



ZACH DUER

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EDUCATION

- 2014 MFA Virginia Commonwealth University, Richmond, VA
Kinetic Imaging
- 2009 MA Mills College, Oakland, CA
Music Composition
- 2007 BM Minnesota State University Moorhead, Moorhead, MN
Music Composition
summa cum laude

ACADEMIC POSITIONS

- 2017 – Assistant Professor, School of Visual Arts, Virginia Tech, Blacksburg, VA
- 2016 – 2017 Immersive Environment Specialist, Virginia Tech, Blacksburg, VA
- 2013 – 2015 Instructor, Virginia Commonwealth University, Richmond, VA
- 2015 Instructor, John Tyler Community College, Chester, VA
- 2012 – 2013 Graduate Teaching Assistant, Virginia Commonwealth University, Richmond, VA
- 2008 Graduate Teaching Assistant [instructor of record], Mills College, Oakland, CA

EXHIBITIONS / SCREENINGS / PERFORMANCES

- 2019 *Body, Full of Time*, 6th International Conference on Movement and Computing. Tempe, AZ.
- 2019 *Body, Full of Time*, Practicing Presence Festival, Northampton, MA
- 2019 *Exploring the World War I Tunnels of Vauquois through Virtual Reality*. ACCelerate: ACC Smithsonian Creativity and Innovation Festival 2019. Smithsonian National Museum of American History. Washington D.C.

- 2019 *Body, Full of Time*, Moss Arts Center Cube, Virginia Tech, Blacksburg, VA
- 2019 *Body, Full of Time*, ICAT Creativity and Innovation Day, Virginia Tech, Blacksburg, VA
- 2018 *Vauquois*, Salem Museum, Salem, VA
- 2019 *Vauquois*, Newman Library, Virginia Tech, Blacksburg, VA
- 2018 *Forgetfulness*, Alliance for the Arts in Research Universities 2018 Annual Conference, University of Georgia, Athens, GA
- 2018 *Badstar*, Moss Arts Center Cube, Virginia Tech, Blacksburg, VA
- 2018 *Forgetfulness*, New Interfaces for Musical Expression, Moss Arts Center Cube, Virginia Tech, Blacksburg, VA
- 2018 *Exploring America's Forgotten War*, Digital Scholarship Lab, Michigan State University, East Lansing, MI
- 2018 *Diverging, converging... (sound path drawing #18, #20, #1, #4)*, Declarations, Institute for Contemporary Art, Virginia Commonwealth University, Richmond, VA
- 2018 *nothings_nomeanings*, Intersections: 16th Biennial Symposium for Art and Technology, Connecticut College, New London, CT
- 2018 *nothings_nomeanings*, Madatac 09_2018, Madrid, Spain
- 2017 *Or Be Forever Fallen*, Beo String Quartet, Moss Arts Center, Blacksburg, VA
- 2017 *nothings_nomeanings*, 3rd Electroacoustic Music Festival Ecos Urbanos, Mexico City, Mexico
- 2017 *What Bends*, International Composers and Interactive Artists Fuse concert, DiMenna Center for Classical Music, New York, NY
- 2017 *nothings_nomeanings*, Atlanterium AV Festival, Atlanta, GA
- 2017 *What Bends*, Moogfest, Durham, NC
- 2017 *What Bends*, DISIS, Moss Arts Center, Blacksburg, VA
- 2017 *What Bends*, Moss Arts Center, Blacksburg, VA
- 2017 *nothings_nomeanings*, Shimmer, Chapel Hill, NC
- 2016 *Women's Work*, Moss Arts Center, Blacksburg, VA
- 2016 *Belle2VR*, Virginia Tech Science Festival, Moss Arts Center, Blacksburg, VA

