

## THOMAS J. TUCKER

711 Burruss Dr.  
Blacksburg, VA

Cell: 704 773 2721

Email: thomasjt@vt.edu  
Web site: thomastucker.net

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## CURRICULUM VITAE

### EDUCATION

- 1996-1998 Masters of Fine Arts - School of the Art Institute of Chicago, Chicago, IL  
1992-1996 Bachelor of Fine Arts - Kansas City Art Institute, Kansas City, MO

### ADDITIONAL TRAINING

- 2023 World 16 project, in Groningen, Netherlands.  
Training in Scent in VR and Scent applications with UC-Win/Road software and Chidori Engine
- 2022 World 16 project, in Tokyo, Japan  
Training in Scent in VR applications with UC-Win/Road software and Chidori Engine
- 2021 World 16 project, in Tokyo, Japan  
Training in Scent in VR applications with UC-Win/Road software
- 2020 World 16 project, at Taipei, Tiawan (joined virtually due to Covid-19)  
Training in physical tracking in VR applications with UC-Win/Road software
- 2018 World 16 project, at Victoria University of Wellington, Wellington, New Zealand  
Training in utilizing point cloud data in VR applications with UC-Win/Road software
- 2017 World 16 project, at University of MIT, Boston, Massachusetts  
Training in utilizing point cloud data in VR applications with UC-Win/Road software
- 2016 World 16 project, at Osaka, Japan  
Training in utilizing point cloud data in VR applications with UC-Win/Road software
- 2015 World 16 project, at Thessaloniki and Chalkidiki, Greece  
Training in utilizing point cloud data in VR applications with UC-Win/Road software
- 2014 World 16 project, at University of Hawaii, Honolulu, HA  
Training in utilizing point cloud data in VR applications with UC-Win/Road software and projection mapping seminar
- 2013 FARO Laser Scanner training at Kennett Square, PA  
Training how to use the FARO laser scanner and 3D applications
- 2013 Qualisys motion capture training on hardware and software in the ICAT Cube space.
- 2011 World 16 project, at University of Pisa, Pisa, Italy  
Training in utilizing VR applications with UC-Win/Road software.
- 2010 World 16 project, at University of California in Santa Barbara  
Training in utilizing VR applications with UC-Win/Road software.
- 2009 World 16 project, at Forum 8, Tokyo, Japan  
Training in utilizing VR applications with UC-Win/Road software.
- 2005 Escape Studios Ltd., London, UK  
Maya data flow/node structure, MEL and conditional testing (data types, syntax and flow control), indoor and outdoor illumination techniques, conditional dynamic events, scripted/expression based activation and instigation of dynamic elements based on rules, element driven particles, seed driven controlled elements (crowd) control within a multi-element system.

### PROFESSIONAL EXPERIENCE

- 2012-Present Virginia Polytechnic Institute and State University, Blacksburg, VA  
Position: Director of MFA Creative Technologies Program, Associate Professor with Tenure, The School of Visual Arts, Creative Technologies, College of Architecture and Urban Planning and Fellow at Institute for Creative Art and Technologies  
Teaching Responsibilities: Intro to 3D Animation, Animation, CG Visual Effects, Tools for Visualization, Projection Mapping, Video Gaming, 3D Heritage, Grad Seminar and Begining and Advanced Character Modeling

Other Responsibilities include: University Research Committee, Associate Dean Review Committee, Curriculum Development, Scholarship Committee, Undergrad Portfolio Review, MFA Portfolio Review, Thesis Advisor for Undergrad, Graduate Students, Curriculum Committee, Photography, Multi-Media, Gaming and Animation Search Committee, Promotion and Tenure Committee, Program SOVA Director Five-year Review Committee, SOVA XCOM Committee, Member of Bioinspired Science & Technology Center (BIST), University Undergraduate Research Advisory Board, CAUS Honorifics Committee, ICAT Catalyst member and ICAT Fellow and Senior Fellow

2007-2012 Winston-Salem State University, Winston-Salem, NC

Position: Tenured Associate Professor, Art & Design, College of Arts & Sciences

Teaching Responsibilities: Desktop Publishing 1, 2, 3D Animation/Modeling 1, 2, Interactive Design, Web Design, Multimedia Design, Independent Study and Virtual Environments/Game Design

Other Responsibilities include: Strategic Planning Council, Academic Standards and Curriculum Committee Chair of Hiring Committee, WSSU Recruitment Council Committee, The General Education Task Force Committee, Senior Research Symposium Undergraduate Forum Committee, Health Committee, Student Recruitment Committee, Curriculum Committee for BFA program, E-portfolio Committee, and Student Advisor.

2009 The Serious Game Group, Piedmont Triad Partnership Design Consortium, Winston-Salem, NC

Position: Game developer for Surgical Mayo Tray Game

Game Developer Responsibilities: Developing tech documents for the Maya game, finding street value of game, Flash programmer, and modeler of Mayo surgical tools using Maya.

Other Responsibilities include: lighting, texturing and rendering of all Mayo surgical tools, setting up modeling sequencing for team.

2008-2012 Center For Design Innovation, Winston-Salem, NC

Position: Workshop Instructor

Teaching Responsibilities: Conducting workshops on fundamentals of Maya polygonal modeling techniques, subdivision modeling, organic modeling, industrial modeling, lighting and animation using Maya.

Other Responsibilities include: Setting up 10 Mac laptops for the Maya workshop.

2003-2007 Zayed University, Dubai, United Arab Emirates

Position: Assistant Professor, Art & Design, College of Arts & Sciences

Teaching Responsibilities: Basic Graphic Design, Graphic Design 1, 2, and 3, 3D Animation/Modeling 1, 2, and 3, Virtual Environments/Game Design, Capstone, and The Dart Program (3D Animation)

Other Responsibilities include: Department Criteria for Promotion and Tenure Committee, Student Recruitment Committee, Exhibition Committee, Art Conference in the UAE Committee, Strategic Planning Committee, International Exhibition Planning Committee, Curriculum Committee, Program Revision Committee, Student Advisor, Grading and Assessment Formats Committee, Research Threshold and Faculty Time Allocation and Reporting, Documentation of Student Artwork and Faculty Projects, SAFE Project, Continuing Education Courses, International Institution Links, Art Conferences in the UAE, UAE Design Group, Student Organization - Art Club, Designed a poster and brochure for the Art and Design Department, ZU Magazine, Safe Book Project and IT Help within the department.

2006 Latifa College, Dubai, United Arab Emirates

Position: Assistant Professor, Art & Design

Teaching Responsibilities: 3D Animation

2002-2003 University of Chicago Hospital, Chicago, IL

Position: Project Coordinator for Compliance Education

Responsibilities included: Providing essential support to educational initiatives; Coordinating of training rooms, schedules, orientation and monitoring of hospital staff; facilitating for faculty and staff in accessing information to managers and administrators; providing support in preparation of video presentations. Maintaining web site and supporting the technical aspect of the computer based programs for all staff and faculty on and off site.

2000-2002 Image Source Creative, Chicago, IL

Position: Head of Web Development, Multimedia and Video/Post Production Department.

Responsibilities included: Development and production of site specific projects including web sites, site maintenance, CD-ROM, Interactive CD-ROM, Interactive DVD, 3-D animation, and video dependent on the clients needs.

GRANTS AND EXTERNAL FUNDING

- 2021 Virtual Reality Scents Start date: 18 December 2021 End date: 17 March 2022 Funder name: ICAT Amount: (USD 3,000) Status: active Collaborators: Tucker T, Lahondere C, Lahne J, Latimer J, James J Types: Sponsored Research Included in the database of medical student research projects?: false Record created at source: 17 December 2021
- 2021 The Modern Skeleton: Translating natural history into interactive and immersive experiences Start date: 1 July 2021 End date: 30 June 2022 Funder name: Institute for Creativity, Art, and Technology Amount: (USD 25,000) Status: Active Collaborators: Nesbitt S, Stocker M, Ofsa M, Tucker T, Bradley J, Fralin S, Newbill P Types: Grant Included in the database of medical student research projects?: false Record created at source: 3 May 2021
- 2021 Experiencing Civil War History Through Augmented Reality: Soldiers, Civilians, and the Environment at Pamplin Historical Park. Funder name: National Endowment for the Humanities Funder type: Federal Federal agency (if appropriate): Other Funder reference: GRANT13135983 Virginia Tech grant number: PT61J3DX Amount: (USD 30,000) Principal investigators: Quigley P, Guimont C, Ogle J, Bowman D, Luther K, Hicks D, Tucker T, Duer Z Start date: 1 March 2021 End date: 28 April 2022 Status: Active Record created at source: 16 April 2021
- 2021 If this place could talk - Visualizing 150 years of VT as part of the Council of VT History Abstract: The grants supports the VT 150 Visualizing history team of faculty, staff and students to use innovative technologies including Virtual Reality, Augmented Reality and 360 video to help visualize and bring the universities past to life through immersive exhibits and walking tours. Details regarding the project can be found here: <https://hci.icat.vt.edu/research/vt150--visualizing-150-years-of-virginia-tech-history.html> and <https://historylab.squarespace.com/> Start date: 2021 End date: 2022 Funder name: Office of the President / Office of Strategic Affairs, Amount: (USD 137,900.00) Collaborators: Quigley P, Tucker T, Ogle J, Hicks D Included in the database of medical student research projects?: false Record created at source: 25 January 2022
- 2021 Entomo-3D: Digitizing the Virginia Tech Insect Collection Funder name: Council on Library & Information Resources Funder type: Private Federal agency (if appropriate): \*\*Non Federal\*\* Funder reference: DHC\_2019\_000697 Virginia Tech grant number: 549753 Amount: (USD 244,752 Maximum award amount: USD 244,752) Principal investigators: Hall N, Marek P, Tucker T Start date: 1 June 2020 End date: 31 May 2022 Status: Active PI list: Hall Nathan (50%), Marek Paul (45%), Tucker Thomas J ( 5%) Publicity Code: AR - Acknowledgement Required Banner title: Entomo-3D: Digitizing the Virginia
- 2021 Virtual Reality Horse Start date: 1 February 2020 End date: 31 January 2021 Funder name: Center for Excellence in Teaching and Learning High Impact Instructional Grant Amount: (USD 10,800) Status: Active Collaborators: Nappier M, Byron C, Corcoran L, Elnady F, Smith B, Walz A, Tucker T, Wilson K Record created at source: 29 May 2020
- 2020 If this place could talk - Visualizing 150 years of Virginia Tech Start date: 21 January 2020 End date: 15 May 2020 Funder name: Office of the President / Office of Strategic Affairs Amount: (USD 54,000) Status: Completed Collaborators: Quigley P, Hicks D, Bowman D, Tucker T Record created at source: 29 May 2020
- 2017 VDR Project working with ICAT in developing prototype a basic VDR to create a virtual environment where kitchen and bath dealerships can design consumer and builder kitchens and give their clients the chance to experience a life-size image of what their project will look like when completed. The consumer will interact with the design to try different finishes, hardware, appliances, flooring, etc. to give them the confidence to purchase that new kitchen from the VDR dealership. Partnership with local businessman Dan Stout and Gene Swartz (awarded contract \$3,000)
- 2017 Oba's Dream working with ICAT in developing VR experience with international film maker Shawn Peters (awarded contract \$7,000)
- 2017 Technology-Enhanced Learning & Online Strategies Grant Program, Awarded funding to support our work in three projects World War I, Christiansburg Institute and Blacksburg 16 Squares 3D Printing Project (15,000 awarded) PI: Thomas Tucker
- 2017 NSF MRI proposal selected in the internal competition for Development of a Motion-Capture System for Occlusion-Free Recording of Complex Animal Motion Kinematics Investigators: PI: Rolf Müller, ME, COE, Co-PI: A. Lynn Abbott, ECE, COE, Jake Socha, BEAM, COE, Thomas Tucker, SOVA/ICAT, CLAHS, Hongxiao Zhu, Statistics, COS Senior Personnel: Nicole Abaid, BEAM, COE, Pinhas Ben-Tzvi, ME, COE, Andy Kurdila, ME, COE, Sunny Jung, BEAM, COE, Alexander Leonessa, ME, COE, Danesh Tafti, ME, COE (\$356,500 pending)
- 2017 Enigma Project, VR project PI: Joe Gabbard, Co-PI: Doug Bowman and Thomas Tucker (\$280,000 awarded by Facebook)
- 2016 ICAT SEAD Major Grant for "Stepping into the past through Visualization: Exploring America's Forgotten War" (\$25,000 awarded) PI: Thomas Tucker, Co PI: David Hicks, Todd Ogle, David Cline
- 2015-16 Awarded, presented and participated at the Advanced Challenges in Theory and Practice in 3D Modeling of Cultural Heritage Sites at Amherst College, Maryland and UCLA, Las Angeles, CA. (2,300

awarded stipend)

