6. Ann McNamara & Carol O'Sullivan (Editors), *Proceedings of the ACM SIGGRAPH/Eurographics Campfire on Perceptually Adaptive Graphics*, Snowbird, Utah, 2001

SYMPOSIUM ON APPLIED PERCEPTION

Co-Founder of the first ACM conference on Applied Perception in Graphics and Visualization; the success of this new conference evolved into the Symposium on Applied Perception (ACM Symposium on Applied Perception) and spun-off a journal (ACM Transactions on Applied Perception). The proceedings of the first symposium in 2004 has been downloaded over 19,500 times.

Victoria Interrante, Ann McNamara, Heinrich H. Bulthoff, Holly E. Rushmeier: *Proceedings of the 1st Symposium on Applied Perception in Graphics and Visualization*, APGV 2004, Los Angeles, California, USA, August 7-8, 2004. ACM International Conference Proceeding Series 73, ACM 2004, ISBN 1-58113-914-4 [Citations 556, Downloads 19,510] 2004

INVITED TALKS (Selected)

- I1. *The Technical University of Dublin* July 2021
The Virtual Interactive Research Lab (VIRaL) at TU Dublin is a cutting edge virtual, and augmented, reality research and development environment, in a large dedicated space. I was invited as a speaker to present on my current research.
- I2. *The Future of Virtual Reality (Panelist), ARVR Innovate* May 2021
Invited Speaker at the 8th International ARVR Innovate Conference and Expo, where AR and VR Get Down to Business. User application studies, great international speakers, and an expo featuring the latest AR and VR technology. This conference is dedicated to address the commercial dimensions of augmented reality and virtual reality. I was invited as a panelist on the Future of Virtual Reality.
- I3. *Texas A&M Transformation Teaching and Learning Conference (TTLC)* April 2021
The Transformational Teaching and Learning Conference celebrates and promotes a culture of teaching excellence and innovation at Texas A&M University. I presented a talk describing the restructuring of an introductory programming course entitled *Teaching Coding with 3D Modeling & Animation*.
- I4. *EyeTrack Texas A&M*, College Station, TX April 2019
EyeTrack Texas A&M was a half-day workshop where attendees had the opportunity to learn from engaging speakers, network and talk all things eye tracking. This event was sponsored by the Psychology Department Organization of Graduate Students and Department of Psychological & Brain Science.
- I5. *South By South West (SXSW)*, Austin, TX March 2018
Future Society: AI & Generative System Austin TX Covered by *The Eagle*, KBTX, and the *Austin American Statesman*. Emmy-winning TV host and digital lifestyle expert Mario Armstrong will join Texas A&M University artificial technology, interactive art and augmented reality faculty experts to discuss how the digital revolution is reshaping society and what the implications are for future generations. Armstrong

will guide Texas A&M College of Architecture professors Philip Galanter and Ann McNamara and Texas A&M Soft Interaction Lab Director Dr. Jinsil Hwaryoung Seo through a sprawling discussion that will feature predictions for the future of machine learning, networked knowledge and human creativity in an increasingly automated world.

NEWS COVERAGE:

- Using AI to connect physical and virtual worlds KBTX, 2018
- Technology knocks some sense into the future Austin American Statesmen, 2018

I6. Dell Technology Forum, Dallas, TX September 2018
 Higher Education: Innovations in Immersive Learning, Dallas, TX Invited Speaker at Dell Technology Forum in Dallas, led to collaborative white paper entitled *Expanding the horizons of augmented and virtual reality in higher education*

I7. Immersive Technology Conference, Houston, TX November 2017
 Invited Speaker at the *Immersive Technology Conference*, University of Houston, Houston (2017)) The Immersive Technology Conference is an annual event specifically created to foster the use of Virtual Reality, Augmented Reality, and Mixed Reality technologies for non-gaming/non-entertainment applications. Our event focused on the R (reality) of VR and AR technologies.

