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Full Name Timothy David McLaughlin

Education

- Master of Science in Visualization Sciences, Texas A&M University, 1994
- Bachelor of Environmental Design, Texas A&M University, 1990
- Associate of Arts, Kilgore College, 1987

Academic Experience

- 2008-present: Associate Professor, Department of Visualization, College of Architecture, Texas A&M University, College Station, Texas
- 2008-2020 Associate Professor and Department Head, Department of Visualization, College of Architecture, Texas A&M University, College Station, Texas
- 2007-2008: Chair of Visualization Faculty and Associate Professor, Department of Architecture, Texas A&M University
- Spring 2000: Visiting Professor, The Media School, Bournemouth University, Bournemouth, England

Industry Experience

- 2006-2007: Front End Supervisor, Lucasfilm Animation, Nicasio, California
- 1994-2006: Various positions including Associate Visual Effects Supervisor, Creature Supervisor, Creature Technical Director, and Technical Director at Industrial Light & Magic, San Francisco and San Rafael, California
- 1990-1991: Draftsman, HKS, Inc. Dallas, Texas
- 1990: Draftsman, Cunningham Architects, Dallas, Texas

Professional Memberships

- Member, ACM – SIGGRAPH Pioneers
- Member, Visual Effects Society (VES)

ADMINISTRATIVE EXPERIENCE

A. Selected Significant Service to the Department of Visualization, Texas A&M University

Overview

- Department Head, Department of Visualization (VIZA), Texas A&M University (TAMU), January 2008 – August 2020.
- Principal author for both the 2011-2015 and 2015-2020 Strategic Plans for VIZA.
- Oversaw VIZA budget growth in State funding from \$1.45m in 2008-2009 to \$2.47m in 2018-2019 (170% increase).
- Oversaw VIZA budget growth in all areas outside of State funding from \$270k in AY 2008-2009 to \$2.75m in AY 2018-2019 (1019% increase).

Academic Advancement

- Department Level
 - Led development of VIZA's first **Academic Program Review Self-Report** covering the BS, MS, and MFA in Visualization programs and the site evaluation by external reviewers (Fall 2018-Spring 2019).
 - Led **enrollment growth** in the BS-Visualization program from 128 students in AY 2009-2010 to 391 in Fall 2018 (*305% growth*). In 2011 the BS-Visualization program became the first academic program on campus to fill its slots for freshmen admission. Each year the program attracts roughly three times more applicants than can be admitted.
 - Introduced the **Visualization Industry Fair (VIF)**, as the career fair for Visualization students in 2016.
 - Led growth of **Viz-a-GoGo** as a celebration of student works that now encompasses all of the academic programs in the department and is a community event coordinated with the Art Step / First Friday event organized by the Downtown Bryan Association.
- Program Level
 - Led effort to gain **STEM** designation for the MS in Visualization program by the Texas Higher Education Coordinating Board for a Classification of Instructional Programs (CIP) code change from Multi-/Interdisciplinary Studies, Other (30.9999.09) to 11.0803.00 Computer Graphics (a STEM code).
 - Primary author of the proposal to initiate the **B.S. in Visualization Program** (2009) through administrative transfer of the BED-Visual Studies program from the Department of Architecture. The BS in Visualization is the first undergraduate STEM degree in the College of Architecture.
 - Contributing author to the proposal to create a **Master of Fine Arts in Visualization** degree program. Approved November 2011 by the Texas Higher Education Coordinating Board. The MFA-Visualization is the first MFA degree offered at Texas A&M University.

- Contributing author to the proposal to create a **Ph.D. in Visualization** program. Still in development.
- Led development of the **Minor in Art** (2011) and the **Minor in Game Design and Development** (2016) programs to extend the Department of Visualization's influence to students in other majors.
- Course Level
 - Organized and initiated from the first **Summer Industry Production Course** in 2000 while an employee at ILM. Contributed again in 2003 to ILM's partnership in the course. As Department Head since 2008 have led the effort to recruit and organize with industry partners including DreamWorks Animation, ILMxLab, Pixar, ReelFX Creative Studio, and Walt Disney Animation.
 - Designed and taught the first **Vertical Studio** in Fall 2012. This format tackled the challenge faced at that time of low faculty numbers and variable numbers of students at each studio level by combining sophomore, junior, and senior level studios together. In this format the students are placed on small vertically integrated teams in which the sophomore must learn the fundamentals of visual storytelling and tools, the juniors must gain broad exposure to all aspects of the discipline, and seniors are responsible for depth in one or two areas along with overall responsibility for team success. Vertical Studios are now one of the signature elements of our undergraduate curriculum, recognized for both hard skills and soft skills development.
 - Designed and taught the first **undergraduate research** course for BS-Visualization students in Fall 2011. This course investigated the application of agile development to short-form animation.
 - Designed and taught the first **First Year Seminar** for incoming freshmen in the BS-Visualization program. This course meets university and departmental goals of introducing first time in college students to the resources and culture of the program.
 - Directed and/or supported the addition of these courses to the department catalog. Listing is provided to illustrate the breadth of the programs overseen:
 - Undergraduate
 - ARTS 104 – Introduction to Graphic Design
 - ARTS 115 – Drawing for Visualization
 - ARTS 210 – Introduction to Digital Photography
 - ARTS 234 – Body Art of Tattoos
 - ARTS 312 – Advanced Photography
 - ARTS 315 – Figure Drawing for Narrative and Concept Development
 - ARTS 325 – Digital Painting
 - ARTS 328 – Advanced Painting
 - ARTS 333 – Visual and Material Culture of the Mediterranean
 - ARTS 339 – Themes in Contemporary Art
 - ARTS 340 – History of the Photographic Image
 - ARTS 341 – History of Animation
 - ARTS 342 – History of Graphic Design
 - ARTS 343 – History of Illustration
 - ARTS 345 – History of Gaming
 - ARTS 403 – Graphic Design III
 - VIST 131 – First Year Seminar
 - VIST 170 – Introduction to Visualization Computing Environments
 - VIST 201 – Writing for Design
 - VIST 235 – Theory and Practice in Visualization

- VIST 275 – Introduction to Visualization
- VIST 284 – Visualization Techniques
- VIST 310 – Photography for Visualization
- VIST 339 – Research Techniques in Visualization
- VIST 354 – Principles of Multimedia Design
- VIST 357 – Interaction Design
- VIST 409 – Capstone Studio
- VIST 432 – Applied Perception
- VIST 439 – Capstone Proposal Development
- VIST 442 – Digital Characters: Art, Technology, Uses and Meaning
- VIST 476 – Data Visualization
- VIST 477 – Virtual Reality
- VIST 486 – Introduction to Game Design
- VIST 487 – Game Development
- **Graduate**
 - VIZA 626 – Generative Art & Design
 - VIZA 630 – Contemporary Art Studio/Seminar I
 - VIZA 631 – Contemporary Art Studio/Seminar II
 - VIZA 662 – Physical Computing for Art and Design
 - VIZA 676 – Data Visualization
 - VIZA 677 – Virtual Reality
 - VIZA 680 – Professional Practice in Visualization
 - VIZA 684 – Professional Internship
 - VIZA 693 – Professional Study

Administrative Efforts in Support of Faculty Success

- Led growth in the size of the faculty body from 15.5 FTE in AY 2008-2009 to 35 FTE in AY 2018-2019 (*226% growth*)
- Supported the creation of three **research labs** within the department: Augmented Reality/Virtual Reality Lab, led by Ann McNamara; Soft Interaction Lab, led by Hwaryoung Seo; TAMU Embodied Interaction, which led to the creation of the Texas Institute for Technology-Infused Learning, led by Francis Quek and Lou Tassinary.
- Supported the creation of three **research/production/instruction labs** within the department: the Learning Interactive Visualization Experience Lab focusing on interactive learning games, led by André Thomas and Hadeel Ramadan; the VIRT space focusing on augmented and virtual reality in which undergraduate research is concentrated by Hwaryoung Seo; and the ARTs Lab, focusing on UI/UX development, led by Anatol Bologan.
- Created **research appointments** in addition to teaching responsibilities for five Academic Professional Track faculty members who are research active at significant levels for their fields.
- Provided more **time for research & creative works** through course release support for faculty as a reward for outstanding research and creative works in the previous year, who are directing an institute, and/or 1/3 of the cost of a course buyout.
- Oversaw growth in number of **proposal submissions** for federal funding from 4 in AY 2008-2009 to 23 in AY 2017-2018 (*575% growth*).
- Oversaw growth in **research expenditures** from \$139,029 in AY 2008-2009 to \$862,069 in AY 2017-2018 (*620% growth*).