- 2015 China Cave Scan, Shandong University, Jinan, China, funded by the China Ministry of Education and the State Administration of Foreign Experts Affairs (22,000 Yuan awarded).
- 2015 Awarded, Presented and participated at the Advanced Challenges in Theory and Practice in 3D Modeling of Cultural Heritage Sites at Amherst College, Maryland. (\$2,300 awarded stipend)
- 2015 ICAT SEAD Mini Grant for Moss Arts Center Projection Mapping Project (\$2,200 awarded)
- 2015 Towards Printing a Stradivarius, Institute For Creative, Arts and Technology, SEAD (Science, Engineering, Art, and Design) Major Initiative Program Grant, PI: Pablo Tarazaga, PhD, Mechanical Engineering, College of Engineering, Virginia Tech, Co PI: Thomas Tucker, BFA, MFA, Creative Technology, School of Visual Arts, Virginia Tech, Chris Williams, PhD, Mechanical Engineering, College of Engineering, Virginia Tech, David Ehrlich, Outreach Fellow, Fine Arts, Virginia Tech, Stefan Hersh and Violinist and Violin Maker, Darnton & Hersh Fine Violins, Chicago Il (\$25,000) Responsible for 12%.
- 2014 Advancing Transportation Infrastructure 3D Image-Based Reconstruction, Visualization, and Non-Contact Measurement for Condition Assessment and STEM Education, Institute For Creative, Arts and Technology, SEAD (Science, Engineering, Art, and Design) Mini Grant, PI: Cristopher D. Moen, PhD, PE, Co PI: Thomas Tucker, MFA, Kevin Kochersberger, PhD, Gerardo Flintsch, PhD, PE (\$3,000) Responsible for 33%.
- 2014 Christiansburg Institute, Augmented Reality for Historical Inquiry, NSF project, NSF grant, CNS, Division of Computer and Network Systems Grant, PI: Doug Bowman, Co PI: Todd Ogle, David Cline, David Hicks, Gurjot Singh, Stipend Support: Thomas Tucker (\$585,510.00) Awarded. Responsible for 1%
- 2014 Puppy CT Scan, Institute For Creative, Arts and Technology, SEAD (Science, Engineering, Art, and Design) Mini Grant, PI: Thomas Tucker, Co-PIs: Bess J. Pierce, DVM, DABVP, DACVIM, Jeryl C. Jones, DVM, PhD, Dipl. ACVR, Cynthia M. Otto, DVM, PhD, DACVECC (\$1,000) Awarded. Responsible for 100%.
- 2014 China Cave Scan, University, Jinan, China, Funded by the China Ministry of Education and the State Administration of Foreign Experts Affairs Grant (22,000 Yuan) Awarded. Responsible for 100%.
- 2015 China Cave Scan, University, Jinan, China, Funded by the China Ministry of Education and the State Administration of Foreign Experts Affairs Grant (22,000 Yuan) Awarded. Responsible for 100%.
- 2014 Nano Pod Project, Open at the Source, Institute for Creativity, Art, and Technology at the Cube, Moss Arts Center, PI: Thomas Tucker, Virginia Tech Co PI: Tohm Judson, Winston-Salem State University (\$1,500) Awarded. Responsible for 100%.
- 2014 Puppy CT Scan, Institute For Creative Arts and Technology, SEAD (Science, Engineering, Art, and Design) Mini Grant, PI: Thomas Tucker, Co-PIs: Bess J. Pierce, DVM, DABVP, DACVIM, Jeryl C. Jones, DVM, PhD, Dipl. ACVR, Cynthia M. Otto, DVM, PhD, DACVECC (\$1,000) Awarded. Responsible for 100%
- 2013 Living Lab for Asynchronous and Synchronous Investigation of Virtual and Real Environments, NSF grant, CNS, Division of Computer and Network Systems Grant, PI: Benjamin Knapp, Co PI: Nicholas Polys, Ivica Bukvic, Yong Cao, James Ivory, Dane Webster and Thomas Tucker (\$585,510.00) Awarded. Responsible for 12.5%
- 2013 Blacksburg's 16 Squares: A Study of Time in Place AR and VR Recreation of Blacksburg's 16 Squares, Funding from Institute for Creativity, Arts and Technology, SEAD (Science, Engineering, Art, and Design) Major Initiative Program Grant PI: Thomas Tucker (\$25,000) Awarded. Responsible for 68%
- 2013 Bodies of Interaction, Projection Mapping project inside the new ICAT cube, SEAD (Science, Engineering, Art, and Design) Mini-Grant, PI: Ann Kilkelly, Ph.D, MA, BA, Co-PIs: Carol Burch-Brown, BA, MFA, Thomas Tucker, BFA, Tohm Judson, Ph.D (\$3,000) Awarded. Responsible for 15%
- 2013 Salt Marsh Suite: Revealing a Coastal Estuary through 3D Visualization, Max/MSP/Jitter, and Projection Mapping SEAD (Science, Engineering, Art, and Design) Mini-Grant, PI: Carol Burch-Brown, BA, MFA, Co-PIs: Thomas Tucker, BFA, MFA, Sam Blanchard, BFA, MFA and Dongsoo Choi, BS (\$3,000) Awarded. Responsible for 15%.
- 2013 Odd Fellows Hall And New Town Virtual Reality Tour, Institute For Creative, Arts and Technology, SEAD (Science, Engineering, Art, and Design) Mini Grant, (\$3,000) Awarded. Responsible for 100%
- 2013 Odd Fellows Hall And New Town Virtual Reality Tour, Funding from Outreach and International Affairs, Virginia Tech (\$10,000) Awarded. Responsible for 100%
- 2012 Creating 3D Visualization Tools to Study Canine Puppy Socialization Behaviors, Institute for Creativity, Arts and Technology, SEAD (Science, Engineering, Art, and Design) Major Initiative Program Grant, (\$9,000) Awarded. Responsible for 100%
- 2007 Robotic Rack and Pinion Project, Zayed University Basic Research Funding Grant (\$3,000) Awarded. Responsible for 100%

- 2007 Ras Al Khaimah Project, GPS Survey, Zayed University Basic Research Funding Grant (\$3,000) Awarded. Responsible for 100%
- 2006 Modular Unit Project, Ziva Gallery, Zimbabwe, Africa, Zayed University Professional Development Grant. (\$3,500). Awarded. Responsible for 100%
- 2006 Self-Contained Modular Unit Project, Joan Mitchell Foundation Opportunity Grant, (\$5,000). Awarded. Responsible for 100%
- 2006 Ras Al Khaimah Project, Zayed University Basic Research Funding Grant, (\$1,500). Awarded. Responsible for 100%
- 2006 Self-Contained Modular Unit Project, Zayed University Basic Research Funding Grant, (\$1,500). Awarded. Responsible for 100%
- 1998 Joan Mitchell Foundation Recipient Grant, (\$10,000). Awarded. Responsible for 100%

#### AWARDS AND RECOGNITION

- 2022 Forum 8 Academic Achievement Award, Tucker, T. (July 15, 2022). NFT Content Creation for World Rally Championship. World 16 VR Symposium Workshop 2022 in Tokyo, Japan. Recipient of the Academic Encouragement Award (1,000 US) from FORUM 8.
- 2022 University of Miami Honorarium, Tucker, T., (March 28, 2022) Artist/Research Talk at the School of Communication and Interactive, Media at the University of Miami (Wolfson Building, 1021) hosted by the Ribeiro Innovation Fund Speaker Series
- 2022 Forum 8 Academic Achievement Award, Tucker, T. (November 18, 2022). NFT Content Creation for World Rally Championship. Forum 8 16th, Annual VR Symposium in Tokyo, Japan. Recipient of the Academic Encouragement Award (1,000 US)
- 2021 Forum 8 Academic Achievement Award, Tucker, T. (July 28, 2021). Scent + VR. World 16 VR Symposium 2021 in Tokyo, Japan (joined virtually due to Covid-19) Academic Encouragement Award (1,000 US) from FORUM8 on my project presented at the 2021 Summer Symposium Workshop.
- 2021 Forum 8 Academic Achievement Award, Tucker, T. (November 17-19, 2021). Scent + VR. Forum 8 15th Annual VR Symposium in Tokyo, Japan (presented virtually due to Covid-19). Awarded the Academic Encouragement Award (1,000 US) from FORUM8 on my project presented at the 15th VR Symposium. <https://www.forum8.co.jp/fair/df/day2-e.html>
- 2021 Course Release for VT 150 Research Leave Award for Spring 2021 (President's Office). (Awarded \$10,000)
- 2020 Institute for Creativity, Arts, and Technology (ICAT) Sabbatical Research Augmentation Leave Award for Spring 2020. (Awarded 50% salary).
- 2020 ICAT Day Board Choice Award  
Tucker, T., Judson, T., David Fransich, D., Monzel D., Freeman L., Ngo H., Comstock H., Ngo P., Kubalak J., Bibel J., Hamilton J., Upthegrove T. and Hardebeck G. Dee, M., Stiles, P., Hase, A., Okumura, H., Shokhov, H., Salisbury, A. and Duff, C. (May 5, 2020) The Virtual Sensory Interfaces Project. Presented at ICAT C+I Day. Awarded: This project was selected by a panel of experts as exemplary of the Creativity + Innovation Day goals. Online Presentation: <https://icat.vt.edu/events/2020/05/icat-c-i-day-2020/the-virtual-sensory-interfaces-project.html>
- 2020 Forum 8 Academic Achievement Award  
Tucker, T. and Choi, D. (June 24, 2020). Interactive Mixed Reality Buildings. World 16 VR Symposium in Taipei, Taiwan (joined virtually due to Covid-19) Academic Encouragement Award from FORUM8 on my project presented at the 2020 Summer Symposium Workshop.
- 2020 Forum 8 Academic Achievement Award, Tucker, T. and Choi, D. (November 19, 2020). Interactive Mixed Reality Buildings. Forum 8 13th Annual VR Symposium in Tokyo, Japan (presented virtually due to Covid-19). Awarded the Academic Encouragement Award from FORUM8 on your project presented at the 13th VR Symposium.
- 2019 Institute for Creativity, Arts, and Technology (ICAT) Sabbatical Research Augmentation Leave Award for spring 2020. (Individually awarded 50% salary.)
- 2018 National Technology Leadership Initiative (NTLI) Fellow for CUFA Social Studies Education.
- 2018 Academy Encouragement Award for Best VR in UC-WinRoad, Forum 8, World 16 17th 3DVR Conference November 20. Presented by the President Yuji Ito (CEO of FORUM 8) Tokyo, Japan. (Individually awarded \$1,000.)
- 2018 Academy Encouragement Award for Best VR in UC-WinRoad, Forum 8, World 16 Summer Workshop in New Zealand at University of Victoria at Wellington, NZ. (Individually awarded \$1,000.)

- 2017 Society for Information Technology and Teacher Education (SITE)/National Technology Leadership Initiative (NTLI) Technology Paper Award, College and University Faculty of National Council for the Social Studies, November, San Francisco, CA. (Group awarded.)
- 2017 Nexus Award at ICAT Day 2017 for the project that best exemplifies working at the nexus of science, engineering, arts, and design. Collaborators: Dongsoo Choi, Todd Ogle, David Hicks, Erik Westman, David Cline, David Newcomb, Yves Massotte, Celine Beauchamp, and Adrien Arles. (April 27- May 20.) The Disappeared Village of Vauquois. ICAT: Open (at the) Source- Sensing Place. Moss Arts Center, Virginia Tech, Blacksburg, VA. (Group awarded.)
- 2019 Recognition of Teaching Excellence Award from the Center for Excellence in Teaching and Learning (CETL) at Virginia Tech.
- 2017 Awarded The 2017 Favorite Faculty Nominations by a MFA CT graduate student Mahshid Gorjian
- 2017 Awarded The SITE/NTLI Technology Paper Award presented to Thomas Tucker, College and University Faculty of National Council for the Social Studies, November 2017, San Francisco, CA
- 2017 Awarded the National Distinction Salary Award presented by the Virginia Tech Board of Visitors on November 6, 2017
- 2017 Awarded the Nexus Award at ICAT 2017 “At the Nexus” Award for the project that best exemplifies working at the nexus of science, engineering, arts, and design for the Tucker, T., Choi, D., Ogle, T., Hicks, D., Westman, E., Cline, D., Newcomb, D., Massotte, Y., Beauchamp, C., & Arles, A. (April 27th-May 20th 2017). The disappeared village of Vauquois. ICAT: Open (at the) Source- Sensing Place. Moss Arts Center, Virginia Tech, Blacksburg, VA.
- 2016 Awarded Tenure at current rank of Associate Professor
- 2016 Nominated and accepted position for the Director of the Master of Fine Arts of Creative Technologies
- 2016 Awarded for the 15th 3DVR Simulation Contest on the Cloud “Academic Encouragement Award” November 20, 2016 Presented by the President Yuji Ito (CEO of FORUM 8) Tokyo, Japan.
- 2016 Nominated for 2016 XCaliber Award, nominated for Lighting and Projection Mapping Class
- 2015 Virginia Tech merit increase by the Board of Visitors, August 10, 2015.
- 2015 14th 3DVR Simulation Contest on the Cloud “Academic Encouragement Award” November 20, 2015 Presented by the President Yuji Ito (CEO of FORUM 8) Tokyo, Japan.
- 2015 Nominated and Finalist of the Virginia Tech Excalibur Award.
- 2015 Awarded and voted into the Center for Human-Computer Interaction group at Virginia Tech by Director Doug A. Bowman.
- 2014 “Top 8 Awesome Research Projects at Virginia Tech, One of the Top R&D Institutions in the US”, Puppies at Play Predict Disease; Recognized by Virginia Tech and Gothamist Staff.
- 2014 Academy Encouragement Award for Best AR in UC-WinRoad, Forum 8 Company, Tokyo, Japan.
- 2014 College Award in Creative Achievement, College of Architecture and Urban Studies, Annual Awards Ceremony, Virginia Tech, Blacksburg, VA.
- 2014 Merit Award for Valuable Academic and Service Contributions to the School, College and University, Virginia Tech, Blacksburg, VA.
- 2013 Joan Mitchell Foundation Residence Program Award, Joan Mitchell Center, New Orleans.
- 2013 PDI Nomination and Award, Professional Development Institute (PDI) Program, Virginia Tech.
- 2010 Academy Award for Best Virtual Reality Project using UC Win/Road Software, World 16 project with Forum 8, 4th International VR Symposium in Tokyo, Japan.
- 2005 Experts List, Zayed University publication recognizing top internationally known scholars and teachers.
- 2004 Merit Award, Zayed University top ten percent of faculty recognized for outstanding achievements.
- 1998 Ryerson Fellowship Award (SAIC)
- 1993-1996 Silver Screen Scholarship Award (KCAI)

#### EXHIBITION RECORD

- 2021 Ars Electronica, Senses Swirling in Virtual Reality: A Sensual Exploration in VR, Tucker, T., Judson, T., Franusich, D., Freeman L., Bibel J., Nguyen P., Dee M., Stiles P. and Upthegrove T. (September 8-11, 2021). Exhibition: <https://www.ars.nz/senses-swirling-in-virtual-reality-2/>
- 2021 Pelléas et Mélisande. Wyatt, A., Co-Director and Producer. Moss Arts Center, Fife Stage. Joshua May, co-director; Richard Masters, musical director; Tatiana Vintu, scenic designer; Chriss Russo, technical director and projection engineer; Tálloc López Watermann, projection designer; Cindy Moon, costume and mask designer; Amy Luce, stage manager; Thomas Tucker, projection consultant; Doug Bowman, computer science consultant.