I8. ARVR Innovate May 2017
 Invited Speaker at the 4th International ARVR Innovate Conference and Exhibition. User application studies, great international speakers, and an expo featuring the latest AR and VR technology. This conference is dedicated to address the commercial dimensions of augmented reality and virtual reality.

NEWS COVERAGE:

- Radio Telefis Eireann: *Why Virtual Reality is not like the movies.*
- College of Architecture.

I9. Immersive Technology Conference, Houston, TX November 2016
 Invited Speaker at the *Immersive Technology Conference*, University of Houston, Houston (2016, 2017) The Immersive Technology Conference is an annual event specifically created to foster the use of Virtual Reality, Augmented Reality, and Mixed Reality technologies for non-gaming/non-entertainment applications. Our event focused on the R (reality) of VR and AR technologies.

MEDIA COVERAGE

About My Work

- M1. *New Roof Top Garden for Cancer Treatment* Houstonia Magazine, 2020
- M2. *Roof garden serves as oasis for patients at Houston Methodist Hospital* PRISM, 2020
- M3. *Texas A&M Lab goes to Hollywood* The Eagle, 2020
- M4. *Going to see Toy Story 4? You'll also see Aggies in the credits* KBTX, 2019
- M5. *Bringing the Outside In* Houston Methodist Magazine, 2019

- M6. Can exposure to nature alleviate pain, distress during chemotherapy? My San Antonio, 2019
- M7. Does the view from the chemo room make a difference? KSAT, 2019
- M8. Seeking Nature in the Hospital Texas Medical Center, 2019
- M9. A garden in the sky lifts patients' spirits at Houston Methodist Texas Medical Center, 2019
- M10. Researchers Investigate Impact of Actual
and Virtual Nature on Cancer Patients Houston Methodist, 2019
- M11. To Aggieland and Beyond The Battalion, 2019
- M12. Houston Methodist is tapping into
virtual reality technologies to ease the pain for cancer patients Innovation Map, 2019
- M13. Technology knocks sense into the future Austin-American Statesman, 2018
- M14. Texas A&M Panels look to the Future at SXSW The Eagle, 2018
- M15. Using AI to connect physical virtual worlds KBTX, 2018
- M16. 21 Scholars named Presidential Impact Fellows The Eagle, 2018
- M17. Texas A&M's South by Southwest panels look to the future The Eagle, 2018
- M18. Texas A&M Viz Lab graduate working to make virtual reality more accessible The Eagle 2015
- M19. Professor gets avatar grant The Eagle, 2014
- M20. Aggies get to spread wings on animated film Free Birds The Eagle, 2013
- M21. I'm Not There: Soundscapes of Animals The Sensational Exhibition Survey, 2011
- M22. Immersive Exhibit Redefines Birds-Eye View ACM TechNews, 2009
- M23. A new virtual environment that allows humans to see and hear extreme ranges Futurity, 2009
- M24. Tech gives humans animal senses BBC News, 2009
- M25. The world through their eyes Wired Campus, 2009

Authored by Me

- A1. Why Virtual Reality is not like the Movies, RTE, 2018
Radio Telefis Eireann (RTE) (The Equivalent of NPR in Ireland)
- A2. How does a computer know where you are looking The Conversation, 2016
(Picked up by many news outlets)

TEACHING

TEACHING AWARDS

College Level Award for Distinguished Teaching (2015),
Texas A&M University

\$5000.00

Each fall, The Association of Former Students honors outstanding faculty members for their dedication to teaching. Since the program's inception in 1982, these achievement awards recognize, encourage, and reward the superior classroom teachers— those individuals whose command of their respective discipline, teaching methodologies, pervasive caring, communication skills, and commitment to the learning process exemplify the meaning of teacher/mentor in its highest sense. This award is designed to distinguish those teachers who maintain high expectations of their students and who ensure academic rigor in their courses. Distinguished teachers recognize their responsibility in motivating and contributing to the overall development of the student.