Administrative Efforts in Support of Development & Outreach

- Established **VizNorth** as studio space for graduate students, classroom space for graduate classes, exhibition space for the department, office space for faculty and staff, and a front door to the community. The deal includes \$100,000 in grant support from the City of Bryan over the first two years of occupancy.
- Organized and Chair the **Visualization Industry Partners** (VIP) program, beginning in Fall 2008 and meeting each Spring and Fall since. VIP includes members from: Amazon Game Services, Austin, Blue Logic LLC, Dallas, Blue Sky Studios, Greenwich, CT, CGBot, Austin, Clickhere Labs, Dallas, DreamWorks Animation Studio, Glendale, CA, EA-BioRad, Austin, Epic Games, Greenville, NC, Gearbox Software, Frisco, TX, Google, Mountain View CA, HKS, Inc, Dallas, IBM Design, Austin, Jacobs, St. Louis, MO, MPC, Montreal, Canada, Pixar Animation Studios, Emeryville, CA, Reel FX Creative Studios, Dallas, SideFX Software, Toronto, Canada, T3, Austin, and Walt Disney Animation Studios (Burbank, CA).
- Organized the first **Viz alumni scholarship** in 1997 while employed at ILM. There are now four other scholarships arranged following the same model at DreamWorks Animation, EA-Bioware, Pixar Animation Studios, and Walt Disney Animation, respectively.
- Partnered with the Texas A&M Foundation, Larry Zuber, and our donors to establish the department's first four **endowments** totaling \$780,000 in commitments plus an estate planned gift.
- Developed **VizKids Camps** as an initiative to introduce middle school-age students to the opportunities made possible through pursuit of arts, math, sciences and technology in high school. Camps have been held each summer since 2010. Summer 2019 will feature four camps: VizKids – Game Design, VizKids – Virtual Reality, VizKids – 3D Animation, and VizKids Anime & Manga in Tokyo, Japan.

B. Interdepartmental

- Member of Texas A&M University's STEM Center development group, Spring 2012 to present.
- Initiated and Co-Chair, with the Head of the Department of Computer Science and Engineering, the *Joint Committee on Computer Graphics Initiatives*, Fall 2009 – 2011.
- Contributor as speaker, Texas Governor's School: Arts & Humanities for Urban Leadership, 24 June 2009.
- Creative Director with Dr. Dennie Smith (Producer), Head of the Department of Teaching Learning & Culture on a student-developed animation project for the Texas Education Agency's effort to introduce changes in the Texas Essential Knowledge and Skills program to state-wide K-12 teachers. Fall 2010.

C. Selected Significant Service to the College of Architecture, TAMU

- College Leadership Team, Member. August 2007 – Present.
- College of Architecture Dean's Advisory Council, Department of Visualization Representative. Fall 2012 – present.
- Search Committee for the Head of the Department of Architecture, Chair. Summer 2017 – Spring 2018.
- Interdisciplinary Charrette for Undergrads, Judge. Spring 2018 and Spring 2019.

- Outstanding Alumni of the College of Architecture Review Committee, Member. 2016.
- Search Committee for the Head of the Department of Architecture, Chair. Fall 2011.
- Department Head Council for the College of Architecture, Member. January 2008 – Present.
- College IT Committee, Member. August 2007 – January 2008.
- Parents / Family Weekend, Presenter, 2008-2017.
- Aggieland Saturday, Presenter, 2008-2019.
- Spend a Day with the Corps - College of Architecture Information Session, Organizer. Summers 2009-2011.
- Dean's External Advisory Board, College of Architecture, Member prior to joining the faculty. 2004-2007.

D. Selected Significant Service to TAMU

- Center of Digital Humanities Research, Advisory Board Member, 2015 – Present.
- Provost's Task Force on Arts, one of two College of Architecture Representatives. Spring 2020.
- University Department Heads Steering Committee, College of Architecture Representative. Fall 2016 – Summer 2019.
- Search Committee for the Vice President for Research, Member. Spring 2017 – Spring 2018.
- Creative Works Focus Group, LAUNCH: Undergraduate Research, Member. Fall 2016- Spring 2017.
- Center for Teaching Excellence, Advisory Board Member, Fall 2014 – Fall 2015.
- Distinguished Alumni of Texas A&M University Review Committee, Member. Spring 2015.
- New Academic Leaders Orientation, Dean of Faculties and Associate Provost Office, Panelist. Fall 2011.
- Center for Teaching Excellence Portal Task Force, Member. October 2009 – 2011.
- University Research Roadmap Multidisciplinary Research Initiative: Institute for Digital Humanities, Media and Culture, Invited Participant. November 2009 – 2011.
- Task Force for Campus Arts Programs, Member. November 2009 – May 2010.
- College of Architecture Dean Search Committee, Member. November 2008 – May 2009.

E. Selected Significant Service to the Profession and Community

- Tenure and Promotion External reviewer for faculty from Brigham Young University, Drexel University, The Ohio State University, and UT-Dallas.
- External Curriculum Reviewer for the Animation and Visual Effects program at Drexel University, Philadelphia, PA. 2017.
- Visual Effects Society, Board Member January 2009 – 2013.
- Digital Production Symposium 2012 (DigiPro), Program Committee, Member.
- Game On! Texas symposium, Advisory Committee, Member Fall 2009 – 2012.
- External Curriculum Reviewer for Diploma in Advanced Animation, Lifeway College, Snells Beach, Rodney, New Zealand. 2009.
- Book chapter reviewer: Kitagawa, M., Windsor, B. "Mocap for Artists: Workflow and Techniques for Motion Capture", selected chapters. Elsevier, Inc. 2008. Print.
- Games Education Summit, Advisory Committee, Member. 2008.