- 2021 The ICAT Cube Research Performance at Virginia Tech, The Virtual Sensory Interfaces Project 2.0, Puppeteers: Hase, A., Tucker, T., Tucker, H., Weaver, R., Okumura, H., Winters, E., Dietz, T., Short, A., EDeisa E., Voice Director: Wyatt, A., Singers: Wright M., Jagdhari, T., Phillips, K., Docents: Copper, C., Knapp, B., PC Tower Controller: Franusich, D., Videographer/Photographer: Schoenborn, E., Sound Designer: Tohm Judson, T., Sound: Upthegrove, T., Hale, B., Support and Logistics: Copper, C., Carberry, R., Williams, H., Wyers M., Wine Lab: Kessman, C., Boyer, J., 3D Printing: Bibel, J., Feast & Company Catering: Boling, M., and Garito-Reighley, K. (December 17, 2021)
- 2017 Tucker, T., Choi, D., Ogle, T., Hicks, D., Westman, E., Cline, D., Newcomb, D., Massotte, Y., Beauchamp, C., & Arles, A. (April 27th- May 20th 2017). The disappeared village of Vauquois. ICAT: Open (at the) Source- Sensing Place. Moss Arts Center, Virginia Tech, Blacksburg, VA.
- 2017 Tucker, T., Choi, D., Ogle, T., Hicks, D., Bowman, D., Yu, R., Cline, D., Duer, Z., Upthegrove, T., & Westman, E. (May 2017). Visualizing World War I through mixed reality: The mystery of the destroyed village of Vauquois and the War of the Mines. ICAT Creativity and Innovation Day. The Cube, Moss Arts Center: Institute for Creativity, Arts, and Technology. Virginia Tech, Blacksburg, VA.
- 2017 Panel/Conversation topic presentation on panel for Civic Engagement at ACCelerate 16 Squares Project that took place at the ACCelerate Creativity and Innovation Festival 2017 hosted by The Smithsonian National Museum of American History and Virginia Tech.
- 2017 Exhibited at ACCelerate, ACC Smithsonian Creativity and Innovation Festival at the Smithsonian's National Museum of American History. The 16 Squares Project works to develop an online resource and on-site augmented and virtual reality experience of the original 16 Squares of Blacksburg, Virginia. The original Town of Blacksburg was laid out in a grid on land that was donated by William Black, for whom the town is named. The multilayered and sophisticated program not only provides a factual history of the town, but also an educational treasure about the successes and challenges of civic life, capturing the extensive emotions that people experienced as they lived at various times.
- 2017 The "ACCelerate Projection Mapping Project" took place at the ACCelerate Creativity and Innovation Festival hosted by The Smithsonian National Museum of American History and Virginia Tech. The projection mapping piece took place at the National Mall entrance of the Museum. Two 20,000 lumens Christie Projectors and a stereo sound system powered by two 220 volt generators were utilized to cover the 7012 square feet of the grand façade of the building entrance.
- 2016 Exhibited at South by Southwest Conference and Festival 2016 "Mirror Worlds" Mirror worlds is an infrastructure project created to study human interaction. With various sensors installed in the Moss Art Center, the system is able to sense the physical world and generate a virtual model of the building so people can interact from both physical and virtual environments in this shared space. For the South by Southwest Conference we created a mini Mirror Worlds by creating an interactive virtual experience of the actual space at SXSW. The whole Virginia Tech booth was recreated in 3D and the tracker was on site to capture audience members in real time. The data was then translated in real time.
- 2016 Performance at SECAC 2016 with "Moss Arts Center Projection Mapping" on the grand staircase. By utilizing project light and imagery, and complemented by sound, guests visiting the Moss Arts Center will experience a study in aesthetic design that showcases the unique architecture of the building.
- 2016 Performance at SECAC 2016 "Space Echoes: An Immersive Audio-Visual Environment" This fully immersive experience was a collaboration of Eric Lyon, Associate Professor of Practice from the School of Performing Arts, and Thomas Tucker, Associate Professor for the School of Visual Arts. The performance showcased an array of technologies available from the institute of Creativity, Arts, and Technology's state of the art Cube at Virginia Tech. 3D Animations and 3D sound compositions were presented in unison to create a sensation of other worldly experiences. The visual components of the animations were projected onto a Cyclorama screen that is 16 feet tall by 40 feet wide. Audience members wore 3D goggles while listening to 3D musical compositions relayed from an array of 139 speakers, collectively creating a new kind of visual and auditory encounter.
- 2016 Forum 8 Design Festival 2016 on November 20 on the Smithfield Class project showcasing the implementing of point cloud data, scanning, photogrammetry, 360 video and using quad copter for photogrammetry with the utilizing UC win/Road software and Virtual Reality project using the OculusRift and VIVE
- 2015 Projection Mapping of ABB 120 Robot, The Design Robotics Summit, Center for Design Research, Virginia Tech School of Architecture and Design.
- 2015 Salt Marsh Suite Installation, SEAMUS 2015, Experience Studio, Moss Arts Center, Salt Marsh Suite, Carol Burch-Brown, Ann Kilkelly, Tohm Judson and contributor Thomas Tucker (3D laser scanning)
- 2014 Projection Mapping Exhibition, World 16 Group with Forum 8, Tokyo, Japan at University of Hawaii,
- 2014 The Nano Pod Project, Institute of Creativity, Arts, and Technology (ICAT). Thomas Tucker and Tohm Judson, Winston-Salem State University.
- 2014 Salt Marsh Suite, Institute of Creativity, Arts, and Technology (ICAT) with support from the School of Performing Arts and the School of Visual Arts. Carol Burch-Brown, School of Visual Arts, Ann Kilkelly, School of Visual Arts, Thomas Tucker, School of Visual Arts, Tohm Judson, Winston-Salem State

University, Rachel Grant Bella, Steve Williams, Theatre Arts MFA, Katie Conner School of Visual Theatre Arts and DongSoo Choi, School of Visual Arts.

- 2014 Material and Embodiment, Projection Mapping Show in the gallery space 371. Alberta College of Art and Design, Calgary, Canada, Nicole Burisch, Canadian curator, artist, critic, Thomas Tucker artist and researcher, Gwendolyn Yoppolo, performance artist, Lucky Leone, sculpture artist.
- 2013 t3j Show: at the Contemplative Practices in a Technological Society, Conference at Virginia Tech in Blacksburg, VA
- 2013 t3j Show: at the Joan Mitchell Foundation Residence Program, Joan Mitchell Center in New Orleans
- 2011 Strictly Academic, Part 1: at The Womble Carlyle Gallery at the Milton Rhodes Center for the Arts, Winston-Salem, NC Exhibition features work by: Thomas Tucker, Scott Betz, Tammy Evans, Alison Fleming, Christine Kirouac, Leo Morrissey, Juie Rattley III, and Adrew Fansler
- 2011 Solo Show, Dialect Design Art Gallery, Charlotte, NC
- 2010 Winston Salem State University faculty show at Diggs Gallery, Winston-Salem, NC
- 2009 Solo Show, Amanda Schedler Fine Art, Homewood, AL
- 2008 Winston Salem State University faculty show at Diggs Gallery, Winston-Salem, NC
- 2007 Five schools/Five miles: at The Rhodes and Davis Galleries at The Sawtooth Center, Winston-Salem, NC
- 2007 Minus Reality, Art Attack Gallery, Dubai, United Arab Emirates
- 2007 Zayed University Faculty Exhibition, Meem Gallery, Dubai, United Arab Emirates
- 2007 Solo Show, East Tennessee State University in Slocumb Galleries, Johnson City, Tennessee
- 2007 Southern Appalachian International Film Festival (SOAPIFF) - Honorable mention prize for animation
- 2006 Solo Show, Zimbabwe Institute of "Vigital" Arts in Zimbabwe, Africa
- 2005 Joan Mitchell Foundation MFA Grant Recipients Group Show, CUE Art Gallery, NYC
- 2005 Reinventing the Present, Meramec Art Gallery, Saint Louis Community College, St. Louis, Missouri
- 2005 Reinventing the Present, Amelia Center, Gulf Coast Community College, Panama City, Florida
- 2004 Drawing Show, Overground Gallery, Abu Dhabi, United Arab Emirates
- 2004 14 Artists, faculty members from Zayed University, Cultural Center, Abu Dhabi, United Arab Emirates
- 2003 12 Artists, faculty members from Zayed University, Courtyard Gallery, Dubai, United Arab Emirates
- 1999 Synapse Group, a group of electronic artists Kevin Heisner, Robert Kephart, Daniel Miller, Fernando D. Orellana, Sabrina Raaf, Eric Ravenstein, Valerie Sullivan Fuchs, Karen Thornton, Thomas Tucker, Lauren Was, Amy Youngs. Earth Goddess Gallery, Chicago, IL
- 1999 Group Show, The Aaron Packer Gallery, Chicago, IL
- 1998 Group Show of Graduating Seniors, Contemporary Art Workshop, Chicago, IL
- 1998 M.F.A The School of the Art Institute of Chicago, graduating show (sold out), Chicago, IL
- 1996 B.F.A. Kansas City Art Institute graduating show (sold out), Kansas City, MO
- 1994-1996 Kansas City Art Institute National Tour: Kansas City, MO

#### VISITING ARTIST/RESEARCH LECTURES

- 2021 Tucker, T., (September 10, 2021) The Garden Aotearoa Artists Talk at Ars Electronica, Senses Swirling in Virtual Reality: A Sensual Exploration in VR  
[https://www.youtube.com/watch?v=y0B\\_-Vwf8AI](https://www.youtube.com/watch?v=y0B_-Vwf8AI) (1:13:40 minute mark)
- 2021 Tucker, T., (July 28, 2021). Scent + VR. World 16 VR Symposium 2021 in Tokyo, Japan (joined virtually due to Covid-19) Presented at the 2021 Summer Symposium Workshop.
- 2021 Tucker, T., (November 17-19, 2021). Scent + VR. Forum 8 15th Annual VR Symposium in Tokyo, Japan (presented virtually due to Covid-19). Presented at the 15th VR Symposium. <https://www.forum8.co.jp/fair/df/movie-ppt/2021/day2-w16.html> (at the 3:40 minute mark)
- 2021 Tucker, T., Voice of America (VOA) interview on VR Research: The Virtual Sensory Interfaces by Andrei Dziarkach for the Technology story aired on TV-show 'Detali' on Current Time Channel (<https://www.currenttime.tv/>) <https://www.youtube.com/watch?v=M26pkncrQxQ> (at the 15:41 minute mark)
- 2021 Tucker, T., (April 15-16, 2021) The Power of Immersive Storytelling, the 5th CHCI workshop on the future of human-computer interaction, presentation of VR Research: The Virtual Sensory Interfaces held virtually.
- 2021 Tucker, T. (March 1, 2021). Open Education Symposium interdisciplinary panel, "Connecting the Opens: A Panel Discussion for the Future Professoriate." The issues discussed included cost and issues of persistent access/equity, pedagogical affordances, persistent access, and editability/customization.



This panel consisted of faculty colleagues from across Virginia Tech and within the University Libraries.

- 2021 Ogle, T., Hicks, D., and Tucker, T., (February 10, 2021) presented Accessing the Past through Virtual Reality: First World War Landscapes at the Gorffennol Digidol/Digital Past Conference in New Technologies in Heritage, Interpretation & Outreach held online via Zoom hosted by the Royal Commission on the Ancient and Historical Monuments of Wales.
- 2016 Presented at the DIAVOLO I Architecture in Motion, ICAT DAY Keynote presentation with Jacques Heim, Daniel Wheeler, Chisa Yamaguchi and the Technical Team at Virginia Tech. Carol and I presented on stage our projection mapping research, animation and shadow studies
- 2016 ICAT Learning Studio (Sandbox), Community Meeting Lecture – A Virtual Reality Experience by Thomas Tucker and Eric Lyon and two other SOVA students.
- 2016 ICAT Learning Studio (Sandbox), Community Meeting Lecture – Stepping into the past through visualization by David Hicks, David Cline, Todd Ogle, Thomas Tucker and two other SOVA students.
- 2016 2016 College of Architecture and Urban Studies, Research Symposium – Robotic Projection Mapping, Project by Thomas Tucker, David Clark and Matthew Bender
- 2016 Innovation Space, Storytelling: Presented our VR and AR research by Thomas Tucker David Hicks, David Cline, and Todd Ogle.
- 2016 Meet the Makers, Newman Library Multipurpose Room, presented my research from the last four years at Virginia Tech, on Tuesday, April 26th 2016 at 7:00 pm.
- 2016 Presented to The Elumenati and The Newseum our Cyclorama Demo in the ICAT Cube.
- 2016 Presented to Science Applications International Corporation (SAIC), Doug Wagoner, President and James Jackson, Senior Vice President. Todd Ogle and I presented our World War I Virtual Reality project in the Cube.
- 2016 Presented to Professor Bailey’s MA class on the New Town/Odd Fellow’s Project at the Odd Fellow Hall, Blacksburg, VA
- 2016 Presented to Professor Ann-Marie Art History Class (200 students) on 3D scanning research of St.Denis, Rippon, and Australia aboriginal cave painting sites.
- 2015 ICAT Learning Studio (Sandbox), Community Meeting Lecture – 16 Squares AR and VR Project by Thomas Tucker, Todd Ogle, David Hicks, David Cline, Tom Sherman, Phat Nguyen, Daniel Monzel and 6 other SOVA students.
- 2015 ICAT Learning Studio (Sandbox), Community Meeting Lecture – World War I Project by Thomas Tucker, Todd Ogle, David Hicks, David Cline, Phat Nguyen.
- 2015 ICAT Learning Studio (Sandbox), Community Meeting Lecture – Motion Capture Puppy Project by Jeri Jones and Bess Pierce.
- 2015 Presented to Professor Bailey’s MA class on the New Town/Odd Fellow’s Project at the Odd Fellow Hall, Blacksburg, VA
- 2015 Presented to Professor Ann-Marie Art History Class (200 students) on 3D scanning research of St.Denis, Rippon, and Australia aboriginal cave painting sites.
- 2015 Odd Fellow Hall Open House, April 25th, 2015, “Presentation of New Town Remembered, A Virtual Re-Creation”. Attendees could walk the streets, experience the sounds and sights, and meet residents in a virtual environment. Nikki Giovanni, Neal Wymys and the release of the children’s book Three Boys in New Town will be presented. The program was created by Thomas Tucker (School of Visual Arts), Todd Ogle (VT Technology-enhanced Learning and Online Strategies), and Tom Sherman (Blacksburg Museum and Cultural Foundation).
- 2014 ICAT Learning Studio, Community Meeting Lecture – “3D Visualization Tools” by Thomas Tucker and Bess Pierce.
- 2014 SOVA 50th, 2014 Faculty Research Symposium, Thomas Tucker presenter of “Puppy Motion Capture and Odd Fellows Hall”
- 2014 Presented 3D scanning research at UNC Asheville, Keith Krumpe and Christopher Oakley, Head of New Media faculty and animator.
- 2014 Presented my 3D scanning research at UNC Chapel Hill to the Transatlantic Teacher Scholars Program: Change of Time and Place in the Meuse Argonne American Cemetery. American Battle and Memorial Commission.
- 2013 Artist lecture on current research and projection mapping workshop at Xavier University, Art Department in New Orleans, LA
- 2013 Artist lecture at Tulane University, Art Department in New Orleans, LA on current research
- 2012 Artist lecture on current research and projection mapping workshop at Stetson University, Art Department in DeLand, FL
- 2011 Artist lecture at University of North Carolina School of the Arts, Film Department on current “T2 show”