TEACHING RELATED GRANTS

TG1. Innovation-X Grant Program (2021)

Texas A&M University, School of Innovation,

\$20,000.00

The Innovation[X] Program proceeds from the basic idea that productive multidisciplinary collaboration is fundamental to solving big problems. To that end, we have developed a program that brings together faculty, graduate, and undergraduate students from across campus to work on year-long, research-based projects that address real-world issues.

Virtual Reality (VR) offers much potential for data analytics visualization. By immersing ourselves in the data, we can take advantage of the greater space on offer, more natural interactions, and viscerally analyze multi-dimensional data. Students will work in small interdisciplinary teams to explore the viability of VR as an interactive medium for Data Analytics and Visualization. Real-time interaction in 3D will set these projects apart from the current mainstream applications.

TG2. Data Science Course Development Grant Program (2021)

Texas A&M University, Institute for Data Science (TAMIDS),

\$15,000.00

The Texas A&M Institute of Data Science (TAMIDS) has announced **7 faculty awards** that will support creation of new courses in Data Science. The TAMIDS Data Science Course Development Program, offered in association with the Texas A&M Center for Teaching Excellence, received 22 submissions from faculty drawn from 13 Colleges, **acceptance rate 31.8%**. The quality of the submissions was extraordinarily high and not all worthy proposals could be supported from the available funding in this round of the program. Each award comprises \$10,000 at the start of the project, with a further \$5,000 payable upon completion

of the project deliverables and submission of the course to the Texas A&M Curricular Approval Request System. The 2021 awards span the foundations, methods, and applications of Data Science.

This new course will deliver a comprehensive practical introduction to Data Visualization and Visual Analytics. The teaching team comprises instructors from Visualization, Statistics, and Computer Science to deliver a holistic approach to the development and use of data visualization and analytics tools and methods. The plan is for the course to use R and RStudio and address the end-to-end process from data collection, through storage and management, to visualization and analysis. The emphasis is be on hands-on practical projects using real-world data.

TG3. **Faculty Institute, Flipping your Course (2013)** Texas A&M University \$2000.00 I completed a five-day faculty institute at the Texas A&M University ITS entitled Flipping your course. The flipped course is a pedagogical model where the typical lecture and homework elements of a course are reversed. It introduces lecture materials in an online format so that class time can instead be devoted to problem-solving, discussions, and group activities that reflect higher levels of learning.

TEACHING AREAS

Computer Science, Data Structures, Computer Graphics, 3D Computer Animation, 3D Modeling, Production Pipeline, Digital Lighting, Rendering and Shading, Game Design, Databases, Algorithms, Data Visualization, Virtual Reality.

COURSES TAUGHT AT TEXAS A&M

- C1. VIST 170, Introduction to Visualization Computing Environments, (2-1). Credit 1.
Procedures, practices and environments useful for visual problem solving using programmatic languages; setup and use of the computing environment; useful system tools and commands; basic programming concepts and constructs.
- C2. VIST 206, Visual Studio I. (3-5). Credit 3.
Theory and practice of visual communication methodologies and processes used in interactive media, game design and development, or animation; visual storytelling
- C3. VIST 270, Computing for Visualization I. (3-2). Credit 4.
Theory and practice of visual computer based problem solving; system tools; scripting; software design principles and practice; basics of interactive programming and interface design; development concepts and principles useful in digital art and visualization production.
- C4. VIST 271, Computing for Visualization II. (3-2). Credit 4.
Continuation of Computing for Visualization I; concepts of object oriented programming; emphasis on principles and techniques useful for three dimensional visualization and real time graphic display.
- C5. VIST 305, Visual Studies Studio II. (1-5). Credit 3.
Theory and practice of visual communication employing digital and conventional media; development of artistic concepts, proposal development and related implementation techniques; introduction to digital painting, 3D modeling, animatics and post production.