Externally Funded Grant Activity

1. "ETx-STEAM Network to Empower URM Middle School Students", Simons Foundation, Science Sandbox, New York, NY. Role: Principal Investigator with Co-PIs Carol LaFayette, Andrea Roberts, Shinjiro Sueda, Hira Roberts (PVAMU), and Tracey Moore (PVAMU). Funded. Total Award: \$296,682. Scheduled for 9/1/2021 – 8/31/2023.
2. "Moving Picture – History Painting with a Game Engine: Comanches and Texas Rangers, 1848", National Endowment for the Arts, Grants for Arts. Role: Principal Investigator. Submitted July 2020. *Under Review*. Proposed budget: \$96,461 for nine months.
3. "STTR: Human Machine Interface for Field of Light Displays (HMI FoLD)". Funded by NAVSEA-SBIR Small Technology Transfer (program solicitation N19B-T036). Phase 1 funding total for TAMU: \$30,000 for six months. Completed. Awarded July 2009. Supported two undergraduate students. Role: Co-PI providing administrative support with PI Anatol Bologan as TAMU academic partner with FOVI 3D, Austin, TX.
4. "Testing and Modeling of Concepts in Variant". Funded by Triseum, LLC, Bryan, TX. Funding total \$100,000 for six months (4/1/2016-9/30/2016). Completed. Supported 14 undergraduate and graduate students for prototyping and testing educational video game to teach limits in calculus. Role: Principal Investigator providing administrative oversight with Co-PI André Thomas.
5. "FashPose: Phase 1 – Establishing Processes for Mobile Creation of Appealing Avatars". Sponsored by privately held company, FashPose, LLC. Phase 1 funding total: \$9,642, for three months (5/25/2012 – 8/24/2012). Completed. Supported one graduate student. Role: Co-Principal Investigator, with PI Dr. Ergun Akleman.
6. "Alternate Reality Teaching: Our Space" submitted in response to Defense Advanced Research Projects Agency –Information Innovation Office –ENGAGE: Learning to Solve Problems, Solving Problems to Learn, DARPA-BAA-11-36. Role: Member of educational advising group from Texas A&M University. Lead organization: Total Immersion Software, Inc. Award for Texas A&M activities: \$138,953 (21 months). Awarded August 2011. Completed.
7. "HCC-GV: Small: Generating Animal Avatar Animation with Specific Identifiable Traits Based Upon Viewer Perception of Real Animals", National Science Foundation Division of Information & Intelligent Systems, Human Centered Computing. Role: Principal Investigator, with Co-PI Ann McNamara. NSF-IIS Project #1016795. Total award: \$499,552 (3 years). Awarded August 2010. Completed. Supported two graduate students 12 months per year for the duration of the award.
8. "Pilot: Creative IT Project: Collaborative Undergraduate Computing Studios Facilitating Decentralized Participation", National Science Foundation Division of Information & Intelligent Systems, CreativeIT. Role: Principal Investigator. NSF Project #0855908. Total Award: \$293,057 (3 years). Awarded July 2009. Completed. Supported one graduate student 12 months per year for the duration of the award.
9. "Workshop on Video Games in Engineering and Computer Science Education", National Science Foundation Division of Undergraduate Education. Role: PI (*administrative role, replaced Dr. Vinod Srinivasan after he left Texas A&M University*) with Co-PI Karen Butler-

Purry. NSF Project Number:0938176. Total Award: \$92,328. Awarded September 2009. Completed.

Externally Funded Fellowship

1. Unreal Virtual Production Fellowship, Epic Games. October 2020 – November 2020 (five weeks). Total awarded support: \$10,000. Completed.

Internally Funded Grant Activity

2. “The ABC’s of Sculpting: Merging Art Appreciation, Business & Creativity”, Academy for Visual and Performing Arts, TAMU. Co-PI with Dr. Jay Woodward from the Department of Educational Psychology. Total award: \$7,860. Awarded December 2014. Completed.
3. “Integrated Animation Studio”, Academy for Visual and Performing Arts, TAMU. Total award: \$7,061. Awarded December 2013. Completed.
4. “Teaching Vignette Prototype Development”, Vice President for Research, Texas A&M University. Co-PI with Dr. Dennie Smith from the Department of Teaching Learning and Culture, TAMU. Total Award: \$60,100 (18 months). Awarded October 2008. Completed. Supported one graduate student for 18 months and another for 6 months.

Journal Articles and Published Conference Presentations

1. Tessendorf, J., McLaughlin, T., and Girimaji, S. 2021. “Multi-Cohort/Multi-Tier/Cross-Disciplinary Instruction and Research via Short Film Production”. Paper accepted at the Consortium for Computing Sciences in Colleges: Southeastern Conference 2020. Due to COVID, to be held January 22-22, 2021.
2. Cook, M., Payne, A., Seo, H., Pine, M. and McLaughlin, T. 2019. “InNervate AR: Mobile Augmented Reality for Studying Motor Never Deficits in Anatomy Education”. Paper accepted at the International Conference on Computers in Education sub-conference on Artificial Intelligence in Education/Intelligent Tutoring Systems.
3. Smith, D., McLaughlin, T. & Brown, I. 2012. “3-D Computer Animation vs. Live-Action Video: Differences in Viewers’ Response to Instructional Vignettes”. *Contemporary Issues in Technology and Teacher Education*, 12(1), 41-54. AACE.
4. McLaughlin, T. and Keske, S. 2012. “Evaluation of Students’ Skills in Remote Collaboration for Creative Problem Solving in Computer Graphics,” Eurographics 2012 - Education Papers, May 13 – 18, 2012. Sardinia, Italy.
5. McLaughlin, T., Smith, D., and Brown, I. A. 2010. “A Framework for Evidence Based Visual Style Development for Serious Games,” In *Proceedings of the Fifth International Conference on the Foundations of Digital Games*. 132-138. ACM, New York, NY, 1. DOI: [10.1145/1822348.1822366](https://doi.org/10.1145/1822348.1822366). (Foundations of Digital Games Conference 2010, Monterrey, California, June 19 – 21, 2010).
6. McLaughlin, T., Fechter, T., Pasing, A. M., Pena, B. A., Reitz, J., and Vidal, J. A. 2010. “Multi-Institutional Collaboration in Delivery of Team-Project-Based Computer Graphics Studio Courses,” In *Advances in Visual Computing –Lecture Notes in Computer Science 6454/2010*, 394-405. Springer, Berlin/Heidelberg. DOI: 10.1007/978-3-642-17274-8_39. (6th Annual

International Symposium on Visual Computing Las Vegas, Nevada, November 21 – December 1, 2010).

7. McLaughlin, T., Tooley, J., and Cloward, B. "Character Rigging and Creature Wrangling in Game, Feature Animation, and Visual Effects Production" ACM SIGGRAPH 2012 Courses. 39th International Conference and Exhibition on Computer Graphics and Interactive Techniques, held in Los Angeles, California, August 5-9, 2012.
8. McLaughlin, T., Cutler, L., and Coleman, D. "Character Rigging, Deformations, and Simulations in Film and Game Production," In ACM SIGGRAPH 2011 Courses (SIGGRAPH '11). ACM, New York, NY, USA, Article 5, 18 pages. DOI=10.1145/2037636.2037641. (38th International Conference and Exhibition on Computer Graphics and Interactive Techniques, Vancouver, Canada, August 7-11, 2011).
9. McLendon, M., McNamara, A., McLaughlin, T., and Dwivedi, R. 2009. Connecting the dots: discovering what's important for creature motion. In *SIGGRAPH 2009: Talks* (New Orleans, Louisiana, August 03 - 07, 2009). SIGGRAPH '09. ACM, New York, NY, 1-1. DOI=<http://doi.acm.org/10.1145/1597990.1598066>
10. McLaughlin, T. and Sumida, S. S. 2007. The morphology of digital creatures. In *ACM SIGGRAPH 2007 Courses*. SIGGRAPH '07. ACM, New York, NY, 1. DOI=<http://doi.acm.org/10.1145/1281500.1281660>. (34th International Conference and Exhibition on Computer Graphics and Interactive Techniques, San Diego, California, August 05 - 09, 2007).
11. McLaughlin, T. 2006. Taxonomy of digital creatures: defining character development techniques based upon scope of use. In *ACM SIGGRAPH 2006 Courses*. SIGGRAPH '06. ACM, New York, NY, 1. DOI= <http://doi.acm.org/10.1145/1185657.1185808>. (33rd International Conference and Exhibition on Computer Graphics and Interactive Techniques, Boston, Massachusetts, July 30 - August 03, 2006)
12. McLaughlin, T. 2005. Taxonomy of digital creatures: interpreting character designs as computer graphics techniques. In *ACM SIGGRAPH 2005 Courses*. J. Fujii, Ed. SIGGRAPH '05. ACM, New York, NY, 1. DOI= <http://doi.acm.org/10.1145/1198555.1198692>. (32nd International Conference and Exhibition on Computer Graphics and Interactive Techniques, Los Angeles, California, July 31 - August 04, 2005). (note: Copyright restrictions prevent ACM from providing the full text for this work.)
13. McLaughlin, T. and Anderson, J. 1999. Cloth animation for Star Wars: Episode I "The Phantom Menace". In *ACM SIGGRAPH 99 Conference Abstracts and Applications*. SIGGRAPH '99. ACM, New York, NY, 195. DOI= <http://doi.acm.org/10.1145/311625.311999>. (26th International Conference on Computer Graphics and Interactive Techniques, Los Angeles, California, United States, August 08 - 13, 1999).
14. McLaughlin, T. and Phillips, C. 1999. Creature wrangling and enveloping for Star Wars: Episode I "The Phantom Menace". In *ACM SIGGRAPH 99 Conference Abstracts and Applications*. SIGGRAPH '99. ACM, New York, NY, 196. DOI= <http://doi.acm.org/10.1145/311625.312001>. (26th International Conference on Computer Graphics and Interactive Techniques, Los Angeles, California, United States, August 08 - 13, 1999).