animation collaboration project with Tohm Judson

- 2011 Lecture at the Idea Exchange at the Center for Design Innovation. Presenters include: Nickolay Hristov, CDI & WSSU, Dennis Nikolaidis, Animusing Productions, Josh Tan, WFUSM School of Biomedical Engineering and Sciences, Thomas Tucker, WSSU Department of Fine Arts, David Norman & DeEtta Famiano, Famiano Design Group, Keith Hobgood, Out of Our Minds Animation Studios, Glenn Johnson & colleagues, B/E Aerospace
- 2011 Lecture at Piedmont Community College in Roxboro, NC on collaborative Virtual Reality research project with the Forum 8 World 16 Group in Tokyo, Japan
- 2010 Lecture at Forsyth Tech in Winston-Salem, NC on collaborative Virtual Reality research project with the Forum 8 World 16 Group in Tokyo, Japan
- 2010 Lecture at the Institute of Electrical and Electronics Engineers section for Winston-Salem, NC
- 2010 Lecture at the Idea Exchange at the Center for Design Innovation on my research with the Forum 8 World 16 group in Tokyo, Japan
- 2010 Lecture at World 16 workshop, at University of California in Santa Barbara on current research and proposals for VR model research on Dubai, UAE project
- 2010 Guest Artist Lecture at Kansas City Art Institute, Kansas City, MO
- 2009 Lecture at the Idea Exchange at the Center for Design Innovation on Thomas Tucker and Ryan Gilliam (WSSU Art & Design student)
- 2009 Pecha Kucha Night at High Point University at the Design, Art and Technology Symposium
- 2009 Guest Artist Lecture at Amanda Schedler Fine Art, Homewood, AL
- 2009 Lecture at the Idea Exchange at the Center for Design Innovation on current body of work
- 2008 Lecture at Idea Exchange at the Center for Design Innovation on my findings from the International Conference on Entertainment Computing at Carnegie Mellon University
- 2007 Guest Artist Lecture, University of Alabama at Birmingham Art Department
- 2007 Guest Artist Lecture, East Tennessee State University in Slocumb Galleries
- 2006 Guest Artist Lecture and Five Day 3D Workshop, Zimbabwe Institute of Vigital Arts in Zimbabwe, Africa
- 2005 Guest Artist Lecture, Opening of Meramec Art Gallery, St. Louis, Missouri
- 2005 Guest Artist Workshop Lecture one day on Maya and the effects of 3D in the commercial design industry, Latifa College, Dubai, UAE
- 2005 Guest Artist Lecture, Abu Dhabi Women's College, Higher Colleges of Technology, Abu Dhabi, UAE
- 1998 Guest Artist Lecture, Virginia Common Wealth University, Richmond, Virginia
- 1998 Guest Artist Critique, Virginia Common Wealth University, Richmond, Virginia
- 1998 Guest Artist Lecture, Mobil Headquarters, Richmond, Virginia
- 1997 Guest Artist Lecture, The School of the Art Institute of Chicago (Post Back Students during the Summer Term), Chicago, IL

#### GALLERY OWNER/CURATOR

- 2005 Curator: Miniature Chair Design Exhibition, Lecturer: Susan Hefuna, Professor of Art and Design from the German University in Cairo, Reception opened by H.H. Sheikh Nahayan Mabarak Al Nahayan
- 2003-2005 Owner: Overground Gallery, The first gallery in Abu Dhabi showing avant-garde works ranging from video installations, paintings, drawings, and robotic installations. Represented by the gallery: Jason Demarte, Michael Rodriguez, Chae Ho Lee, Terry Dowse, Francoise Dureese, Todd Devriese, Patricia Ball, Russell Hamilton, Neil Chowdhury and Thomas Tucker.

#### PRESENTATIONS AT CONFERENCES

- 2017 Presented at the Forum 8 Design 8th VR Summer Workshop at Massachusetts Institute of Technology MIT on July 18-21 on the scanning MIT site and implementing latest tools of point cloud data, scanning with the utilizing UC win/Road software and Virtual Reality project using the HTV VIVE VR System.
- 2016 Presented at the Forum 8 Design Festival in Tokyo, Japan on the Smithfield Class project showcasing the implementing of point cloud data, scanning, photogrammetry, 360 video and using quad copter for photogrammetry with the utilizing UC win/Road software and Virtual Reality project using the Oculus Rift and VIVE.
- 2016 Presented at the World 16, 7th Annual International VR Symposium Workshop hosted by Forum 8 in Osaka, Japan. Dongsoo Choi and I presented our research with Photogrammetry and Laser scanning.
- 2016 Presented at the National Endowment for the Humanities (NEH) Advanced Topics in the Digital Humanities Summer Institute at UCLA in Los Angeles. David Cline and I presented our findings on the 16 Squares project.

- 2015 Panel discussion at the Forum 8 Design Festival 2015 at Forum 8 on November 20th on the future of Augmented and Virtual Reality in our field with Yoshi Kovayashi from Arizona State University, Matthew Swarts from Georgia Tech, Ruth Ron from Shenkar College, Kostas Terzidis from Harvard University, Paolo Flemma from University of Pisa, Tomoshiro Fukuda from Osaka University and Taro Narahara from New Jersey Institute of Technology.
- 2015 Ogle, T., Tucker, T. & Bunin, C. (2015, March). Bringing the War Back Home: Using Geospatial and Situation-based Technology to Teach World War I. Poster session presented at the Society for Information Technology and Teacher Education International Conference, Las Vegas, Nevada.
- 2015 Hicks, D., Ogle, T., & Tucker, T.(2015, March). Visualization as a Tool to Support the Inquiry Arc in Social Studies Education: Notes from the Field. Paper presented at the Society for Information Technology and Teacher Education International Conference, Las Vegas, Nevada.
- 2014 Singh, G., Bowman, D., Ogle, J.T., Hicks, D., Cline, D., Ragan, E., Johnson, A., Zlokas, R., and Tucker T. (2014, September). CI-Spy: Using Mobile-AR for Scaffolding Historical Inquiry Learning. Poster session presented at the IEEE International Symposium on Mixed and Augmented Reality, Munich, Germany.
- 2014 The 15th UC-win/Road Conference, Tokyo, Japan, Laser Scanning for research about the cave of bats Presented research on a case study using UC-win/Road used in the ecological research of bats.
- 2014 The 15th UC-win/Road Conference, Tokyo, Japan, Projection mapping of World 16 group work.
- 2014 World 16 Project, University of Hawaii, Honolulu, HA, Presentation on Laser Scanning for research about the cave of bats. Presented research on a case study using UC-win/Road used in the ecological research of bats and projection mapping exhibition of my work.
- 2014 College Art Association, 102 Annual Conference, Chicago, IL, Art Historians interested in Pedagogy and Technology, Visual Histories in Virtual Spaces, Engaging on the Value of Artists' Legacies, Chair: Judy B. Bullington, Belmont University, Dominic Marnier, University of Guelph Ron Hawker, Alberta College of Art and Design and Thomas Tucker Virginia Polytechnic Institute and State University (Australia, St. Denis and Rippon)
- 2013 eLearning Conference, Wilmington, NC, Presentation on Virtual Reality as an Instructional Tool to Recreate a Segregation Era Community, Thomas Tucker, School of Visual Arts Virginia Tech
- 2013 Seminar for Arabian Studies at The British Museum, 26th – 28th July, 2013, Presented paper on Computer-based Analysis of the Performance and Spatial Organization of Historic Towns in Qatar and the United Arab Emirates. R. Hawker, Alberta College of Art and Design, T.Tucker, School of Visual Arts, VT and M. Whiteley, Alberta College of Art and Design.
- 2013 University Arts Association of Canada Conference in Banff, Alberta, Canada presented paper on Nookoowayi: Digitalizing a Siksika Tipi, in the Narratives of Continuity and Resistance in Aboriginal Art session, Thomas Tucker, Virginia Tech and Ron Hawker, Alberta College of Art and Design, October 18-20.
- 2013 AR Camp Conference, Canberra University in Canberra, Australia, Conducted presentations and workshops on Unity work of Odd Fellows Hall, motion capture research and the scanning of several indigenous cave sites with a cultural heritage group and local experts. FARO 3D laser scanned the caves and the aboriginal rock art.
- 2011 5th International VR symposium, World 16 project: presentation on VR model research on character simulation with motion capture data Tokyo, Japan (presented published paper and VR project)
- 2011 World 16 project: presentation on VR pipeline for 3D modeling and motion capture for UC/Win road software, Pisa, Italy
- 2011 Archaeology in the United Arab Emirates Conference 2011 in Ali Ainn, United Arab Emirates: Thomas Tucker (WSSU), Ron Hawker and Dina (Zayed University) presented published paper on The Analysis of Digitally-Recreated Heritage Spaces: Case Studies from the United Arab Emirates.
- 2010 4th International VR Symposium, World 16 project: presentation on VR model research on Dubai, UAE Project, Tokyo, Japan (presented published paper and VR project).
- 2010 The Fifth International Conference of ASCAAD (The Arab Society for Computer Aided Architectural Design), Fes, Morocco. Thomas Tucker (WSSU), Ron Hawker and Dina (Zayed University) will present their published paper on understanding of architecture in the United Arab Emirates.
- 2010 Triangle Game Conference, Raleigh NC, Thomas Tucker (WSSU), Andrew Young (Independent game designer) and Tony Makin (Guilford Technical Community College) presented their Piedmont Triad Partnership game development findings on their Mayo surgical training game.
- 2010 The Center of Design and Innovations at Idea Exchange, Winston Salem, NC, Thomas Tucker and the Piedmont Triad Partnership Game Development Team presented their findings of their recent surgical training game.
- 2009 Annual Scientific Meeting, American College of Veterinary Radiology, Memphis, Tennessee with Josh Tan (Wake Forest), Jeri Jones (Virginia Tech), Judy Foxworth and Ben Long (WSSU), and Thomas

Tucker (WSSU) will present a poster presentation of our findings from our case study that indicate the use of multi-slice CT, motion capture, and computer animation on feasible techniques for visualizing and modeling joint movements in working dogs.