- C6. VIST 486, Introduction to Game Design (3-0). Credit 3. Computer game design; emphasis on interactive storytelling, game play and interface design; history of computer games, review of selected games; analysis of rules of play and simple game prototype development.
- C7. VIZA 613, 3D Modeling and Animation (3-2). Credits: 4.
Principles of 3-D computer animation with an emphasis in aesthetics and techniques for 3-D modeling, color, texture, lighting, motion control and rendering.
- C8. VIZA 616, Rendering and Shading (2-2). Credit: 3.
Exploration of advanced rendering and shading techniques for the attainment of a desired visual effect; topics may include shading languages, attainment of visual realism, integration of rendering and modeling tools, and non-photorealistic rendering.
- C9. VIZA 627, Visual Communications III (2-2) Credit: 6.
Advanced methods in video, photography and/or animation production; application of image strategies used in contemporary media.
- C10. VIZA 676, Data Visualization (3-0) Credit: 3.
Visual representation and design of data and information; 3D visualization, infographics, data narratives, principles of visual data encoding and interaction techniques.
- C11. VIZA 677, Virtual Reality (3-0) Credit: 3.
Theory and practice of virtual reality; interactive 3D virtual environments; input/output devices, 3D interaction techniques, augmented reality, role of realism in VR, navigation techniques, design guidelines and evaluation methods.

STUDENT ADVISING

Masters Committees, Chair/Co-Chair

Completed

With links to thesis and information on current position where available

1. Jessica A. Ross, MS in Visualization 2021
Development of an Approach to Simulate Georgia O'Keeffe Paintings
Current Position: Information Technology Professional I, Texas A&M University, College Station, TX
2. Jeffery Nichols, MS in Visualization 2020
Concept to Film: Interpreting Key Art for 3D Environment Look Development on DreamWorks Abominable
Current Position: Look Development/Surfacing Artist at DreamWorks Animation
3. William T. Derrington, MS in Visualization 2020
Sculpting Graphic Detail Efficiently
Current Position: Surfacing Artist and Modeler at DreamWorks Animation, Glendale, CA
4. Sarah Suther, MS in Visualization 2019
An Analysis of Pipeline Technology Update Practices
Current Position: Production Technology Technical Director, BlueSky Studios, New York, NY

5. Ryan D. Sharpe, MS in Visualization 2019
Camera Placement Utility for Dialogue Sequences
 Current Position: Software Developer at the Cobalt Company, Austin, TX
6. Danicka Oglesby, MS in Visualization 2019
Blurred Lines – Experimenting with Crowds and Music Visualization in Virtual Reality, 2019
 Current Position: Senior Technical Artist at Intific, Austin, TX
7. Mallory L. Kohut, MFA in Visualization 2019
NAILED IT The body, pain, and the pursuit of perfection
 Current Position: Sets Shading Technical Director, Pixar, Emeryville, CA
8. Joanne George, MS in Visualization 2019
Procedural Camera Shake in 3D software using Motion Capture data
 Current Position: Technical Director, Pixar, Emeryville, CA
9. Katherine Boyd, MS in Visualization 2019
Creation of Control Points for Obtaining 3D Voronoi Structures to Construct Woven Tiles
 Current Position: Technical Director, Disney Animation Studios, Los Angeles, CA
10. Xianmin Feng, MS in Visualization 2019
V-Sphere Rubik's Bookcase Interface for Exploring Content in Virtual Reality Marketplace
 Current Position: Product Design at Facebook (Oculus) Virtual Reality, Menlo Park, CA
11. Somyung Oh, MS in Visualization 2019
Noise-Free Area Light Shadows with D/R Illumination Model
 Current Position: Software Engineer, Persistent Studios, Paris, France
12. Chelsey N. Gobeli, MS in Visualization 2018
The Effects of Reference Frames on 3D Menus in Virtual Environments
 Current Position: Associate Producer, SciPlay Corporation, Austin, TX
13. Mason Smith, MS in Visualization 2018
Virtual Reality Gaze Direction via a Dynamic Real-Time Color Effect
 Current Position: Ph.D. Candidate, Texas A&M, College Station, TX
14. Melissa Parsons, MS in Visualization 2018
Usage Based Materials by Simulating Layered Imperfections
 Current Position: Lighting Artist, Reel FX, Austin, TX
15. Bailey C. Currie, MFA in Visualization 2018
Act Natural
 Current Position: Technical Artist at Intific, Austin, TX
16. Qinghong Xu, MS in Visualization 2018
Effects of Character Guide in Immersive Virtual Reality Stories
 Current Position: Environment Artist at Moving Pictures Cooperation, Montreal, Quebec, Canada