Extended Abstracts

1. Crowley, D., Murphy, R., McNamara, A., McLaughlin, T. and Duncan, B. A., "AR Browser for Points of Interest in Disaster Response in UAV Imagery," CHI 2014 Extended Abstracts on Human Factors in Computing Systems (Toronto, Canada, April 26-May1, 2014).

Poster Presentations

1. Raparathi, N., Acosta, E., Liu, A., & McLaughlin, T. (2020) "GPU-Based Motion Matching for Crowds in Unreal Engine" in SIGGRAPH Asia 2020 Posters. Virtual Event, Republic of Korea. <https://doi.org/10.1145/3415264.3425474>.
2. Cook M., Payne A., Seo J.H., Pine M., McLaughlin T. (2019) InNervate AR: Dynamic Interaction System for Motor Nerve Anatomy Education in Augmented Reality. In: Stephanidis C. (eds) HCI International 2019 - Posters. HCII 2019. Communications in Computer and Information Science, vol 1033. Springer, Cham. https://doi.org/10.1007/978-3-030-23528-4_49.
3. Cook, M., Ackley, A., Chang Gonzalez, K., Payne, A., Seo, H., Pine, M. and McLaughlin, T. 2019. "InNervate Immersion: Case Study of Dynamic Simulation in AR/VR Environments for Learning Muscular Innervation VR/AR Innovations in Anatomy Education". SIGGRAPH 2019 (Los Angeles, California, United States, July 28 – August 1, 2019).
4. Cook, M., Payne, A., Seo, H., Pine, M. and McLaughlin, T. 2019. "InNervate AR: Dynamic Interaction System for Motor Nerve Anatomy Education in Augmented Reality". HCI International 2019 (Orlando, Florida, United States, July 26 – 31, 2019).
5. Ibrahim, Z., McLaughlin, T., Parke, F., and Keyser, J., "The Stretch Engine," The ACM SIGGRAPH / Eurographics Symposium on Computer Animation 2017 (Los Angeles, CA, July 28-30, 2017).
6. Simms, M., Smith, D., McLaughlin, T., and Brown, I., "Stylized vs. Simplified Graphics: Differences in Viewers' Perception of Simulated Actions in Instructional Vignettes," American Educational Research Association 2011 Annual Meeting (New Orleans, Louisiana, United States, April 8 – 12, 2011).
7. McLendon, M., McNamara, A., McLaughlin, T., and Dwivedi*, R. Lions and Tigers and Bears: Investigating Cues for Expressive Creature Motion. SIGGRAPH 2010 The 37th International Conference on Computer Graphics and Interactive Techniques (Los Angeles, California, United States, July 25 - 29, 2010).
8. McLendon, M., McNamara, A., McLaughlin, T., and Dwivedi*, R. Investigating important visual cues for representative creature motion. Eye Tracking Research & Applications 2010 (Austin, Texas, United States, March 22 - 24, 2010).

Peer-Reviewed Panel Presentations at Academic Conferences

1. "Approaches for Immersive Media Curriculum Implementation" Panelist at SIGGRAPH 2019 – Los Angeles, CA, July 28–August 1, 2019.
2. "Other Education Models", Panelist at FMX 2014, Stuttgart, Germany, April 22-25, 2014.
3. "From Production Artist to Educator: Preparing for the Change," Panelist at SIGGRAPH 2014 The 41st International Conference and Exhibition on Computer Graphics and Interactive Techniques, Vancouver, Canada, August 10-14, 2014.

4. "Successful Creative Collaboration Across Time and Space," Panel organizer and moderator at SIGGRAPH 2011 – The 38th International Conference and Exhibition on Computer Graphics and Interactive Techniques, Vancouver, Canada, August 7-11, 2011.
5. "Designing Curriculum for 3D Computer Animation: Innovation and Experimentation for an Evolving Discipline," Panelist at SIGGRAPH 2011 – The 38th International Conference and Exhibition on Computer Graphics and Interactive Techniques, Vancouver, Canada, August 11, 2011.

Feature Films and Commercial Projects

1. **Untitled feature film project.** (December 2005 – July 2007) Fully animated feature film development project. Directed by George Lucas. Produced by Lucasfilm Animation. Project indefinitely postponed in August 2007. Role: Front End Supervisor.
2. **Eragon.** Live action feature film theatrically released December 2006. Directed by Stefan Fangmeier. Produced by Fox 2000 Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Creature Developer.
3. **Project 880 (Avatar Test).** (August 2005 – February 2006) Prototype test project for feature film viability. Director James Cameron. Produced by Lightstorm Entertainment. Visual effects by Industrial Light & Magic. Role: Associate Visual Effects Supervisor.
4. **Pirates of the Caribbean – Dead Man's Chest.** Live action feature film theatrically released July 2006. Directed by Gore Verbinski. Produced by Walt Disney Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Creature Developer.
5. **The Island.** Live action feature film theatrically released June 2005. Directed by: Michael Bay. Produced by DreamWorks SKG. Visual effects by Industrial Light & Magic. Role/Credit: Creature Development Artist.
6. **War of the Worlds.** Live action feature film theatrically released June 2005. Directed by Steven Spielberg. Produced by Paramount Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Creature Lead.
7. **Son of the Mask.** Live action feature film theatrically released February 2005. Directed by Lawrence Guterman. Produced by Dark Horse Entertainment, Distributed by New Line. Visual effects by Industrial Light & Magic. Role/Credit: Co-Creature Supervisor.
8. **Lemony Snicket's A Series of Unfortunate Events.** Live action film theatrically released December 2004. Directed by: Brad Silberling. Produced by Paramount Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Co-Creature Supervisor.
9. **Van Helsing.** Live action feature film theatrically released May 2004. Directed by Stephen Sommers. Produced by Universal Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Creature Supervisor.
10. **Dreamcatcher.** Live action feature film theatrically released March 2003. Directed by Lawrence Kasdan. Produced by Castle Rock Entertainment. Distributed by Warner Bros. Visual effects by Industrial Light & Magic. Role/Credit: Creature Supervisor.
11. **Men In Black II.** Live action feature film theatrically released July 2002. Directed by Barry Sonnenfeld. Produced by Amblin Entertainment. Distributed by Columbia Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Creature Supervisor.
12. **Jurassic Park III.** Live action feature film theatrically released July 2001. Directed by Joe Johnston. Produced by Universal Pictures. Visual effects by Industrial Light & Magic.