- 2009 6 Days in November Conference, presented at The Center for Design Innovation with, Corey Bruse (CDI), Tammy Evans (WSSU faculty), Tunde Adeyemi (WSSU student), a software traffic simulation augments discussion of possibilities for public art, considering the upcoming renovation of bridges along the downtown Winston-Salem stretch of Business Route 40.
- 2009 The Arts Council's 60th Anniversary Luncheon, presented a software traffic simulation video showing possibilities for public art, considering the upcoming renovation of bridges along the downtown Winston-Salem stretch of Business Route 40.
- 2009 Emirates Heritage Club and the Zayed Center for Heritage and History Sixth Annual Archaeology Symposium: A New Generation of Archaeologists: Building National Capacity through Teaching, Media and Technology, Abu Dhabi, United Arab Emirates Al Ainn, Emirati Heritage Architecture in Geographic Context: The Rams-Dhayya-Barama triangle as Case Study, (co-presented lecture)
- 2009 3rd International VR Symposium, World 16 project: presentation on VR model research on RAK project Tokyo, Japan (presented published paper and VR project)
- 2009 10th UC-win/Road Conference, Lecture at 3D Realtime Virtual Reality, Tokyo, Japan.
- 2008 Digital Media and its Applications in Cultural Heritage 2008 Conference, Petra University, Amman, Jordan. "Maya Simulations of Place, Space and Climate: Digital Media and Its use in Understanding Vernacular Architecture in the United Arab Emirates" (presented published paper)

#### PUBLICATIONS

- 2021 Gutkowski, N., Quigley, P., Ogle, T., Hicks, D., Taylor, J., Tucker, T., & Bowman, D. (n.d.). Designing Historical Tours for Head-Worn AR. In Unknown Conference (pp. 26-33). doi:10.1109/ISMAR-Adjunct54149.2021.00016
- 2021 McNabb, K. B., Miles, R., Wolfe, M. L., DePauw, K. P., Ogejo, J. A., & Tucker, T. J. (2021). Open Education Forum 2021: Connecting the Opens: Open Access, Open Education & More. Virginia Tech.
- 2021 Miles, R., McNabb, K., Ogejo, J., Tucker, T., & Wolfe, M. (2021). Open Education Forum 2021: Connecting the Opens: Open Access, Open Education & More. In 2021 Open Education Symposium. Blacksburg, VA. Retrieved from <https://vtechworks.lib.vt.edu/handle/10919/102636>
- 2021 Schnabel, M., Kobayahi, Y., Bennadji, A., Choi, D., Fiamma, P., Fukuda, T., Lo, T., Novak, M., Narahara, T., Ron, R., Pencreach, Y., Swarts, M., Terzidis, K., Tucker, T., and Vital, R., (2021). Virtual world16: Virtual design collaboration for the intersection of academia and industry. In Projections - Proceedings of the 26th International Conference of the Association for Computer-Aided Architectural Design Research in Asia, CAADRIA 2021 Vol. 2 (pp. 203-212).
- 2021 Skarbez, R., Gabbard, J., Bowman, D. A., Ogle, T., & Tucker, T. (2021). Virtual replicas of real places: Experimental investigations. IEEE Transactions on Visualization and Computer Graphics. doi: 10.1109/TVCG.2021.3096494
- 2021 Ogle, J., Hicks, D., & Tucker, T. (2021). Accessing the past through Virtual Reality: First World War Landscapes (Digital Heritage). In Comisiwn Brenhinol Henebion Cymru / Royal Commission of the Ancient and Historical Monuments of Wales Digital Past Conference.
- 2021 Tucker, T., Wyatt, A., Judson, T., & Franusich, D. (2021). Virtual Sensory Interfaces. NIME International Conference on New Interfaces for Musical Expression. doi: 10.21428/92fbef44.9203be1d
- 2019 Grado, R., Bowman, D., Ogle, T., Tucker, T., & Gabbard, J. (2019). "Virtual Replicas of Real Places: Experimental Investigations." Journal Paper presented at IEEE VR 2019 Osaka Conference, Osaka, Japan.
- 2018 Sweeney, S. K., Newbill, P., Ogle, T., Terry, K., Hicks, D., Tucker, T., & Cline, D. (2018). "Using Augmented Reality and Virtual Environments in Historic Places to Scaffold Historical Empathy." Tech Trends 62, 114-118.
- 2018 Yu, R., Duer, Z., Ogle, T., Bowman, D., Tucker, T., Hicks, D.,...Liu, X. (2018) "Experiencing an Invisible World War I Battlefield Through Narrative-Driven Redirected Walking in Virtual Reality." Paper presented at the Institute of Electrical and Electronic Engineers Conference on Virtual Reality and 3D User Interfaces, Reutlingen, Germany. Paper published in the Proceedings of the IEEE Conference on Virtual Reality and 3D User Interfaces (VR), pp. 313-319.
- 2018 Ogle, T., Hicks, D., Johnson, A., & Tucker, T. (2018). "Authentic Problem-Based Learning with Augmented Reality." Paper presented at the 13th International Conference of the Learning Science, London, UK. Paper published in J. Kay & R. Luckin (Eds.), Rethinking Learning in the Digital Age: Making the Learning Science Count, Volume 1. Proceedings of the 13th International Conference of the Learning Sciences (pp. 136-143). International Society of the learning Sciences: London.
- 2018 Verdegem, S., Ogle T., Hicks, D., Tucker, T., Duer, Z., & Choi, D. (2018). "Belgium WWI Archeological

- Summer 2018 VR and AR Data with Dig Hill Group.” Presentation at the Archeological Summit at the University of London, London, UK.
- 2018 Tucker, T., & Choi, D. (2018). “Belgium, Dig Hill 80, WWI Archeological Site Project.” Presentation at the Forum 8 Design Festival 2018 in Tokyo, Japan.
- 2018 Tucker, T., & Choi, D. (2018). “Belgium, Dig Hill 80, WWI Archeological Site Project.” Presentation at the Forum 8, World 16 Summer Workshop in New Zealand at University of Victoria at Wellington, NZ.
- 2018 Hicks, D., Ogle, T., Duer, Z., Tucker, T., Choi, D., Mullins, R. & Shelbourne, S. (2018). “Virtual Reality and Immersive Experiences of a Great War Battlefield.” Presentation at the annual conference of the National Council for the Social Studies, Chicago, Ill.
- 2018 Hicks, D., Ogle, T., Duer, Z., Tucker, T., Choi, D., Mullins, R., ... Shelbourne, S. (2018). “Virtual Reality and Immersive Experiences of a Great War Battlefield.” Presentation at the annual conference of the National Council for the Social Studies, Chicago, Ill.
- 2018 Johnson, A., Hicks, D., Ogle, T., Duer, Z., Tucker, T., Choi, D., ...Mullins, R. (2018). “Design-Based and Transdisciplinary Research Using Mixed Reality to Teach about Hard and Hidden Histories.” Symposium presentations at the annual conference of the college and faculty assembly of the National Council for the Social Studies, Chicago,
- 2018 Nappier, M., Tucker, T., & Smith, B. (2018). “Use of Virtual Reality in Teaching Anatomy and Clinical Skills.” Presentation in Educators/Veterinary Educator Collaborative Combined Symposium. Ithaca, NY.
- 2018 Ogle, T., Hicks, D., Tucker, T., & Duer, Z. (2018). “If This Place Could Talk: The Lost Village of Vauquois.” Invited demonstration/presentation at the Applied Research on Immersive Environments for Learning / Instructional Technology SIG at the annual conference of the American Educational Research Association. New York, New York.
- 2017 Stoddard, J., Hicks, D., Ogle, T., Tucker, T., Walsh, B., & van Hover. S. (2017). “Teacher Development and Place-Based History and Heritage Education.” Presentation at the annual HEIRNET (History Educators International Research Network) conference, Dublin, Eire.
- 2017 Hicks, D., Ogle, T., Tucker, T., Cline, D., and Abbott, J. (2017). “Introducing Mixed Reality (AR and VR) to Support Teaching and Learning History via a Transdisciplinary Course.” Presentation at the International Technology and Teacher Education (ITTE) Conference, University of Hull, Kingston Upon Hull, UK.
- 2017 Hicks, D., Johnson, A., Ogle, T., van Hover, S., Tucker, T., Ragan, E., & Bowman, D. (2017 November). “Making the Invisible Visible: Evaluating the Use of Augmented Reality to Teach a Forgotten Local History – School Segregation – with 5th Graders.” Paper presented at the annual conference of the College and Faculty Assembly of the National Council for the Social Studies. San Francisco, CA. This conference paper received the 2017 SITE / National Technology Leadership Initiative Technology Paper Award.
- 2017 Ogle, T., Hicks, D., Tucker, T., Cline, D., & Abbott, J. (2017). “CI Spy: The Use of Mixed Reality to Support Inquiry into Local Hidden Histories.” Invited presentation at the Applied Research in Immersive Environments for Learning SIG at the annual conference of the American Educational Research Association, San Antonio, TX.
- 2017 Ogle, T., Hicks, D., Tucker, T., Cline, D., & Abbott, J. (2017). The use of mixed reality to support inquiry into hidden histories. Invited presentation at the Applied Research in Immersive Environments for Learning SIG at the annual conference of the American Educational Research Association, San Antonio, TX.
- 2017 Yu, D., Ogle, T., Tucker, T., Hicks, D., Bowman, R., Duer, Z. Experiencing an Invisible World War I Battlefield Through Narrative-Driven Redirected Walking in Virtual Reality E. Accepted paper for IEEE VR Conference 2018 Conference Papers, Reutlingen, Germany
- 2016 Book Publication “EMERGE”, Projects at the Nexus of Science, Engineering, Art and Design, 2016: Projects: Four Four Beat Project pg. 46-47, Blacksburg 16 Square pg.52-53, Bridge Decking Mapping pg. 56-57, Puppy Project pg. 64-64 and Mirror Worlds pg. 72-73
- 2016 Publication on Introducing Digital Humanities Projects and ARCHIE to Social Studies Preservice Teachers: Notes from the Field, SITE 2016 (Accepted) PI: David Hicks, Co-PI, Todd Ogle, Aaron Johnson, Lisa Pennington, Stephanie Van Hover and Thomas Tucker.
- 2015 Publication on “CI-Spy: Designing A Mobile Augmented Reality System for Scaf-folding Historical Inquiry Learning”, ISMAR, 2015 (Accepted) PI: Gurjot Singh, Co-PI Doug A. Bowman, David Hicks, David Cline, J. Todd Ogle, Aaron Johnson, Rose-mary Zlokas, Eric Ragan and Thomas Tucker).
- 2015 Presented our paper Visualization of Historic Sites from Memory, Memorialization and Historical Inquiry at the 21st Annual Online Learning Consortium International Conference, October 14-16 in Orlando, Florida with Todd Ogle Virginia Tech (TILOS).
- 2015 Presented at the Forum 8 Design Festival 2015 on November 20 on implementing point cloud data and projection mapping utilizing UC win/Road software and Virtual Reality project using the OculusRift.

- 2015 Center for Instructional Development and Education Research (CIDER), CIDER Presentation in The Pedagogy in Practice Panel and Reception in August 2015 with Todd Ogle, David Hick and Thomas Tucker.
- 2015 Exploratory Work to Understand the Potentials and Limits of LiDAR Points in Cloud Data, Ji-Sun Kim (CGIT), Ayat Mohammed (CS, ARC), Peter Sforza (CGIT), Joe Newman (CGIT), Thomas Tucker (ICAT), High Performance Computing Day poster presentation at Virginia Tech.
- 2015 Hicks, D., Ogle, T., & Tucker, T.(2015, March). Visualization as a Tool to Support the Inquiry Arc in Social Studies Education: Notes from the Field. Society for Information Technology and Teacher Education International Conference, Las Vegas, Nevada.
- 2015 American Battle Monuments Commission, Volume 4, pg. 11 iBook, Transatlantic Teacher Scholar's Project
- 2015 Meuse Argonne Battlefield 3D Visualizations, <https://www.youtube.com/watch?v=1NCbx2lszNw>, Published on Oct 22, 2014, UNC/VT Transatlantic Teacher Scholar's Project
- 2015 ESM/BEAM newsletter article, September 5, 2014, pg. 12-13 Sound Leadership, Capturing Information on the Dynamics of How Bats Fly Together in a Swarm.
- 2014 College of Architecture and Urban Studies, Faculty Research Symposium, Celebrating 50 Years of Research. 1964 – 2014, pg. 166-67, Odd Fellow Hall Project
- 2014 Virginia Tech Magazine, Fall 2014, pg.36-39, Exploring the Human-Animal Bond at Virginia Tech, Puppies in 3-D
- 2014 Channel WDBJ 7, July 8, 2013, Blacksburg is Looking to Preserve African American History, Produced by Orlando Salinas.
- 2014 Collegiate Times, Tuesday, January 28, 2014, School of Visual Arts studies puppies for science, Page 1-2 (writer Emily Hughes)
- 2013 Improving Understanding of Early Behavioral Indicators of Lumbosacral Disease in Working Dogs using 3D Visualization of Skeletal Movements during Working Tasks: Feasibility Study, Jeryl C. Jones, Thomas J. Tucker, Joshua C. Tan, Bess J. Pierce, Judy L. Foxworth, Benjamin Long, Tisha A.M. Harper, Daniel Moreno, Journal of Veterinary Behavior (2013) 1-7
- 2013 Virginia Tech News, December 6, 2013, Faculty Members Preserve Local History through Art and Technology, article and video produced by Scott Parker and Katie Gehrt (online article and video of the week on VT website and Virginia Tech Daily news and information for Virginia Tech Employees
- 2013 Collegiate Times, Thursday, October 31, 2013 ICAT innovates at the nexus, article on ICAT Tech or Treat with photo of the projection mapping project.
- 2011 Exploring New Trends: Information-oriented Strategy and Technologies in Civil Engineering, Construction, Transportation and Environment, Tokyo, Japan pg 1-3
- 2010 Forum 8 Design Festival 2010-3 Day Conference, Tokyo, Japan, November 18-20, 2010, pg. Day2\_III-1-1
- 2010 5th Arab Society for Computer Aided Architectural Design ASCAAD Conference 2010 "Not Just Another Pretty Face" pg. 249-259
- 2010 Kyoryo & Toshi Project (The Bridge & Urban Project Monthly), Volume 46. No. 5, 2010, pg. 37-39 Tokyo, Japan publication
- 2009 Forum 8 Design Festival 2009-3 Day Conference, Tokyo, Japan, November 18-20, 2009, pg. 80-87
- 2009 3D Realtime Virtual Reality, 10th UC-win/Road Conference, Tokyo, Japan, May 20, 2009, pg. 37-45
- 2009 The Birmingham News, in the section "Play", p. 8G, January 25, 2009, written by James R. Nelson under title 'On the Cusp'.
- 2008 Digital Media and its applications in Cultural Heritage 2008 "Maya Simulations of Place, Space and Climate: Digital Media and Its use in Understanding Vernacular Architecture in the United Arab Emirates" pg. 545-560
- 2007 Time Out magazine Dubai, Volume 7, Issue 20, p.49, May 2007, Meem Gallery exhibition
- 2005 Created a Catalogue/DVD of the gallery exhibition of the Portable Gallery Project 2005
- 2005 Gulf Coast Community College, "The Gull's Cry", Fall, 2005, Volume 48, Issue 2, "Thomas Tucker", Art Show in Panama City, Florida
- 2005 The News Herald Panama City, Florida, "The Entertainer", Friday-Saturday, September 30-October 6, Focus 3, "Art, Animation"
- 2005 The News Herald Panama City, Florida, Wednesday, October 5, 2005, Sec.7B, "Thomas Tucker Reinventing the Present: New Drawings and Animations"
- 2005 Cue Gallery, New York City, NY catalog for the Joan Mitchell Foundation recipient show
- 2005 Art in America, Artist Index Listing and Gallery & Museum Representation by Meramec Art Gallery in