17. Schaefer Mitchell, MS in Visualization 2017
Procedural Surface Weathering of Cultural Stone Through Physically Based Mesh Deformations
 Current Position: Technical Artist, Electronic Arts (EA), Austin, TX
18. Chethna Kabeerdoss, MS in Visualization 2016
Art Directed Shader for Real Time Rendering - Interactive 3D Painting
 Current Position: Software Engineer, DreamWorks Animation, Glendale, CA
19. Oriyomi Adenuga, MS in Visualization 2016
Adapting Cinematic and Theatrical Lighting to Virtual Reality Storytelling
 Current Position: VFX Supervisor & Artist, Sunny Boy Entertainment, Pasadena, CA
20. Megan Walker, MS in Visualization 2015
Realistic Aging of Materials in Computer Graphic
 Current Position: Surfacing Lead, Dreamworks Animation, Glendale, CA
21. Brandon L. Jarratt, MS in Visualization 2015
From Production to Education: An Analysis of Pipeline Requirements and Practices
 Current Position: Pipeline Technical Director, Walt Disney Animation Studios, Los Angeles, CA
22. Eric M. Burke, MS in Visualization 2015
The Wearable Instrument Approach For Pilots,
 Current Position: Software Developer Chemnitz, Saxony, Germany
23. Krista Murphy, MS in Visualization 2014
A Web-based Animation Authoring Application for Quadrupedal Characters
 Current Position: Pipeline Technical Director, Walt Disney Animation Studios, Los Angeles, CA
24. Kourtney R. Kebodeaux, MS in Visualization 2013
 Current Position: Pipeline Technical Director, Dreamworks Animation, Glendale, CA
25. Spencer Cureton, MS in Visualization 2013
Using Fourier Analysis To Generate Believable Gait Patterns For Virtual Quadrupeds
 Current Position: Abuse Operations Engineer, Heroku, Salesforce, Austin, TX
26. Mathew Allen Sanford, MS in Visualization 2012
A GPU Accelerated Smoothed Particle Hydrodynamics Capability For Houdini
 Current Position: Technical Visualization, Lockheed Martin, Austin, TX
27. Mallory C. Snell, MS in Visualization,
 Current Position: Digital Consultant, Accenture, Dallas, TX
28. Punit Deotale, MS in Visualization 2012
Development and Usability Evaluation of an E-learning Application Using Eye-tracking
 Current Position: Software Development Manager, Web Applications, Dish Network Englewood, CO
29. Stephanie Ann Strickland, MS in Visualization, 2011
Chinese Painting in 3D: An Artistic Study of the Use of the Traditional Chinese Painting Aesthetic in Three-Dimensional Computer Graphics, 2011
 Current Position: Sr. Manager, Automated Driving - Technical Operations, Toyota Research Institute, Los Altos, CA

On Going (Chair)