Role/Credit: Creature Supervisor.

13. ***CG Yoda Test***. Fully computer generated test of the feasibility of replacing the puppet Yoda with a computer animated character for Star Wars Episode II (early 2000). Director George Lucas. Produced by Industrial Light & Magic. Role: Creature Developer.
14. ***The Adventures of Rocky and Bullwinkle***. Live action feature film theatrically released June 2000. Directed by Des McAnuff. Produced by Capella International. Distributed by Universal Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Creature Developer.
15. ***Brother Termite Test***. Fully computer generated test of the feasibility of facial motion capture re-targeted to a non-human face. Client: James Cameron. Produced by Industrial Light & Magic. Role: Creature Developer. Role: Creature Developer.
16. ***The Haunting***. Live action feature film theatrically released July 1999. Directed by Jan de Bont. Produced by DreamWorks. Visual effects by Industrial Light & Magic. Role/Credit: Creature Developer
17. ***Star Wars: Episode I "The Phantom Menace"***. Live action feature film theatrically released in May 1999. Directed by George Lucas. Produced by Lucasfilm Ltd. Visual effects by Industrial Light & Magic. Role/Credit: Creature Development Supervisor
18. ***ObaQ Process Management Testing***. In-house Industrial Light & Magic production tools development project to test the production readiness of software for managing processes across the ILM network. Role: Technical Director.
19. ***Mars Attacks!*** Live action film theatrically released December 1996. Directed by Tim Burton. Produced by Warner Bros. Visual effects by Industrial Light & Magic. Production budget: not available. Role/Credit: Technical Director.
20. ***BMW Penguins***. Live action 30-second commercial broadcast in 1996. Director: Steve Beck. Client: Fallon McElligott for BMW of North America. Role: Technical Director.
21. ***Jumanji***. Live action feature film theatrically released December 1995. Directed by Joe Johnston. Produced by TriStar Pictures. Visual effects by Industrial Light & Magic. Role/Credit: Technical Director.
22. ***Supercuts Stylin***. Live action 30-second commercial broadcast in 1995. Directed by Steve Beck. Client: J. Walter Thompson for Supercuts. Visual effects by Industrial Light & Magic. Role: Technical Director.

Invited Presentations

1. "Preparing Students for a Career in Media & Entertainment with Remote Workflows, AI, and Virtual Production". Panelist at NVIDIA's GTC '21 to be held, virtually, April 12 – 16, 2021.
2. "World-Building Creativity & Technology," Panel organizer and moderator at SXSW 2019 – Austin, TX, March 11, 2019. Panelists: Laura Murphy, Pixar Animation Studio, Gracie Arenas Strittmatter, EA-Bioware, and Kyle Clark, Flight School.
3. "The Creativity Revolution: You as Consumer, Critic, and Maker," Explorations – 10th Anniversary & Journal Release. November 16, 2018. Texas A&M University, College Station, TX.
4. "Merging Art & Science: The Department of Visualization at Texas A&M University", Texas Higher Education Coordinating Board Quarterly Board Meeting. October 25, 2018, Austin, TX.

5. "Merging Art & Science for the On-Demand Generation", UT-Austin Osher Lifelong Learning Institute, January 28, 2018, Austin, TX.
6. "Collision of Art & Science", Texas A&M Foundation Legacy Society, March 30, 2017.
7. "Visualization and the On-Demand Generation," AggieCon 2017, March 24-26, 2017, Bryan, TX.
8. "Creativity and the On-Demand Generation," Texas 4-H STE(A)M Career Pathways Webinar, November 10, 2016.
9. "Creativity and the On-Demand Generation," Texas A&M University Freshman Convocation, Reed Arena, College Station, TX. Fall 2015.
10. "Master of Fine Arts in Visualization", Texas A&M University Center for Teaching Excellence Advancement Council. College Station, TX. October 9, 2014.
11. "Visualization Graduate Programs at Texas A&M University", FMX 2014, Stuttgart, Germany, April 22-25, 2014.
12. "Distance Collaboration: Distributed Team-Based Learning in Visualization," Texas A&M University Center for Teaching Excellence Faculty Teaching Academy, College Station, TX. January 24, 2014.
13. "Visual Literacy, Creativity and STE(A)M Powered Education," The Chamber of Commerce Leadership Brazos, College Station, TX. November 13, 2013.
14. "Visual Creativity, Technology and the On-Demand Generation," Saturday Morning Biophysics Outreach. August 14, 2013. Texas A&M University, College Station, TX.
15. "STEAM Powered Education", The Arts in Education Conference, Texas Education Agency Region 6, Huntsville, Texas, January 24, 2013.
16. "The Modern-Day DaVinci", Panelist at Creative Talent Network, Burbank, California, November 18, 2011. Moderator: David Parrish, Reel FX. Fellow Panelists: Bryan Engram, Reel FX, Stan Syzmanski, StanleyVision, Inc., and Chantal Bumgarner, Digital Domain.
17. "Advances in Animation and Visualization Technologies." Talk presentation given at the University of Texas at Dallas' New Models for Interfacing Art and Technology: Advanced Educational Gaming and 3D Animation symposium, April 15, 2011. Presented by The Institute for Innovation and Entrepreneurship, Richardson, Texas.
18. "A Landscape of Game Design Programs in Texas", Presentation given at Game On! Texas symposium, Austin, Texas. April 12, 2011.
19. "Inter-departmental Collaboration in Animation Production and Pre-service Teacher Training." Presentation given at Texas A&M University's College of Education and Human Development Advisory Board, November 12th, 2010. Annenberg Presidential Conference Center, College Station, Texas.
20. "Houston Summit for the Creative Economy – Digital, Design, and Film", Houston, Texas. October 22, 2010. Panelist. Fellow Panelist: Jerry Alexander, Acumen Design.
21. "Educators Panel Discussion," Panelist at DreamWorks Animation SKG 7th Annual Educators' Symposium, Glendale, California. July 26th, 2010. Panel moderator: Angela Lepito, DreamWorks Animation; Fellow panelists: Bobby Beck, Animation Mentor, Alice Carter, San Jose State University, Jim McCampbell, Ringling College of Art & Design, and Jeremy Moorshead, Savannah College of Art & Design.
22. "Twenty-First Century Careers – Preparing Students for Their Future, Not Our Past," Panelist at Texas Regional Collaboratives 16th Annual Meeting, Austin, Texas. June 30, 2010. Panel moderator: Dr. Keith Mitchell, Texas Regional Collaboratives Coordinator of

Technology; Fellow panelists: Dr. Leslie Miller, Executive Director, Rice University Center of Teaching and Learning, Mr. Stephan Samuleson, President and CEO of Twist Education; Mr. Spencer Zuzolo, President of 3DSquared.