- 2016 *Belle2VR*, ICAT Creativity and Innovation Day, Moss Arts Center, Blacksburg, VA
- 2015 *Circuits*, Inlight, 1708 Gallery, Richmond, VA
- 2015 *noplaces_nostories*, Inlight, 1708 Gallery, Richmond, VA
- 2015 *nothings_nomeanings*, Currents New Media Festival, Santa Fe, NM
- 2015 *nothings_nomeanings*, The Unstitute, online gallery
- 2015 *The Architecture Sings II*, Community Room Presents: The Dog Days, 1708 Gallery, Richmond, VA
- 2015 *nothings_nomeanings*, Digital Media, Gloucester Arts, Gloucester, VA
- 2014 *A Kind of Measure*, Inlight, 1708 Gallery, Richmond, VA
- 2014 *nothings_nomeanings*, MFA Thesis Exhibition, The Depot, Richmond, VA
- 2013 *Targeting Eyes*, Game Play 2013, The Brick, New York City, NY
- 2013 *Relentless Spasms of Restrained Serenity*, Electronic Music Midwest, Kansas City Kansas Community College, Kansas City, KS
- 2013 *Circuit*, Running Touching Pulsing Flashing, FAB Gallery, Richmond, VA
- 2013 *The Architecture Sings*, Art6, Richmond, VA
- 2012 *Observation Window*, 423 W. Broad St., Richmond, VA
- 2012 *Relentless Spasms of Restrained Serenity*, Electro Acoustic Barn Dance Festival, University of Mary Washington, Fredericksburg, VA
- 2011 *Modes of Destruction*, International Exhibitions, Byte Gallery, Lexington, KY
- 2011 *Modes of Destruction*, CSUF New Music Festival, California State University, Fullerton, Fullerton, CA
- 2010 *St. Petersburg Waltz*, Minimalism, Mills College, Oakland, CA
- 2009 *Fragility of Permanence*, Langston Labs, San Francisco, CA
- 2009 *Assembled Works*, Signal Flow, Mills College, Oakland, CA

SPONSORED RESEARCH

- 2019 *Body, Full of Time* (\$11,400). PI: **Zach Duer**. Co-PIs: Scotty Hardwig (School of Performing Arts), Charles Nichols (School of Performing Arts). Responsible for 33%.
- 2019 *Body, Full of Time* (\$3,000). PI: **Zach Duer**. Co-PIs: Scotty Hardwig (School of Performing Arts). Responsible for 50%.
- 2019 *Square Dance Cube* (\$3,000). PI: Zach Duer. Co-PIs: Anne Elise Thomas, Phyllis Newbill (Institute for Creativity, Arts, and Technology). Responsible for 50%.
- 2019 *Zoologica Fantastica in the Mist: Bringing Borgess Mythological World to Mixed Reality* (\$1,000). PI: Jasmine Shah (MFA Candidate, School of Visual Arts). Co-PIs: Eric Cades (MFA Candidate, School of Visual Arts), Dash Elhaughe (MFA Candidate, English). Faculty advisors: **Zach Duer**.
- 2018 Pathways Grant Program (\$20,000). PI: **Zach Duer**. Co-PIs: Jimmy Ivory (Department of Communication), Katie MacDonald (School of Architecture), Tacie Jones (MFA candidate, School of Visual Arts). Responsible for 25%.
- 2018 *Memory Bank* (\$1,000). PI: Tacie Jones. Co-PIs: Vasiliki Ampatzi, Jessie Mann, Najla Mouchrek. Faculty advisors: **Zach Duer**, Thomas Tucker, Rachel Weaver.
- 2018 International Travel Supplemental Grant (\$1,000). PI: **Zach Duer**. Helped fund conference travel for presentation of *Belle2VR – A Virtual Reality Visualization of Subatomic Particle Physics in the Belle II Experiment* at IEEE Vis 2018, Berlin, Germany.
- 2017 *3D visualization and simulation of infectious disease spread, 9/1/2017 – 9/30/2017*. PI: Bryan Lewis (Biocomplexity Institute). Co-PIs: **Zach Duer**, Van Truong (Biocomplexity Institute). Funded by Mini SEAD grant from the Institute for Creativity, Arts, and Technology at Virginia Tech. \$4,000, responsible for 33%
- 2017 *Immersive Music Performance and Video Projection Mapping, 7/1/2017 – 6/30/2018*. PI: Charles Nichols (Music). Co-PIs: **Zach Duer**, Jonathan Rugh (Architecture), André Foisey (Assessment and Evaluation). Funded by Major SEAD grant from the Institute for Creativity, Arts, and Technology at Virginia Tech. \$25,000, responsible for 20%
- 2017 *Embodied Virtual Reality for Training and Performance, 7/1/2017 – 6/30/2018*. PI: Todd Ogle (Library) Co-PIs: **Zach Duer**, Robin Queen (Biomedical Engineering and Mechanics), Doug Bowman (Computer Science), Nathan Lau (Industrial and Systems Engineering), Ico Bukvic (Music), Stefan Duma (Institute for Critical Technology and Applied Science). Funded by Major SEAD grant from the Institute for Creativity, Arts, and Technology at Virginia Tech. \$25,000, responsible for 14%
- 2017 *Bringing Fossils Back To Life, 7/1/2017 – 7/31/2017*. PI: Michelle Stocker (Geosciences). Co-PIs: **Zach Duer**, Tanner Upthegrove (Institute for Creativity, Arts, and Technology). Funded by Mini SEAD grant from the Institute for Creativity, Arts, and Technology at Virginia Tech. \$4,000, responsible for 33%
- 2016 *An Educational Tool to Explore the Dynamics of Subatomic Physics Interactions, 7/1/2016 – 6/30/2017*, PI: Leo Piilonen (Physics). Co-PIs: **Zach Duer**, George Glasson