1. Emily C. Edwards, MS in Visualization
2. Andrew Gillie, MS in Visualization

Masters Committees, Committee Member

1. Eun Sun Chu, MS in Visualization 2020
ARTIST: Interactive Augmented Reality for Curating Children's Artworks Current Position: XXXX
2. Anatol Bologan, MFA in Visualization 2018
What is human
Current Position: Director of the ARTS Lab, Texas A&M University
3. Shenyao Ke, MS in Visualization 2017
Development of Physical Connectors To Assemble Unfolded Planar Panels for the Construction of Large Shapes
Current Position: Software Engineer, Apple, San Francisco, CA
4. Christopher Potter, MS in Visualization 2015
A Qualitative Comparison of Coding Languages Used for Image Synthesis
Current Position: Software Engineer at Reaction Commerce, North Charleston, SC
5. Cassandra M. Hanks, MFA in Visualization 2014
Space Landscape
Current Position: Video Editor at TYT Network, Los Angeles, CA
6. Wei Wang, MS in Visualization 2014
A Collision Deformer for Autodesk Maya
Current Position: Current Position: Software Engineer, Apple, San Francisco, CA
7. Amber Playle, MS in Visualization 2014
Gait Synthesis of Abnormal Gaits in Canines
Current Position: Developer at SoftLayer, an IBM Company, Dallas-Fort Worth, TX
8. Kendall Litaker, MS in Visualization 2013
Cinematic Scientific Visualizations
Current Position: Technical Supervisor, Walt Disney Animation, Los Angeles, CA
9. Jose Guinea Montalvo, MS in Visualization 2012
An Artistic Approach for Intuitive Control of Light Transfer in Participating Media
Current Position: Lighting Artist, DreamWorks Animation, Glendale, CA
10. Nathan Thomas Bajandas, MS in Visualization 2012
A Post-mortem Analysis of Production Process: The Bricklayer's Disaster
Current Position: Artist at Adayana, Munich, Bavaria, Germany

11. Naureen Mahmood, MS in Visualization 2012
 Designing Video Games and Interactive Applications to Enhance Learning in Children with Autism Spectrum Disorders
 Current Position: CEO at Meshcapade GmbH, Tübingen, Baden-Württemberg, Germany
12. Adan Pena, MS in Visualization 2011
 Performance-Guided Character Bind Pose for Deformations
 Current Position: Character Rigging Lead, DreamWorks Animation, Glendale, CA
13. Trisha A. Cleveland, MS in Visualization 2009
 Rendering the Renaissance: A Methodology for Recreating Historical Fabrics and Fashions in Computer Graphics
 Current Position: Technology Support Specialist at Northside ISD, San Antonio, TX

External Committees, Committee Member, Complete

1. Michayal Mathew, MS in Visualization 2020
 Realtime design and analysis of 3D structures using Finite Element Analysis within Virtual Reality environments
 Current Position: Systems Engineer II at Sierra Nevada Corporation, Denver, CO
2. Samia Kabir, MS in CPSC 2020
 Effects of Visual Aids with Axis Information on Navigation and User Experience in Virtual Reality
 Current Position: Ph.D. Student, Computer Science, Purdue University, IN
3. Matthew Holub, MS in AERO 2019
 Simulation Testbed for Entry Analysis and Design (STEAD)
 Current Position: Aerospace Engineer at CACI International Inc., Hockley, TX
4. Mohan Li, MS in ELEN 2019
 Statistical Analysis of a Three-dimensional Axial Strain and Axial-shear Strain Elastography Algorithm
5. Rania Labib, PHD in ARCH 2019
 Façade Internet of Things (FIoT): A Human-Sensing, Two-Façade Communication Approach to Achieve Glare Reduction, Optimized Daylighting, and Solar Energy Collection
 Current Position: Assistant Professor, Architecture, Prairie View A&M University, Prairie View, TX
6. Faryaneh Poursardar, PHD in CPSC 2018
 Identifying the Bounds of an Internet Resource
7. Ukwatta Jayarathna, PHD in CPSC 2016
 Unified Implicit and Explicit Feedback for Multi-Application User Interest Modeling
 Current Position: Assistant Professor, Computer Science, Old Dominion University, Norfolk, VA
8. Swarochisa Kandregula, MS in COMG 2015
 The Impact of Isolated Visual Representation Of A 3D Model in the BIM Cave
 Current Position: Solutions Specialist MEP, Microdesk Fremont, CA