23. "Post-Secondary Game Development Education", Panelist at Game On! Texas symposium, Austin, Texas. April 7, 2010. Panel moderator: Leah Smith, Texas Film Commission; Fellow panelists: Dr. Tom Linehan, Director of Arts & Technology at the University of Texas at Dallas, Dr. Kevin Ludlam, Executive Director of Development, Baylor University, Dr. Peter Raad, Executive Director of the Guildhall at Southern Methodist University, and Linda Smarzik, Dean of Computer Studies and Advanced Technology at Austin Community College.
24. "Watch the Visual Arts to See the Future of Technology Development", Keynote speaker at Corning Patent Awards Ceremony, Corning, New York. March 30, 2010.
25. "Shaping Society Through Visual Technology", Presentation for the High School Education Program at the George Bush Library and Museum, College Station Texas; March 4th, and 10th, 2010.
26. "Visual Creativity, Technology and the On-Demand Generation", Talk given at the College of Architecture Research Symposium, Texas A&M University, College Station, Texas; October 2009.
27. "Visual Creativity, Technology and the On-Demand Generation", Keynote speaker at the Society for Information Display (SID) Display Week Awards Luncheon, San Antonio, Texas; June 2009.
28. "The Texas A&M Visualization Department," Speaker at Sam Houston State University SIGGRAPH Chapter meeting. October 28, 2008.
29. "TV Magazine with Sharon Colson," Invited guest. KAMU-TV, Texas A&M University, October 22, 2008.
30. "The Next Great Talent Search," Panelist at SIGGRAPH 2008, Los Angeles, California. August 18, 2008.
31. "The Morphology of Digital Creatures," Talk given at the Research on the Built and Virtual Environments: Global Symposia, Texas A&M University, College Station, Texas. October 29, 2007.
32. "The Visual Effects of *Van Helsing*," Universal Pictures press junket, New York, New York. June 2004. Fellow presenters included Scott Squires, Visual Effects Supervisor and Christian Alzmann, Art Director.
33. "Alternative Careers with an Architecture Education," Presentation given at the AIAS Annual Convention, Austin, Texas. December 30, 2003.
34. "The Use of Softimage in *Jurassic Park III*," Multiple presentations given to the Softimage User's Groups, Tokyo and Osaka, Japan. October 2001.
35. "Dynamic Muscle and Flesh Simulation: Jurassic Park III", At the 28th Annual Conference on Computer Graphics and Interactive Techniques (28th International Conference on Computer Graphics and Interactive Techniques Los Angeles, California, United States, August 12 – 17, 2001) with Sebastian Marino.
36. "The Art of Visual Effects," Talk given at the University Filmmakers Alliance Conference, University of Texas at Austin, Texas. Spring 2001.
37. "Creature Effects in *Star Wars Episode I*," Multiple booth presentations at the International Broadcasters, Amsterdam, The Netherlands. September 2000.

38. "Creature Wrangling and Enveloping for *Star Wars Episode I 'The Phantom Menace'*," Talk given at the London Effects and Animation Festival, London, England. November 18, 1999.
39. "Cloth Animation for *Star Wars Episode I 'The Phantom Menace'*," Talk given at the London Effects and Animation Festival, London, England. November 18, 1999.
40. "Virtual Actors – A Reality In Our Age?" Panelist at the London Effects and Animation Festival, London, England. November 1998.
41. "Modeling with Tim McLaughlin," Masters Class presentation given at the London Effects and Animation Festival, London, England. November 1998.
42. "Alternative Careers with an Architecture Education," Presentation and panel discussion at the AIAS Bridge City Forum 95, Portland, Oregon. November 1995.

Selected Reviews, Interviews, and Profiles

1. "Former Visualization Department Head Hits the Ground Running with VFX Fellowship," COA News. Web story published January 20, 2021. <https://coanews.arch.tamu.edu/former-visualization-head-hits-ground-running/>
2. "Aggies in Animation: Texas A&M University Produces Powerhouse Animators," Brazos Valley Insite. Print and web article published August 1, 2020. Sourced November 9, 2020. <http://www.insitebrazosvalley.com/lifestyle/arts-culture/aggies-in-animation-texas-am-university-produces-powerhouse-animators/>.
3. "Texas A&M Game Design Program Ranks High Among Public Schools," MyAggieNation.com. Web story written July 7, 2018. Sourced April 29, 2019. https://www.myaggienation.com/am_news/texas-a-m-game-design-program-ranks-high-among-public/article_6b393b01-e53a-5a17-9a81-6a55c88855e8.html
4. "Storytelling Tips for Snackable Social Media Content from a Jedi Master," Clarity Digital online. Video interview. Sourced April 29, 2019. <https://www.claritydigital.marketing/tag/tim-mclaughlin/>
5. "Interview: Tim McLaughlin," in *Digital Character Development: Theory and Practice*. 2nd Ed., O'Neill, R. CRC Press, pp. 39-42. 2015. Print. ISBN: 9780429160127.
6. "In Tall Cotton: Q&A with Tim McLaughlin, Visualization Head at Texas A&M", Animation Career Online. Written July 24, 2015. Sourced April 29, 2019. <https://www.animationcareerreview.com/articles/tall-cotton-qa-tim-mclaughlin-visualization-head-texas-am>
7. "Aggies Feel Connection to Steve Jobs", KBTX Channel 3. Broadcast story aired on local news and web story written on 6 October 2011. Sourced 10 October 2011. http://www.kbtx.com/home/headlines/Aggies_Feel_Connection_to_Steve_Jobs_131252604.html
8. "Film Industry Has Eyes on Texas A&M Visualization Program", Financial Tech Spotlight. Web story written 7 July 2011. Sourced 10 October 2011. <http://financial.tmcnet.com//mergers-acquisitions/news/2011/07/07/5620791.htm>
9. "Automated Avatars and Eye Tracking", Eye Tracking Update blog. Written 18 January 2011. Sourced 10 October 2011. <http://eyetrackingupdate.com/2011/01/18/automated-avatars-eye-tracking/>

10. "NSF Avatar Grant Expected to Revolutionize Virtual Representations", Educational Games Research blog. Written 5 October 2010. Sourced 4 October 2011.
<http://edugamesresearch.com/blog/tag/tim-mclaughlin/>
11. "College of Architecture, Tim McLaughlin", *European Union Center News –Texas A&M University*. Fall 2010.
12. "Professor Gets Avatar Grant", *The Eagle*, 4 October 2010.
<http://www.theeagle.com/am/Professor-gets--avatar--grant>.
13. "The Future of Pedagogical Methodologies in Creature Development: How procedural tools can help facilitate creature development and design". *USC Animation – Visualizing Art and Science* 17 September 2007. http://usanimation-artandscience.blogspot.com/2007_09_01_archive.html.
14. Fordham, J. "War of the Worlds: Alien Apocalypse". *Cinefex* October 2005. 103. Pp. 66-87. Print.
15. Duberman, D. "Spectrum Reviews: SIGGRAPH 2005." *Spectrum: Interactive Media & Online Developer News* 29 August 2005. <http://www.3dlinks.com/spectrum/issues/spectrum-aug-29-05.cfm>
16. Duncan, J. "Van Helsing: Man Made Monsters". *Cinefex* July 2004. 98. Pp. 98-124. Print.
17. Mallory, M. "Feel Their Pain: 'Van Helsing' Brings Creature Feature Standbys Up to Date". *Los Angeles Times* 6 May 2004. <http://articles.latimes.com/2004/may/06/news/wk-movies6>
18. Gross, E. "Die Monsters Die". *CFQ Cinefantastique* April-May 2004. 34. Pp. 34-40, 70-71. Print.
19. Munson, B. "Men In Black II: Building a Better Pug". *Cinefex*. October 2002. 91. Pp. 82-111. Print.
20. Ford, M., Lehman, A. "An Interview with Tim McLaughlin". *Inspired 3D Character Setup*. Premier Press. Pp. 251. 2002. Print.
21. Deckel, L. "Jurassic Park III: Bigger, Faster, Meaner". *Cinefex*. October 2001. 87. Pp. 15-40,125-132. Print.
22. Robertson, B. "Raptor Redux: ILM Revitalizes the Raptors, T Rexes, and Other Digital Dinos in Jurassic Park III". *Computer Graphics World* August 2001. Pp 44-49. Print.
23. Staff, "Learning to Work Magic with Light". *BBC News* 28 May 2000.
http://news.bbc.co.uk/2/hi/uk_news/education/765911.stm
24. Cannell, M. "Brain Drain: Young Architects Are Fleeing the Studio to Build in the Virtual World". *Architecture* December 1999. Pp 125-127. Print.
25. Cohen, K. "The Animated Side of Star Wars: An Interview with Rob Coleman, The Film's Animation Director". *Animation World Magazine*. August 1999. 4.5.
<http://www.awn.com/mag/issue4.05/4.05pages/cohenwars.php3>
26. Robertson, B. "Star Wars Super Models." *Computer Graphics World* July 1999. Pp 39-44. Print.
27. "Tim McLaughlin ILM Technical Director", interview from 1997. Sourced April 29, 2019.
<http://theforce.net/jedicouncil/interview/ilmag.shtml>
28. Duncan, J., Martin, K. H., Cotta Vaz, M. "The Phantom Menace: Hero's Journey". *Cinefex*. July 1999. 78. Pp. 74-145. Print.
29. Parisi, P. "Effects Force: Conjuring 'The Phantom Menace' Required New Tools and a New Approach to Filmmaking." *The Hollywood Reporter Summer Special Effects Special Issue* 18-24 May 1999. S-12-15. Print.
30. Stack, P. "The Digital Divide: 'Phantom Menace' Pushes Moviemaking Into a Realm Dominated by the Computer," *The San Francisco Chronicle* 19 May 1999, sec. E: 1+. Print.