(Education), Dane Webster (Creative Technologies), Nicholas Polys (Computer Science), Todd Ogle (Technology-Enhanced Learning and Online Strategies). Funded by Major SEAD grant from the Institute for Creativity, Arts, and Technology at Virginia Tech. \$25,000, responsible for 16.5%

PUBLICATIONS & CONFERENCES

- 2019 **Duer Z.**, Harwig, S. Body, Full of Time. Paper presented at Border Control, New Media Caucus Symposium. Ann Arbor, MI.
- 2019 **Duer Z.** Educational Platforms for Immersive Student-Driven Learning. Paper presented at College Art Association Annual Conference 2019. NYC, NY
- 2019 Ogle, T., **Duer., Z.** Tucker, T., Yu, R., Hicks, Dr., Bowman, D. Adventures in Visualizing History: A Case of Creative Transdisciplinary Work at Virginia Tech. Poster presented at Branches from the Same Tree – A National Convening on the Integration of Arts, Humanities, and STEMM in Higher Education. National Academy of Sciences. Washington, D.C
- 2019 Piilonen, L., **Duer, Z.**, Glasson, G. Belle2VR. Poster presented at Branches from the Same Tree – A National Convening on the Integration of Arts, Humanities, and STEMM in Higher Education. National Academy of Sciences. Washington, D.C.
- 2018 Dee, M., **Duer, Z.**, Bukvic, I. Typography for Immersive, Mixed, and Virtual Environments. Paper presented at TypeCon 2018. Minneapolis, MN.
- 2018 Dee, M., **Duer, Z.**, Bukvic, I. Design for Immersive, Mixed, and Virtual Environments. Paper presented at University and College Design Association Conference. Grand Rapids, MI.
- 2018 **Duer Z.**, Piilonen L., Glasson G.E. Belle2VR: A Virtual Reality Visualization of Subatomic Particle Physics in the Belle II Experiment. IEEE Computer Graphics and Applications, Vol. 38 No. 3.
- 2018 **Duer, Z.**, Piilonen, L., Glasson, G. Belle2VR – A Virtual Reality Visualization of Subatomic Particle Physics in the Belle II Experiment. Paper presented at IEEE Vis 2018.
- 2018 Ogle T., Hicks D., Tucker T., **Duer Z.** (2018) *Virtual Reality and Immersive Experiences of a Great War Battlefield*. 98th Annual Conference of the National Conferences for the Social Studies.
- 2018 Ogle T., Hicks D., Tucker T., **Duer Z.** (2018) *Learning Social Studies in Virtual and Augmented Spaces: Theory, Methods, Approaches*. College and University Faculty Assembly annual meeting, Chicago, IL.
- 2018 Yu R., **Duer Z.**, Ogle T., Bowman D., Tucker T., Hicks D., Choi D., Bush Z., Ngo H., Nguyen P., Liu X. Experiencing an Invisible World War I Battlefield Through Narrative-Driven