9. Vardharaj Lakshminarasimhan, MS in CECN 2014
A Latent Factor Model for Board Recommendations in Pinterest
 Current Position: Software Engineer, Facebook, Mountain View, CA
10. Shu-Wei Hsu, PHD in CPSC 2013
Statistical and Directable Methods for Large-Scale Rigid Body Simulation
 Current Position: Senior Software Engineer, Microsoft, Redmond, WA
11. Aaron Molin, MS in CPSC 2012
Segmenting Hand-Drawn Strokes
12. Daniel Dixit, MS in CPSC 2009
A Methodology for Using Assistive Sketch Recognition For Improving a Person's Ability to Draw

External Committees, Committee Member, Ongoing

1. William Young, MS in AERO
2. Riyad Ashmeel, PHD in ARCH
3. Hassan T. Anifowose, PHD in ARCH
4. Di Liu, PHD in ARCH
5. Nicholas B. Milef, PHD in CPSC
6. Aditya Parsheera, MS in COMG

SIGNIFICANT CURRICULUM CHANGES

Through my leadership role as Graduate Program Coordinator, I completely restructured the **Master of Science in Visualization** curriculum to reduce the number of **required hours** (from 48 to 32) and to introduce a **non-thesis option**. These new degree offerings are more in line with peer offerings and permit our masters students to graduate on time. Students can now choose between the **thesis** and the non-thesis track. The thesis track requires the submission of a written research thesis which is the culminating activity of the Master of Science curriculum. It allows and requires that the student pursue a focus topic in significant depth. It is recommended for students who want to pursue careers in research and academia. The non-thesis track allows students to tailor the curriculum to their individual career aspirations through a combination of required and elective courses. Student in the non-thesis track will create and defend a capstone project that demonstrates mastery of the curriculum. This track is recommended for students interested in careers such as animation, concept art, motion graphics, gaming, and rigging. In both tracks, students develop their projects with the guidance of a faculty advisor.

SERVICE

DEPARTMENT SERVICE & LEADERSHIP

2020-present	Curriculum Subcommittee Visual Computing Task Force
2020-present	Member, Faculty Search Advisory Committee
2015-2020	Member, Department Promotion and Tenure
2018-2019	Chair, Faculty Search Advisory Committee
2018-2019	Member, <i>Academic Program Review</i>
2016-2019	Associate Department Head
2016-2019	Graduate Program Coordinator
2016-2019	Member, Joint Visualization-Computer Science Committee

COLLEGE SERVICE

2015-present	Member, College Promotion and Tenure
2015-present	Member, Creative & Research Interdisciplinary Committee (CRIC)
2021	King Medal Selection Committee
2017-2020	<i>Outstanding Alumni</i> Selection Committee
2016-2019	Academic Affairs Committee
2018	Member, Architecture Department Head Search Committee

UNIVERSITY SERVICE

2020-present	Associate Professor Task Force
2020-present	Graduate Mentorship Committee
2019-present	<i>Women in Animation Student Group</i> , Faculty Advisor
2018-present	Faculty & Student Advisory Board, Center For Teaching Excellence
2018-present	Faculty Fellow, Center for Health Systems & Design
2018-present	X-Grant Reviewer
2013-2015	Institutional Review Board Member
2011-2014	Texas A&M Honor Council Member
2008-present	<i>Women's Faculty Network</i> , member

ACM SIGGRAPH

- Art Paper Jury Member, ACM SIGGRAPH 2021
- General Submissions Chair, ACM SIGGRAPH 2015
- General Submissions Chair, ACM SIGGRAPH 2014
- ACM SIGGRAPH General Submissions Juror 2009-2015
- ACM SIGGRAPH Courses Chair 2012
- ACM SIGGRAPH Courses Chair 2011
- ACM SIGGRAPH Committee Member 2012
- ACM SIGGRAPH Committee Member 2011
- ACM SIGGRAPH Technical Paper Reviewer 2000-2019
- ACM SIGGRAPH First Time Attendee Coordinator 2013
- ACM SIGGRAPH ASIA Technical Paper Reviewer 2009-2012

ACM APPLIED PERCEPTION IN GRAPHICS & VISUALIZATION

Founding Co-Chair of the annual *Symposium on Applied Perception in Graphics and Visualization (APGV)*. The name changed to *Symposium on Applied Perception (SAP)* in 2011 to be more inclusive.