31. Jones, K. "Viz Kids." *Texas Monthly*. Dec. 1996. Print. Available online at: <https://www.texasmonthly.com/articles/viz-kids/>
32. Cotta Vaz, M. "Mars Attacks!: Martial Art". *Cinefex*. December 1996. 68. Pp. 70-93. Print.
33. Kunde, D. "Aggies in Wonderland." *The Dallas Morning News* 3 July 1996, sec. D: 1+. Print.
34. Peline, J. "Creating the Wild Kingdom: How Computers are Redrawing the Movie Landscape." *The San Francisco Chronicle* 11 December 1995, sec. B: 1+. Print.
35. Pourroy, P. "Jumanji: The Game Board Jungle". *Cinefex*. December 1995. 64. Pp. 54-71. Print.
36. *SIGGRAPH Video Review, Issue 102: SIGGRAPH 94 Screening Room Entertainment and Commercial Program, "Dream Dweller"*. 1994. Video.
37. Pocock, L. "The Animation Screening Room SIGGRAPH 94" *Computer Graphics* February 1995. Pp 25-26. Print.

TEACHING & MENTORING

Courses Taught

1. VIST 131 – First Year Seminar. Taught in Fall 2019, 2018 and 2017 (as CARC 181)
This seminar course provides an opportunity to explore the building blocks for success in the Bachelor of Science in Visualization program, at Texas A&M University, in the professions of Visualization, and in life. The journey of university life is a time of personal growth. Change begins with the identification and clarification of values around how you present yourself to the world. It is critical to establish a sense of identity as an artist, designer, technologist, and scientific inquirer. Change also includes developing the foundation for life-long learning built upon methods of critical thinking.
2. Vertical Studio: Animation (lead instructor for VIST 206, 305, 405). Taught in Fall 2016, 2014, 2013 and 2012 and Spring 2014 and 2013.
The purpose of the vertical studio is to facilitate and encourage the development of skills, knowledge, and interpersonal communication required for the use of computer graphics in the studio environment of animation and visual effects. It is a group project- problem-based learning experience. Development of both hard and soft skills is the expected outcome. The course is co-located with sophomore (VIST 206), junior (VIST 305) and senior (VIST 405) students together. Students from multiple class years are included to provide opportunities for less experienced students to learn from those who are more experienced and for the more experienced students to practice mentoring and leadership skills. Specific performance requirements and expectations vary according to the level in which each student is enrolled. Peer assessment plays an important role in course performance evaluation. The semester is divided into two sections. The first section focuses on skills development. The second section focuses on animation production. Technology plays a vital role in animation and visual effects production. There are no specific software packages required for the projects and exercises in this course. However, access to and ability to employ certain kinds of software is required. All required kinds of software will be available through the Visualization Laboratory, available through student licensing agreements with software publishers, or available as open-source software. The products produced in this course consist of Projects, which are major grades, and Exercises, which are minor grades. Participation is highly important and is measured three ways: participation in class activities, participation in

review sessions, and participation as a contributor to your team. Reviews will be held regularly through out the semester and offer the opportunity for students to show work in progress to both the instructors and their fellow team members.

3. VIST 305 – Visual Studies Studio II (non-vertical). Taught in Fall 2008 and Fall 2009
As a stand-alone studio, not part of a Vertical Studio, VIST 305 builds upon previous studios oriented toward traditional media and introduces a variety of processes using digital media primarily in a 3-D environment. Digital media or computer graphics, can be understood as the synthetic representation of form, motion, material, and light. Emphasis will be placed on the development of creative solutions, narrative and design. Research and the use of historical precedent will be an integral component of the studio.
4. VIST 406 – Visual Studies Studio IV. Taught in Spring 2012, 2011, 2010
It was expected that students will draw upon all of their experience, skills, and knowledge from prior studios, math, programming, technical and art electives to succeed in this course. This course focused on the production of a 3D animated short project. Students were expected to utilize their analytical, technical, and aesthetic skills while contributing to the story development, modeling, layout, animation, rigging, effects animation, surfacing lighting, and compositing tasks required for a project of this type. Use of the python programming language in either Maya was required. To be successful on the main project students were expected to collaborate with team members from other campuses including Texas A&M students studying in Bonn, Germany, students in the ATEC program at the University of Texas at Dallas, and high school students at the Design and Technology Academy in San Antonio. This portion of the course was part of a project funded by the National Science Foundation (NSF project number: 0855908). The research aim of the project was to understand how information technology contributes to creative and technical problem solving among students taking part in geographically distributed teams. Students were also expected to pursue an independent project that should incorporate a wide swath of knowledge and skills garnered from their experience in the BS in Visualization program. The nature of this personal project was to be determined in consultation with the instructor, but was expected to be a significant personal interest of the student.
5. VIST 491 – Undergraduate Research. Taught in Fall 2011
This was the first Undergraduate Research course offered in the Bachelor of Science in Visualization program. The course used undergraduate research to bring the ingredients of inquiry and professional practice together in such a way as to further enhance the experience for students in visualization. The goals of the course were two-fold and inseparable: (1) produce a short animation suitable for entry in juried venues such as animation festivals, and (2) investigate the applicability of agile development to animation production. Agile development is a methodology used in software and game development in which team members work iteratively to sustain a working version of the code or game while responding to changes. Benefits of agile development include the capacity to make changes late in production, regular and continuous engagement by team members, and incremental measured progress. The form of agile development use in game studios is often as Sprint/Scrum. Scrum defines roles of a ScrumMaster, Product Owner, and the Team. Scrum also employs sprints as a series of timed delivery of pre-determined features. Applying scrum to animation development involves bending the linear pipeline of story development -> art development -> model -> rigging -> surfacing -> rigging -> animation -> lighting ->

effects animation → editing, into a circular pipeline in which all stages are in progress from the beginning of the production to the end.

6. VIZA 615 – Computer Animation. Taught in Spring 2019, 2017, 2015, 2014, 2013, 2012, 2009, 2008 and Fall 2015 2013, 2010.