St. Louis, Missouri

- 2005 Art & Design Auction 2005 catalog, Kansas City Art Institute, p. 48
- 2004 Khaleej Times, Tuesday, May 11, 2004, Volume 3, Issue 23
- 2004 "Arty Dozen Get Total Attention" – Faculty members of the Zayed University showcase paintings at the Courtyard Gallery

#### INTERNATIONAL AND NATIONAL RESEARCH COLLABORATIONS

- 2017-18 Volvo Trucking project, working with Volvo Group Trucking based out of Dublin, VA in developing AR and VR solutions to design and implantation of their trucking line. We are currently working with a team of Virginia Tech faculty and students in developing new pipelines and interactive VR solutions for the future. Working in conjunction with Todd Ogle from VT and Steven Horton, Max Sikorski, and Jeffrey Pasciak from Volvo Manufacturing.
- 2017/18 Gilbane VR project, working with Gilbane Construction Company based out of Arlington, VA in developing AR and VR solutions to design and implantation of their building construction research development. We are currently working with a team of Virginia Tech faculty and students in developing new pipelines and interactive VR solutions for the future. Working in conjunction with Todd Ogle and DongSoo Choi from VT and David Childress Director of Interiors and Tim Welch Construction Executive from Gilbane.
- 2016-17 Worked with ICAT and Diavolo Dance Company based out of Las Angeles. We are working with the company to use motion capture systems, projection mapping, programmable LED lights for audience members and 3D modeling and fabrication of set design. I have also been working with Matthew Swarts from Georgia Tech in the development of programmable LED light in which a large audience can participate in the performance with hand held devices.
- 2014-17 Robot Projection Mapping Project, an interdisciplinary team comprised of designers and engineers meet weekly in an effort to expand the range of engaging participatory visual environments through projection mapping with robotic manipulators. This group has sought out, developed, or repurposed new tools and workflows that can exploit volumetric space and time when coupled to existing audio/visual resources. Source and destination space no longer need to be flat and static; participant experience no longer stationary and controlled. Digital visualization design tools have long blurred the boundaries of reality with precision and control exceeding the thresholds for human validation, without much consideration for an experiential environment beyond two-dimensional static visual surfaces. This research is demonstrating how advanced numeric control tools can be simultaneously considered and designed for use in real time-rendered audio/visual environmental experiences. Industrial manipulators tooled with complex volumetric surfaces can become integrated within a larger spatial environment, executing digitally defined movements synced with projected imagery and discretely sourced audio that permits dynamic audience participation and experience. The tools and workflows being developed are simultaneously leveraged towards expanding the scope of human-robot environments. Computational feedback systems are permitting real-time open-loop tool communication, diminishing the need for discrete path planning and strict environmental control by introducing object-relation coding structures that adapt to conditional changes. Participants: Thomas Tucker (College of Architecture & Urban Studies); Nathan King (College of Architecture & Urban Studies); Matthew Bender (Engineering); Dr. Kurdilla (Engineering) and Walter (Engineering)
- 2015 Traveled to Shangdong University, in Jinan, China on June 1, 2015 through July 1, 2015, Collaborated with Rolf Mueller, Dr. Abaid, Dr. Kurdilla and Matthew Bender.
- 2014 Alberta College of Art and Design and Emerging Media, on October 3rd -8th 2014, Alberta, Canada invited as guest lecturer, projection mapping workshop and visiting artist. I presented my work with the ACAD students on projection mapping and other digital video presentation innovations, and 3D FARO scanning demonstration and 3D modeling of architecture and landscapes. ACAD also sponsored DongSoo Choi (SOVA Grad student) to help with scanning and projection mapping workshop.
- 2014 Jack Singer Auditorium, On October 6th -8th 2014, Alberta, Canada Scanned and processed the Jack Singer Theatre for the projection mapping performance. Data was used to determine proper projectors to use for the performance and figuring out complex surfaces to project on and animate. Collaborated with Alberta College of Art and Design students to animate for the performance with the Calgary Philharmonic Orchestra's performance of Turangalila at Jack Singer Concert Hall. DongSoo Choi (SOVA Grad student/staff) helped with scanning and compiling all the scans into one point cloud
- 2014 As part of the TransAtlantic Teacher Scholars Project, I was part of a team from Virginia Tech to help create a 3D representation of a selection of sites important to the American story at the Meuse-Argonne. LIDAR, which illuminates an object with a laser, then analyzes the light that is reflected, was used to create 3D images of five sites at four locations. The resulting visualizations were intended to help viewers gain a spatial understanding of the sites and spark an interest in the greater narrative that the sites are a part of. This tour traces the generally northward movement of the American Expeditionary Force during the Meuse-Argonne Offensive of September 26th to November 11th, 1918. The sites scanned include the jump off point for the American 35th Division at Vauquous Hill, the ruined

village of Montfaucon, the Côte Dame Marie, and the Meuse-Argonne American Cemetery in Romagne where more than 14,200 Americans who lost their lives in the Meuse-Argonne Offensive rest to this day.

- 2014 Traveled to Shangdong University, in Jinan, China on June 1, 2014 through July 1, 2014, Collaborated with Rolf Mueller, Dr. Abaid, Dr. Kurdilla and Matthew Bender. During my thirty-day summer research visit to Shandong University in Jinan, China, I helped gather and process 3D scan data at two cave sites. I also created over 12 bat marker schematics and conducted preliminary motion capture analysis. I assisted in CT scanning and retopologizing CT bat skeleton data and helped develop and set up a depth map capturing system. I assisted in the arrangement of the face motion capture slow motion system, created a 3D bat rig and animated preliminary data in Maya.
- 2013 Traveled to Calgary, Canada on May 27, 2013 Collaborated with Ron Hawker to scan several K'omoks villiages from the turn of the century in its original terrain and to analysis of its climactic performance and spatial syntax in relation to the social organization of the K'omoks people.
- 2013 Traveled to London and Paris, July 29 – August 1st, 2013 Collaborated with Ron Hawker and Dominic Marner to scan and digitally recreate the Cathedral St. Denis in Paris, France and Rippon Cathedral in Rippon, U.K. using the FARO Scanner.

#### COMMUNITY SERVICE

- 2017 Presented a quick overview of the MFA CT program to Dean Blythe. It was a 30 minute presentation in which I covered a brief overview of your area: size, focus and highlights, basic DNA of my area, who are your key competitors, presented what are primary change-horizons in your disciplinary area and what our area would you like to be doing that we currently cannot do on November 6, 2017.
- 2017 Worked with Yanshen Sun (PhD student) and Dr. Hession from department of Geography at Virginia Tech scanning and creating a accurate point cloud for the Stream Lab Bridge number 1 on October 19, 2017
- 2017 Presented to Virginia Tech IDEAS group within Interior Design in School of Architecture + Design my recent research in VR and AR on April 4, 2017 at Burruss Hall
- 2017 Feature ACCelerate Projection Mapping Video presented and shown looping to Alumni Relations during the networking reception of 275 alumni members at the Westin Hotel in Washington D.C. on Friday, October 6, 2017
- 2017 Participated in Come Run with the Dean! on Wednesday, November 29, 2017
- 2017 Participated and featured in Virginia Tech's new campaign ad Get Ready: Lunch Pail that premiered at the homecoming game this year. Two of my students Xindi Liu and Bredan Casey and two research colleagues Todd Ogle and David Hicks were showcased in the final commercial video. [https://www.youtube.com/watch?time\\_continue=29&v=Di71JqE5TgE](https://www.youtube.com/watch?time_continue=29&v=Di71JqE5TgE)
- 2017 Participated in ICAT Playdate presentation on Visualizing World War I though Mixed Reality on October 20, 2017
- 2017 Worked with MFA CT grad student in rebranding the MFA CT web site with video testimonials and new descriptions of our program. We also worked on print promotional material such as a 2-fold poster and 8-page brochure to use as hand out material to potential graduate students.
- 2017 Curated a show with Fall 2017 Character and Advanced Character modeling classes and created a 3D Character Modeling Printing Exhibit on December 11 at the Virginia Tech, Library Multipurpose Room.
- 2017 Feature article on the ACCelerate Projection Mapping Show at the "ACCelerate Creativity and Innovation Festival 2017" published in the Virginia Tech News, October 20, 2017
- 2017 Feature photo and video on the ACCelerate Projection Mapping Show at the "ACCelerate Creativity and Innovation Festival 2017" published in the Virginia Tech Daily News, October 23, 2017
- 2017 Organized visiting artist lecture and workshop by CGI/VFX artist Matthew Yourshaw on December 7, 2017 in Torgersen 1100
- 2017 Worked on finding two additional Gradaute Assistantship funding from Honors College for Hannah Comstock and CAUS for David Franusich
- 2017 ACCelerate logo animation used by the Nomad (company who filmed the event) to showcase the ACCelerate Festival.
- 2017 Smithsonian Museum Projection Mapping Project was featured in the ICAT Cube on Science Festival on November 4, 2017.
- 2017 Invited guest speaker for Principle's Tea for Honor College by Pablo Tarazaga showcasing my recent collaborative research on Friday, November 10, 2017.
- 2017 Feature work "Space Echoes and 3D Working Dog Skeleton" shown for the CAUS In The Cube for a meet the Dean CAUS Alumni Event at the Moss Arts Center at Virginia Tech, Wednesday, November 8, 2017



- 2017 Participated and completed training in the Unconscious Bias in Academic Hiring and Advancement by Diversity Education.
- 2017 Participated and completed training in the Conflict of Interest and Commitment for Faculty, Staff and Students presented by CITI Program.
- 2017 Participated and complete training in the Academic Leaders Program yearlong workshop
- 2017 Worked with Montgomery County Public Schools Internship Program. Nick Myers from Blacksburg High School had been part of my current research in WWI scan data and Blacksburg 16 Squares project 3D printing and building houses.
- 2017 Presented with Todd Ogle to Professor Trudy Becker's History Survey class on our WWI VR research in room GYM 124 on December 5, 2017
- 2017 Presented to Professor Ann-Marie Art History Class (200 students) on 3D scanning research of St.Denis, Rippon, and Australia aboriginal cave painting sites.
- 2016 Worked with Todd Ogle, David Hicks, and David Cline and co-taught a 3D Heritage class with the partnership of Smithfield Plantation and assistance with Provost Thanassis Rikakis. The course explored different technologies and approaches to preserving cultural heritage sites. The students engaged in an interdisciplinary approach to the uses of photogrammetry, 3D laser scanning, UAV, retopologizing 3D surfaces, and creating Augmented and Virtual Reality learning environments. The class was a combination of students and teachers from the disciplines of Education, History and SOVA that teamed up to create complex projects utilizing the latest in technology to preserve several historical sites in the area. Teams were created to tackle the sites and create VR and AR outcomes. Students used an array of hardware and software, including the FARO Scanner, UAV, Oculus Rift, GeoMagic and Agisoft Photoscan software. The final project was exhibited in the ICAT CUBE space.
- 2016 Exhibited at Exploring Local History at the Virginia Tech Library "The Christiansburg Institute and the CI-Spy Application". The exhibit offered an opportunity to explore and celebrate the often-overlooked history of the Christiansburg Institute and our rich local African American heritage. The exhibit featured work from Virginia Tech's Technology-enhanced Learning and Online Strategies unit and the computer science, education, arts, and public history programs and an app developed around the history of the CI called CI-Spy.
- 2016 Todd Ogle, David Cline, David Hicks and I presented to Dr. Laura Sands, Dr. Rikakis, Moss Buckley, Bill Foster, Ben Knapp, Ruth Waalkes, at a meeting at Smithfield to discuss our 3D Heritage Class preserving the Smithfield Plantation house.
- 2016 My projection mapping class demoed and showcased their projects in the Experience Studio to Dr. Sands and Dr. Rikakis during their visit to the Institute for Creativity, Arts, and Technology.
- 2016 Participated in the Graduate Arts Council Mixer at the ICAT Cube in the Moss Arts Center. My recent research project Space Echoes was shown on the Cyclorama during the duration of the mixer event.
- 2016 Participated in ICAT Day with Moss Arts Center Projection Mapping on the grand staircase. By utilizing project light and imagery, and complemented by sound, guests who visited the Moss Arts Center experienced a study in aesthetic design that showcased the unique architecture of the building.
- 2016 Worked with MFA CT grad student in rebranding the MFA CT web site with video testimonials and new descriptions of our program. We also worked on print promotional material such as a 2-fold poster and 8-page brochure to use as hand out material to potential graduate students.
- 2015 Artwork was selected to be the cover of the CAUS + effect postcard for the 2016 Annual Report for College of Architecture and Urban Studies
- 2016 Feature Article on our ICAT Day projection mapping project "Art and innovation converge at ICAT" published in the Roanoke Times, May 6, 2016
- 2016 Feature Article on our ICAT Playdate presentation on "A Virtual Reality Experience" published in the Collegiate Times, Sunday, October 23, 2016
- 2016 Featured News on ICAT web site on Research Spotlight for Moss Center Projection Mapping Project, February 2016 ICAT News and Announcements
- 2016 Received a "Thank a Teacher" note from one of my students, highlighting the positive impact I have had on the student's achievement and development. "Thank you, Thomas! Thanks a lot for your help to me during this semester! (Anonymous)"
- 2016 Received a "Thank a Teacher" note from one of my students, highlighting the positive impact I have had on the students' achievements and development. "Thank you Thomas! For all your help about my studies in the VT:) I really enjoy my studying time with you! (Anonymous)"
- 2016 Feature Article on our ICAT Playdate presentation on "A Virtual Reality Experience" published in the Collegiate Times, Sunday, October 23, 2016
- 2016 Participated and completed training in the Networked Learning Initiative (NLI) Canvas: Basic Course Development
- 2016 Worked with Montgomery County Public Schools Internship Program. Nick Myers from Blacksburg High

School had been part of my current research in WWI scan data and Blacksburg 16 Squares project 3D printing and building houses.