THE NATIONAL SCIENCE FOUNDATION(NSF)

- Review Panelist, NSF Information and Intelligent Systems, Future of Work at the Human-Technology Frontier
- Review Panelist, NSF Information and Intelligent Systems, Human Centered Computing
- Review Panelist, American Society For Engineering Education NSF Graduate Research Program
- Review Panelist, NSF Career Award Review Panelist,
- Review Panelist, NSF Curriculum, Laboratory Improvement Program

TEXTBOOK REVIEWER

- Reviewer for Jason Jerald. *The VR Book: Human-Centered Design for Virtual Reality*. Association for Computing Machinery and Morgan & Claypool.
(Specifically focusing on Eye Tracking & Virtual Reality) 2015
- Reviewer for Michael H. Goldwasser and David Letscher. *Object-Oriented Programming in Python*. Prentice-Hall, Inc., USA. 2007

SCHOLARLY REVIEWING & INTERNATIONAL PROGRAM COMMITTEES

- International Jury Member, *ACM SIGGRAPH Art Papers* 2021
- International Program Committee, *ACM Symposium on Applied Perception (SAP)* 2021
- International Program Committee
IEEE International Symposium on Mixed and Augmented Reality, (ISMAR) 2021
- Associate Chair for *ACM Eye Tracking Research and Applications (ETRA) Short Papers* 2021
- *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D)* 2021
- Editorial Board of *Augmented Reality* as Review Editor for *Frontiers in Virtual Reality* 2020-present
- International Program Committee Member *IEEE Artificial Intelligence and Virtual Reality (IEEE AIVR)* 2020
- International Program Committee Member for *ACM Spatial User Interfaces (SUI)* 2020
- International Program Committee Member for *ACM Eye Tracking Research and Applications (ETRA)* 2020
- International Program Committee Member, *ACM International Symposium on Applied Perception (ACM SAP)* 2020
- International Program Committee Member, *Augmented and Virtual Reality Grace Hopper Celebration (GHC)* 2019
- International Program Committee Member
IEEE International Symposium on Mixed and Augmented Reality 2014, 2017, 2018, 2019, 2021
- Co-Chair of the *ACM Eye Tracking Research & Applications (ETRA) Doctoral Symposium* 2019
- International Program Committee Member for the *Human Computer Interaction track Grace Hopper Celebration (GHC)* 2018
- International Program Committee Member, *Expressive,* 2016, 2017, 2018
- International Program Committee Member
Gaming/Computer Graphics/Animation (GFX) Track, Grace Hopper Conference 2016
- General Submissions Chair, *ACM SIGGRAPH Conference* 2015
- General Submissions Chair *ACM SIGGRAPH Conference* 2014
- Chair, *Gaming/Computer Graphics/Animation (GFX) Track, Grace Hopper Conference (GHC)* 2014
- International Program Committee Member, *Eurographics* 2014
- International Program Committee Member, *Eurographics* 2013

- International Program Committee Member, **Media and Entertainment**
Grace Hopper Celebration(GHC) 2013
- International Program Committee Member, ACM Expressive (Formally NPR, Computational Aesthetics)
2013
- International Program Committee Member, ACM Symposium on Applied Perception
(SAP, formerly APGV) 2013
- International Program Committee Member, IASTED International Conference on Graphics
& Virtual Reality 2012
- International Program Committee Member, ACM Eye Tracking Research and Applications (ETRA) 2012
- International Program Committee Member, Computational Aesthetics (CAe) 2009, 2010, 2011, 2012
- International Program Committee Member, Eurographics (Short Papers Program) 2008, 2009
- Reviewer for IEEE Transactions On Graphics, IEEE Transactions on Visualization and Computer Graphics,
Presence, ACM Computer Human Interaction