Animation is the interpretation of action. This course focuses on the analysis of actions of animals, the biomechanical systems supporting action, and their re-interpretation and presentation as performance through computer animation. Computer animation is often viewed through the lens of traditional animation. However, viewers often overlook the degree to which performance animation relies on fundamental principles of biological motion. Computer animation will be approached in this course by the study of movement, how the structure of a body inhibits or promotes particular actions, and how computer graphics techniques can be used to facilitate the perception and comprehension performance expectations of movement.

7. VIZA 691 – Thesis Research. Taught Spring 2008 through Fall 2020
8. VIZA 693 – Professional Study. Taught Fall 2013 through Spring 2017.

Graduate Student Mentoring, Committee Chair, MS and MFA in Visualization (in alphabetical order, DNC = did not complete degree program)

1. Bujnoch, Emily. Pursuing MFA in Visualization. Currently developing body of work exploring knowledge and myth around real and imagined animals. Expected graduation: Spring 2022. Currently full-time student, Texas A&M University.
2. Cereiyo-Perez, Jorge. Proposed thesis: “Web-based Method for Articulation and Motion Generation Across Variable Animal Morphologies”. DNC. Currently Senior Rig / Sim Artist at Blizzard Entertainment, North Hollywood, CA.
3. Davalath, Megha. Thesis: “A Rigging Solution for Isosurface Based Characters,” (URI: <http://hdl.handle.net/1969.1/ETD-TAMU-2011-05-9342>). Graduated May 2011. Character Technology Lead at DreamWorks Animation, Glendale, CA.
4. Drell, David. Thesis: “A System for Designing Digital Creatures Based on Rules of Vertebrate (Tetrapodal) Anatomical Structure,” (URI: <http://hdl.handle.net/1969.1/151724>). Graduated Fall 2013. Lead Character Technical Director at DreamWorks Animation, Glendale, CA.
5. Eggebrecht, Jack. Proposed thesis: “Managing Recognition of Character Traits in Video Games Through LOD”. DNC. Currently with the United States Postal Service.
6. Grier, Kelsey. Thesis: “A Tool for Creating Expressive Control Over Fur and Feathers,” (URI: <http://hdl.handle.net/1969.1/187583>). Graduated May 2019. Rigging/Character FX Artist, BRON Studios, Los Angeles, CA.
7. Griffin, Chris. Thesis: “Automated Vehicle Articulation and Animation: A Maxscript Approach,” (URI: <http://hdl.handle.net/1969.1/ETD-TAMU-2010-12-8857>). Graduated December 2010. Technical Artist Supervisor at Bend Studio, Bend, OR.
8. Hagan, Landon. Thesis: “Spatial Groom,” (URI: <http://hdl.handle.net/1969.1/155126>). Graduated May 2015. Lead Developer at VISION Group, Houston, TX.
9. Henderson, Anthony. Pursuing MS capstone project, currently investigating articulated character animation authoring using rigid parts that alter body plan during performance. Expected graduation: Summer 2021. Currently part-time student, Texas A&M University.

10. Howard, Heather. Thesis: "Group Based Rigging for Realistic Feathered Wings," (URI: <http://hdl.handle.net/1969.1/ETD-TAMU-2011-12-10635>). Graduated December 2011. Currently Environment Technical Artist at Ready At Dawn Studios, Irvine, CA.
11. Ibrahim, Zaid. Thesis: "Stretch-Engine: A Method for Creating Exaggeration in Animation Through Squash and Stretch," (URI: <http://hdl.handle.net/1969.1/174023>). Graduated August 2018. Jr. Technical Artist at PLAYSTUDIOS, Austin, TX.
12. Kelly, Logan. Thesis: "Modular Rigging Utilizing XML and Node-Based Editing" (URI: <http://hdl.handle.net/1969.1/152498>). Graduated May 2014. Technical Director at Walt Disney Animation Studios, Burbank, CA.
13. Keske, Stephanie. Thesis: "Communicating for Creative Success in Remote Collaborative Work" (URI: <http://hdl.handle.net/1969.1/152517>). Graduated May 2014. UX Engineer at Uber ATG, Portland, OR.
14. Koay (Kin), Kelly. Graduated with MFA in May 2017. Currently lighting artist for DreamWorks Animation.
15. Li, Christine. Graduated with MFA in May 2014. Senior Modeler and Texture Artist at Industrial Light & Magic and ILMxLab, San Francisco, CA.
16. Low, Ser En "Sean". Thesis: "Sketch-based Animation Tool for Character Animation Integrating into a Production Pipeline" (URI: <http://hdl.handle.net/1969.1/152733>). Graduated May 2014. Technical Art Director, Riot Games, Seattle, WA.
17. Middela, Dharani Sree. Pursuing MS capstone project, currently investigating use of deep-learning techniques for facial animation rig and performance re-targeting to characters with varying topologies. Expected graduation: Spring 2021. Currently full-time student, Texas A&M University.
18. Murphy, Krista. Thesis title: "A Web-based Animation Authoring Application for Quadrupedal Characters" (URI: <http://hdl.handle.net/1969.1/154104>). Graduated December 2014. Assistant Technical Director with Walt Disney Animation Studios, Burbank, CA.
19. Naugle, Nicholas. Thesis title: "BIM Principles to Practice: Using BIM to Create a New Model for Producing Animation" (URI: <http://hdl.handle.net/1969.1/ETD-TAMU-2011-12-10577>). Graduated December 2011. Lighting Lead at ICON Creative Studio, Vancouver, BC, Canada.
20. Peña, B. Adán. Thesis title: "Automatic Quadrupedal Rig Generation from Single Camera Motion Data" (URI: <http://hdl.handle.net/1969.1/ETD-TAMU-2011-05-9465>). Graduated May 2011. Character Rigging Lead at DreamWorks Animation, Glendale, CA.
21. Playle, Amber. Thesis: "Gait Synthesis of Abnormal Gaits in Canines" (URI: <http://hdl.handle.net/1969.1/153876>). Graduated December 2014. Developer at Softlayer, Dallas, TX.
22. Ramesh, Rakesh. Proposed thesis: "Tactic to Create Custom Production Workflow," DNC. Pipeline Technical Director at DreamWorks Animation, Glendale, CA.
23. Raparathi, Nagaraj. Capstone Project: GPU-based Motion Matching for Crowds in Unreal Engine (SIGGRAPH Asia 2020 – Posters, URL: <https://doi.org/10.1145/3415264.3425474>). Graduated: August 2020. Graphics Engineer at the Henry M. Jackson Foundation for Advancement of Military Medicine, Bethesda, Maryland.

24. Rodriguez, Paloma. Pursuing MS thesis project investigating blend of stop-motion and 3D CG techniques in short-film animation. Expected graduation: Fall 2022. Currently full-time employee of Texas A&M University.
25. Schwartz, Seth. Thesis: "Creating Procedural Animation for the Terrestrial Locomotion of Tentacled Digital Creatures" (URI: <http://hdl.handle.net/1969.1/155261>). Graduated May 2015. Lead Pipeline TD at Reel FX Creative Studios, Dallas, TX.
26. Speer, Jon. Proposed thesis: "Camera Dependent Squash and Stretch". DNC. Technical Supervisor at ATK PLN, Dallas, TX.
27. Wheeler, Christopher R. Thesis title: "An Automated System for the Creation of Articulated Mechanical Parts" (URI: <http://hdl.handle.net/1969.1/ETD-TAMU-2009-12-7399>). Graduated December 2009. Head of Engineering, Fable Studio, San Francisco, CA.
28. Zhou, Junze. Thesis: "Perception Based Gait Generation for Quadrupedal Characters," (URI: <http://hdl.handle.net/1969.1/149472>). Graduated May 2013. Senior Technical Artist, Blizzard Entertainment, Los Angeles, CA.