- 2016 Presented at the DIAVOLO I Architecture in Motion, ICAT DAY Keynote presentation with Jacques Heim, Daniel Wheeler, Chisa Yamaguchi and the Technical Team at Virginia Tech. Carol and I presented on stage our projection mapping research, animation and shadow studies
- 2016 ICAT Learning Studio (Sandbox), Community Meeting Lecture – A Virtual Reality Experience by Thomas Tucker and Eric Lyon and two other SOVA students.
- 2016 ICAT Learning Studio (Sandbox), Community Meeting Lecture – Stepping into the past through visualization by David Hicks, David Cline, Todd Ogle, Thomas Tucker and two other SOVA students.
- 2016 2016 College of Architecture and Urban Studies, Research Symposium – Robotic Projection Mapping, Project by Thomas Tucker, David Clark and Matthew Bender
- 2016 Innovation Space, Storytelling: Presented our VR and AR research by Thomas Tucker David Hicks, David Cline, and Todd Ogle.
- 2016 Meet the Makers, Newman Library Multipurpose Room, presented my research from the last four years at Virginia Tech, on Tuesday, April 26th 2016 at 7:00 pm.
- 2016 Presented to The Elumenati and The Newseum our Cyclorama Demo in the ICAT Cube.
- 2016 Presented to Science Applications International Corporation (SAIC), Doug Wagoner, President and James Jackson, Senior Vice President. Todd Ogle and I presented our World War I Virtual Reality project in the Cube.
- 2016 Presented to Professor Bailey’s MA class on the New Town/Odd Fellow’s Project at the Odd Fellow Hall, Blacksburg, VA
- 2016 Presented to Professor Ann-Marie Art History Class (200 students) on 3D scanning research of St.Denis, Rippon, and Australia aboriginal cave painting sites.
- 2015 Lecture on Odd Fellows Hall and 16 Squares Project for MA in Material Culture and Public Humanities class presentation. Presenters: Thomas Tucker (School of Visual Arts) and Todd Ogle (Senior Director, Networked Knowledge Environments Technology-Enhanced Learning & Online Strategies).
- 2015 Blacksburg High School Presentation, invited by Mike Kaylor and Colin Baker. History and Technology event: History in 3D. Presented by: Thomas Tucker, BFA, MFA, Creative Technology, School of Visual Arts, Virginia Tech; and Todd Ogle, Ph.D., Senior Associate Director, Applied Research and Planning, Technology-enhanced Learning and Online Strategies, Virginia Tech, Phat Ngyen (graduate student)
- 2015 Projection Mapping Robot Project Recruitment Presentation to Dr. Kurdila’s robotics classes for fall independent project workers. Also presenting: Chip Clark, Matthew Yourshaw (MFA grad student)
- 2014 TedX Projection Mapping Stage Design, projection mapping on auditorium balconies and on stage for opening intro with names of each speaker. Worked with TEDxVirginia Tech Steering Committee (30 committee members), worked directly with ICAT Adam Soccolich.
- 2014 ICAT Tech or Treat, Scary Faces: An interactive exhibit where users can manipulate scary face animations using 3D projection mapping
- 2014 First Annual SOVA Shindig, Nano Pod: The Nano Pod Project exhibition in the VIP room consisted of video projection that maps complex animations onto 3D forms.
- 2014 Blacksburg Museum Cultural Foundation, Historic lecture Series presenting The Price House & Gardens and the 16 Squares presentation on Virtual Re-Creation. Presented by Thomas Tucker (School of Visual Arts) and Tom Sherman (Blacksburg Museum and Cultural Foundation).
- 2014 Odd Fellows Hall project at Odd Fellows Hall site. MA in Material Culture and Public Humanities class presentation, Presented by Thomas Tucker (School of Visual Arts) and Tom Sherman (Blacksburg Museum and Cultural Foundation).
- 2014 ICAT Learning Studio (Sandbox), Community Meeting Lecture – 16 Squares AR and VR Project by Thomas Tucker, Todd Ogle, Tom Sherman, Phat Nguyen and Daniel Monzel.
- 2014 ICAT CUBE Launch at Virginia Tech. Over 17 companies with 28 representatives came from all over the US to attend the launch. Companies included Apple, ARUP, Boeing, Deliotte, Department of State, Eyebeam, Harman, Jaunt VR, MacAulay-Brown, Modea, NASA Langley Research, Naval Surface Warfare, Qualisys, Theatre Projects, Universal Creative, and WSI. Presented ICAT sponsored research at Dinner reception.
- 2014 Odd Fellow Hall Open House, A Grand Presentation of New Town Remembered, A Virtual Re-Creation. Attendees could walk the streets, experience the sounds and sights, and meet residents in a virtual environment. The program was created by Thomas Tucker (School of Visual Arts), Todd Ogle (VT Technology-enhanced Learning and Online Strategies), David Hicks (School of Education), and Tom Sherman (Blacksburg Museum and Cultural Foundation).
- 2013 TedX Chevron Stage Design, Projection mapping on Chevron shapes on stage for opening intro with names of each speaker. Worked with TEDxVirginia Tech Steering Committee (30 committee members),

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## TEACHING PHILOSOPHY

With the sensory overload of information and ideas in today's world, students are facing a challenging time in art and design. Many digital artists can become lost when it comes to encompassing their conceptual ideas and bringing them to the forefront. Challenged by technological hurdles, artists and students can quickly lose track of their true vision. As both a fine artist and a teacher of animation, it is my role to help students discover their vision and give them the tools to expound their ideas to the fullest.

I believe a multimedia professor needs an in-depth knowledge of motion graphics, gaming and 3D animation software and should have experience in both the commercial field and in the world of Fine Art in order to offer students an array of resources to help them find their artistic voice. As a practicing Fine Artist, I try to infuse my courses with a creative passion that I hope sparks imaginative and innovative notions in my students. At the same time, I also try to regularly share my experiences as a professional artist in the world of digital media and require of my students the same professionalism that is required of me in the field. In an environment of friendly competition, students learn to work both efficiently and to meet deadlines. Technical skills are built through hands-on projects involving creative inquiry, research, planning, problem identification and problem solving. Group critiques are also an integral part of the process because I feel it is important for students to look to one another for inspiration and to value each other's opinions.

To keep up with the ever changing world of technology, I also feel it is also important for students to become self-directed, life long learners. My students are taught to access online resources where they can find answers to their questions, be exposed to new ideas and can keep abreast of new developments.

Another major role as an instructor is to prepare my students for the world of employment. Resume writing, field trips to professional animation studios, preparation and assessment of internships, creating electronic portfolios and working on professional projects outside the classroom are an integral part of my Internship coursework.

Today's digital media artists face many challenges, but they also have numerous opportunities to practice their craft in a variety of settings. My role is not only to guide students, but to lead by example. My enthusiasm for this field requires that I myself keep pace with the technological evolution. Through my own research and practice in the field, I can encourage students to follow my lead, pursue their passion and find their place in the vast array of possibilities.

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## CREATIVE PRACTICES

### COLLABORATIVE RESEARCH + ARTIST STATEMENT

As a visual artist, I use new technologies to make invisible or immaterial subjects visible. I represent unseeable forces, structures, geometries, and histories. My applied research consists of projects ranging from virtual spatial environments, to groundbreaking scientific and historic visualizations, and dynamic interactive artworks. Transdisciplinary, cutting-edge collaborations across art, technology, the humanities, and the sciences drive my practice, and my research contributions reflect this critical centering. My creative achievements also shape and are shaped by my teaching and outreach.

My work as Creative Director for projects pioneering transdisciplinary collaboration provide successful models for integration of art, creative technology, and visualization across numerous research methodologies. In today's post-disciplinary context, researchers increasingly need creative methodologies and technologies to visualize what they can't create or represent in a typical university lab or other academic setting. Simultaneously, artists have an unprecedented opportunity to use emerging technologies to intersect in new, meaningful ways with countless research subjects. The consequential partnerships that fuel my practice directly inform my teaching and service. My students grow professionally as part of these research collaborations, and gain new creative research methodologies with each project they are involved in.

In my personal artwork, I visually describe and analyze how unique and impossible structures move in relation to each other and within their environment, and I create aesthetic rules that reject accepted understanding of physics and dimensionality. Audiences encounter these forms in motion through a combination of virtual animated media and physical installation. For example, the Sound Arcade, exhibited at the Smithsonian, consisted of projections onto large-scale objects covered in fabric. Audience members actively participated using electronic wands to manipulate the audio and video being displayed in real time. Another such project was Space Echoes, a fully immersive experience using 3D animations and 3D sound compositions presented in unison to create an other-worldly experience. The visual animations were projected onto a 16-foot tall, 40-foot wide Cyclorama screen. Audience members wore 3D goggles while listening to 3D musical compositions relayed from an array of 139 speakers, collectively creating a new kind of visual and auditory encounter.

My collaborative projects often integrate both research and education. For example, the VR Dog Project was a VR and AR project designed for clinical education by adding technology to the teaching of veterinary clinical skills to enhance student learning. In the WWI Cave VR Project, we combined ground-penetrating radar, photogrammetry, and laser scanning to create a digital recreation of the above and below ground features of craters, trenches, tunnels and galleries allowing participants to see Vauquois, a small village that was fiercely contested for four years during WWI by the French and Germans, as it has never been seen before. Animation, 360-degree video, and virtual reality tell the story in an immersive educational experience.

In the future I will continue to explore questions at the heart of my research, developing new processes and systems for visualization and sensorial experience, while also grappling with invisible and unseeable histories, subjects, and phenomena. I am also continuing my ambitious research contributions, leading endeavors within major collaborative transdisciplinary projects, and spearheading new kinds of artistic contribution within substantive applied research. I am pushing the limits of technological explorations, and I look forward to furthering these in ways that are meaningful for my community.

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## VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY TEACHING PORTFOLIO 2012-PRESENT

### COURSES TAUGHT

ART 3704-10827 Character Animation  
ART 3704-10828 Video Game Design  
ART 4544-10839 Video Game Design (Advanced)  
ART 5704-10667 Character Animation (Graduate level)  
ART 5704-19832 Video Game Design (Graduate level)  
ART 3704-80780 Character Model & Sculpt  
ART 4544-80792 Character Model & Sculpt (Advanced)  
ART 5704-80811 Character Model & Sculpt (Graduate level)  
ART 4544-80793 Lighting and Projection Map  
ART 5724-80817 Lighting and Projection Map (Graduate level)  
ART 5704-80812 Topics in Computer Animation (Graduate level)  
ART 4544-90788 Compositing and Lighting  
ART 5724-98905 Adv 3D Animation & Compositing  
ART 5704 Character Animation (Graduate level)  
ART 4544 Modeling Tools for Visualization  
ART 5604 Grad Seminar  
ART 2704 Intro to 3D Animation  
ART 3704 Topics in Computer Animation  
ART 5604 Creat Digi Tech in Arts & Des  
ART 5964 Field Work/Practicum  
ART 4544 Computer Animation Studio  
ART 5704 3D Heritage class  
ART 5984 Special Studyk

### VIRGINIA TECH, UNIVERSITY, COLLEGE OR DEPARTMENT COMMITTEES 2012-PRESENT

#### NASAD Committee

NASAD, October 24, 2014 helped create a curricular table for undergraduate classes.

#### Portfolio Review Committee

Participated in undergraduate portfolio review.

#### MFA Review Committee

Participated in reviewing and choosing the MFA applicants.

#### Scholarship Committee

Assisted in reviewing and choosing awareness of the annual undergraduate scholarships.

#### Performance Review Committee

College review for Robert Schubert, Associate Dean Research in the College of Architecture and Urban Studies, conducted a performance review with Dean Davis as chair of the review committee.

#### Undergraduate Research Advisory Board

Served on the advisory board for the Office of Undergraduate Research, part of the review and selection of ACC Meeting of the Minds student representatives. Advisory board included both President Sands and Provost McNamee.

### ADVISING

#### Undergraduate Advising

2018 Pei Qiu. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

Brendan Casey. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

David Byrd. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling, animation, gaming and HTV VIVE VR.

Derrick Wang PI. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling, animation, gaming and HTV VIVE VR.

Alex Forlini. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling, 3D printing.

2017 Blair Retnauer. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling, animation, gaming and Oculus VR.

Maggie Mitchell. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

Meaghan Curtis. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

~Awarded Tenure in spring, 2016

2016 Petey Mainardi. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation, and gaming.

Xindi Li. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

Huy Ngo. Exhibition at Armory Gallery, Virginia Tech. Research focus: drawing and 3D modeling and animation.

Michelle Vernon. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

Caitlin Werle. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

2015 Stuart Hill. Exhibition at Armory Gallery, Virginia Tech. Research focus: projection mapping, drawing, 3D modeling and animation.

Carson Bendel. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation, sculpture and illustration.

Kevin Dickel. Exhibition at Armory Gallery, Virginia Tech. Research focus: drawing and 2D animation, sound design and script.

Nichole Hartman. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling, animation, construction and drawing.

Erica Kowalski. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling, animation and laser cutting.

2014 Phat Ngyugen. Exhibition at Armory Gallery, Virginia Tech. Research focus: augmented reality, 3D modeling and animation.

Justin-Sotile Jackson. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

Jeff Dera. Exhibition at Armory Gallery, Virginia Tech. Research focus: projection mapping, particles animation, 3D modeling and animation.

2013 Phil Cho. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

Steve Ramberg. Exhibition at Armory Gallery, Virginia Tech. Research focus: projection mapping, construction, 3D modeling and animation.

Co-chaired Undergraduate Theses and Exhibitions, Creative Technologies

2018 Cassidy McFarlane. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and jewelry making. (Changed mentors and senior project direction in Fall 2018).

2017 Tyler William Niskanen. Exhibition at Armory Gallery, Virginia Tech. Research focus: 3D modeling and animation.

#### Graduate Advising

2019 Mahshid Gorjian. Research focus: 3D modeling, animation and rendering.

Xindi Liu. Research focus: 3D modeling, animation, rendering, VIVE VR and animation.

Huy Ngo. Research focus: 3D scanning, 3D modeling, 3D printing, installation, VIVE VR and animation.

2018 Michelle Farber. Thesis title: Octavia. Research focus: 3D modeling and animation.

2017 Dongsoo Choi. Thesis title: Susannah. Research focus: 3D modeling, animation, projection mapping and programming for the Opera Roanoke, Susannah Opera.

Gwendolyn Sewell. Thesis title: Plumage. Research focus: 3D laser scanning, 3D modeling, animation, Unity Game programming in the ICAT Cube.

Fang Liu. Thesis title: Forbidden City: An Immersive Virtual Reality World Using the HTC VIVE to Explore the Real Imperial Palace of China. Research focus: 3D laser scanning, 3D modeling, animation, Unity Game programming in the ICAT Cube.

~Awarded Tenure in spring, 2016.

2016 Matthew Yourshaw. Thesis title: Orbital. Research focus: 3D modeling, animation, Unity Game programming in the Multi-Purpose Room in the Library.

Phat Nguyen. Thesis title: Imperceivable World. Research focus: 3D modeling and animation.

Zachary Bush. Thesis title: Calvary. Research focus: 3D modeling, animation, Unity Game programming in the ICAT Cube.

2015 Justin Fine. Thesis title: Artifacts of Kree. Research focus: gaming, coding, 3D modeling and animation.

Emilia Munoz. Thesis title: 3D Digitized Romanesque Ermita Iglesia de Nuestra Señora de la Anunciada in Virtual Reality. Research focus: 3D laser scanning, 3D modeling, animation, Unity Game programming in the ICAT Cube and summer internship working at the Smithsonian 3D scanning and retopologizing complex artifacts.

Tamar Peterson. Thesis title: The Beat's Interior. Research focus: projection mapping, 3D modeling, animation, construction and interactivity with MAX/Jitter/MSP.

2014 Hadeel Ramandan. Thesis title: The Story of a Girl. Research focus: 3D laser scanning, 3D modeling, animation and summer internship working on the Odd Fellows Hall Project.

Co-chaired MFA Thesis Committees, Creative Technologies

2018 Lucas Freeman. Thesis title: Alchemically: An Educational Role-Playing Game. Research focus: 3D modeling, animation and gaming.

Maureen Suess. Thesis title: Small Tales. Research focus: watercolor painting, 2D animation, Unity Game programming.

2017 Ellie Nikoo. Thesis title: Come with Me. Research focus: 3D animation, modeling, rigging and rendering.

Anirudh Mitra. Thesis title: Libero. Research focus: 2D animation, Unity Game programming.

Jingyi Liang. Thesis title: 'ParkinVT: A Concept Mobile Application for Improved Parking at Virginia Tech. Research focus: projection mapping, 3D modeling, animation and app development.

Yang Liu. Thesis title: Renaissance of the Mogao Grotto. Research focus: projection mapping, 3D modeling and animation.

2015 Reza Tasooji. Thesis title: Desire and Hope. Research focus: 3D modeling, animation.

2014 Alison Kim. Thesis title: Writing Images: Blending Drawings and Code. Research focus: research with processing software, 3D modeling, and animation.

#### iPhD Advising

2020 Michael Rhodes. Research focus: 3D animation and 3D sound technologies. (Graduating Spring 2021)

2019 Lei Zhang. Research focus: technologies to enhance e-learning. (Graduating Fall 2019)

Jessie Mann. Research focus: technologies to enhance learning for people with disabilities. (Graduating Fall 2019)

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## WINSTON-SALEM STATE UNIVERSITY TEACHING PORTFOLIO 2007-2012

### COURSES TAUGHT

ART 1315 Electronic Imaging  
ART 2311 3-D Computer Modeling  
ART 2336 Immersive Virtual Reality  
ART 3312 Desktop Publishing I  
ART 2335 Desktop Virtual Reality  
ART 3333 Computer Animation I  
ART 4311 Interactive Media Design  
ART 3314 Desktop Publishing II  
ART 3334 Computer Animation II  
ART 3157 Portfolio Design  
ART 4310 Multimedia Editing  
ART 4316 Designing for the Web  
ART 4391 Studio Problems I (Ind. Study)

### WINSTON-SALEM STATE UNIVERSITY, COLLEGE OR DEPARTMENT COMMITTEES 2003-2012

#### Strategic Planning Council

Participated in developing the new WSSU strategic plan with the Robinson Group Consulting Inc.

#### Hiring Committee Chair

Chaired the graphic design search committee.

#### E-portfolio Committee

Developed an E-portfolio system through Blackboard and wrote steps involved in evaluation through a MALO review.

#### B.F.A committee

Wrote all the proposals, course descriptions and paradigms for the new BFA in graphic design and the new BFA in animation. Filled out all the Academic Standards and Curriculum Committee forms for new courses or combined courses.

#### Student Recruitment Committee:

Developed publicity material for the Visual Arts program by creating a poster campaign. Six posters have been developed, printed and framed for the Visual Arts hallway. Produced a DVD to showcase our students' animations and experimental movies.

### OTHER RESPONSIBILITIES 2007-2012

#### Mac Lab Coordinator

Coordinated writing all proposals for obtaining and acquiring all software and hardware for the Mac Lab. (Obtained quotes, created purchase forms, order forms and loaded and installed all software and hardware).

#### CDI

Assisted in developing the Center for Design Innovation's strategic plan and aided in architectural ideas. Conducted workshops to its members to promote 3D technologies using Maya.

#### 2/2 Program

Created and built a 2/2 outreach program along with Joseph Lopina coordinator of animation at North Carolina School of the Arts and Herb Burns from Forsyth Technical Community College.

#### Visual Arts Publicity

Developed publicity material for the Visual Arts Program.



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## ZAYED UNIVERSITY TEACHING PORTFOLIO 2003-2007

### COURSES TAUGHT

ART 125 World Cultures in Art and Design  
ART 251 Basic Graphic Design  
ART 351 Graphic Design 1  
ART 352 Graphic Design 2  
ART 376 3D Modeling  
ART 375 Virtual Environments/Game Design  
ART 377 3D Animation 1  
ART 378 3D Animation 2  
ART 451 Graphic Design 3  
ART-497A Advanced modeling with ZBrush  
ART-497B Robotic Interactive Installation  
ART 499 Capstone  
ART 490 Internship

### ZAYED UNIVERSITY, COLLEGE OR DEPARTMENT COMMITTEES 2003-2007

#### Department Criteria for Promotion and Tenure Committee

Worked extensively on setting up the criteria and the structure for promotion and tenure.

#### AAITAA/IT committee

Worked with IT staff to create rendering farm with new server system and to create the new Motion Graphics Lab at the new Zayed University campus.

#### Graduate committee

Assisted in creating a Zayed University MA degree in graphic design, animation, interior design, and gaming.

#### Student Recruitment Committee:

Produced and developed posters (D-0) and 2,000 three fold brochures for the Art & Design Department and promoted the Art & Design Department through series of lectures.

#### Exhibition Committee

Worked to arrange and hang shows around the Abu Dhabi campus for the students of ZU, Student Shows: "Font Project" and "Character Design 3D Show"

#### Exhibition committee

Miniature Chair Design Exhibition at Zayed University, Abu Dhabi campus. Worked with local curators to set up for the show, oversaw the printing of invitations to VIPs, organized insurance, delivery, transport, press release, pre and post debate with students, and participated in a full press coverage of the show.

Introduced German artist Rolf to faculty, students, the German Ambassador and to ADMF sponsors and Huda Kanoo for a lecture series.

#### Strategic Planning Committee

Helped with planning for 2003-2009 improvements for Graphic Design I, II, III courses, 3/D Animation, Web Design, Package Design and implementation for a robotics lab. Planned upgrading of the computer software and hardware in the Mac Labs.

#### International Exhibition planning Committee

Served on a committee to plan international exhibitions as a department.

#### Summer School Committee

Helped implement the 2004 ZU summer school program.

#### Task Force committee

The Task Force was composed of four faculty members from the College of Communication and Media Sciences and four faculty from the Department of Art & Design. In our discussions we examined areas of course overlap and determined that certain recommendations be made concerning some courses in the two programs.

#### Hiring committee

Assisted in hiring new faculty (Motion Graphics, and Graphic Design) for the Art & Design Department for 2004- 2006. This included video conferences and written evaluations of all the candidates.

#### Student Recruitment Committee

Lectured to various classes to provide additional information about Art & Design majors.

Lectured for the Art & Design Department on Major's Day 2004-2006. Provided examples of student work from Interior Design,

Graphic Design, 3D, and Photography.

#### Dart Program Committee

Organized scheduling of courses, dates, and recruitment of faculty to teach in the Dart Program.

#### IT committee

Helped write grant proposal for IT development within the Art & Design Department Curriculum Committees 2003-Present.

#### Curriculum Committee

Assisted in restructuring the Graphic Design, Video and 3D animation programs.

#### Program Revision Committee

Assisted with revising the 8 semester planner for Graphic Design and Video.

### OTHER RESPONSIBILITIES 2003-2007

#### Faculty Development

Taught ZU Art & Design faculty Maya in a two week seminar. This included basics in polygonal modeling, IK chain system, UV mapping, dynamics, shape animation, and sub-divisional polygon modeling.

#### Internship

Set up internship sites for our Art & Design students. Assisted students in their end of the Internship presentations to administration and faculty demonstrating skills they achieved during the Internship.

#### R.A.K. Project

Completed a GPS survey of a terraced mountain village located in Ras al-Khaimah called Barama. The data from the survey was used as the basis for this animated reconstruction of the village. Students constructed three dimensional simulations of some sixty houses and the accompanying terraces and farm fields, rendered the external facades and added details, such as water pots and tools. Figures were then created to inhabit this virtual village based on historic photographs of the local tribes people.

#### Capstone Project

Developed course work for students to follow for their Capstone projects. Students varied from different departments within the Art & Design Department ranging from Interior Design, Graphic Design, Photography, Painting and 3D Animation.

#### Readiness Program

Developed a DVD cover and jacket for the Readiness Program. This was done in conjunction with my Graphic Design students. Over 5,000 were printed.

#### MALO's

Worked on writing the MALO's (learning outcomes) for motion graphic and graphic design concentration.

#### Documentation of Student Artwork and Projects by Faculty

Helped in documenting art work of faculty and students.

#### SAFE project (Literary Magazine)

Involved with the Safe design layout with my basic graphic design class. Coordinated all work from both campuses and archiving it electronically for print. Documented all work on the Abu Dhabi campus for the Safe project.

#### Continuing Education Courses – Outreach Program

Set up the DART program, which is brought forward through the community outreach program to teach 3/D (Maya) to UAE residents.

#### International Institution Links

Set up international dialogue with Frank Debose (Head Dean of the Graphic Design Department of The School of the Art Institute of Chicago) to create relationship with SAIC for the future masters program at ZU.

#### ADMF Foundations

Created a 3D animation to accompany a proposal to transform the National Theater into a gallery space.

#### Huda Kanoo Award

Helped with organizing and setting up the show and involved with the judging for the Huda Kanoo Award, to be awarded to a student for superior work.

#### ZU Magazine

Helped with the preliminary layout design for the entire magazine along with the head of Communications and the head of the Police Unit of Abu Dhabi (responsible for funding the project). Included several students in the initial process of creating layout designs for the magazine.

#### IT Help within the department

Served as a resource to faculty to assist them in learning software programs such as After Effects, Adobe Photoshop, Illustrator, and Flash.

Taught and developed teaching strategies for interior design class using Maya.

Developed a packet of DVD's for learning tutorials recorded using Snap Z Pro.

Assisted Interior Design faculty with teaching the fundamentals of Maya and implementing modeling techniques for interior

design. Provided and created tutorials using Snap Z pro, interactive movies to help learn Maya features and projects related to her curriculum.

#### Departmental Events

Served as host for international visitors to represent how technology was being used at Zayed University. Visitors included: Dr. Abul Kalam, President of India; German Chancellor, Ambassador of Switzerland, Canadian Minister of Education, and International School of Wales delegate, David Smith.

#### Class Exhibition

Exhibition of Graphic Design I class in Garden Gallery which included the construction of wood display panels and production of promotional posters.

#### Edu-tech Exhibition

International Exhibition Center, Abu Dhabi - provided seven 3D animations for Plasma screen viewing with titles of the names of the participating students.

#### Parent's Night (2003- 2006)

Served as a representative for the Art & Design department. Students' animations are displayed from both campuses. Posters and examples of student work from graphic design are also displayed. Handed out 250 pamphlets and spoke to well over 200 prospective students along with their parents.

#### Online magazine

Worked with the ELC and Library in setting up an online magazine for the Readiness students. Helped promote a competition with Art & Design students to create a template for the online magazine and posters to advertise and attract students to participate.

#### ASSOCIATIONS

MEADA, Middle East Art And Design Association

CAA, College Art Association

ISEA, Inter-Society for the Electronic Arts

SITE, Society for Information Technology and Teacher Education

ASCAD, Universities Art Association of Canada

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## REFERENCES

TODD OGLE, PH.D.

Executive Director, Applied Research in Immersive Environments and Simulations  
University Libraries  
560 Drillfield Drive  
Virginia Tech  
Blacksburg, VA 24061  
Tel: (540) 231-1188  
e-mail: jogle@vt.edu

DAVID HICKS

Professor of History and Social Science Education  
225C War Memorial Hall, School of Education  
Virginia Tech  
Blacksburg, VA 24061  
Tel (540) 231-8332  
e-mail: hicks@vt.edu

DANE WEBSTER

Professor  
Director, School of Art  
Texas Tech University  
2500 Broadway Lubbock  
Texas 79409  
Tel (806) 742-3826  
danewebs@ttu.edu