- Redirected Walking in Virtual Reality. IEEE VR 2018, Reutlingen, Germany.
- 2018 Hicks D., Ogle T., **Duer Z.** Virtual Reality and Immersive Experiences on a Great War Battlefield. National Council for the Social Studies, Collegiate and University Faculty Assembly Annual Conference, Chicago, IL.
- 2018 Ogle T., Hicks D., Tucker T., Choi D., **Duer Z.** If This Place Could Talk: The Lost Village of Vauquois. American Educational Research Association, New York, NY
- 2018 **Duer Z.**, Piilonen P. Belle II VR Visualization. Research Computing Days, Blacksburg, VA
- 2017 Glasson, G.E., Piilonen, L., Spytek, S., & Dobson, C., **Duer, Z.** & Barber, J. Particle Physics Virtual Reality Project at Virginia Tech. Presentation at the Virginia Association of Science Teachers, Roanoke, VA.
- 2017 **Duer, Z.**, Piilonen, L., Glasson, G. Belle2VR – A Virtual Reality Visualization of Subatomic Particle Physics in the Belle II Experiment. Short form paper presented at IEEE Vis 2017 Visualization in Practice workshop.

COURSES TAUGHT

Virginia Tech

- ART 1114 – Play to Make
- ART 3704 – Creative Coding: Processing
- ART 4704 – Advanced Creative Coding: Unity
- ART 5604 – Advanced Creative Coding: Unity
- ART 5704 – Creative Coding: Processing
- UH 3004 – Immersive Environments for Art, Data, and Research

Virginia Commonwealth University

- KINE 208 – Introduction to Computer Techniques
- KINE 291 – Projection Mapping
- KINE 291 – Max/MSP/Jitter
- KINE 291 – Processing
- KINE 291 – Motion Capture
- KINE 338 – 3D Computer Animation I
- KINE 438 – 3D Computer Animation II
- KINE 491 – Programming in Unity

John Tyler Community College

- ART 203 – Animation I
- ART 204 – Animation II

Mills College

MUS 003 – Musicianship I [TA, Instructor of Record]

WORKSHOPS

- 2016 *ICAT: Introduction to the Cube and Immersive Virtual Environments*, Networked Learning Initiatives, Virginia Tech, Blacksburg, VA
- 2016 *ICAT: Motion Capture in the Cube*, Networked Learning Initiatives, Virginia Tech, Blacksburg, VA
- 2016 *ICAT: Virtual Reality in the Cube*, Networked Learning Initiatives, Virginia Tech, Blacksburg, VA
- 2016 *ICAT: Surround Projection in the Cube*, Networked Learning Initiatives, Virginia Tech, Blacksburg, VA
- 2015 *Introduction to Videogame Level Design*, Virginia Commonwealth University Summer Intensive, Richmond, VA
- 2015 *Multi-channel video installation*, for department of Photography and Film, Virginia Commonwealth University, Richmond, VA
- 2015 *Absolute Beginner Programming with Processing*, HackRVA, Richmond, VA
- 2015 *ALTFest Makers Fair*, VCU, Richmond, VA
- 2014 *Introduction to Videogame Level Design*, Virginia Commonwealth University Summer Intensive, Richmond, VA

INVITED PRESENTATIONS

- 2019 New Media Caucus Annual Meeting
- 2016 Southwest Virginia STEM Summit (keynote address)
- 2015 Virginia Commonwealth University, Richmond, VA
- 2013 Alfred University, Alfred, NY
- 2009 University of California Davis, Davis, CA

MEDIA COVERAGE

- 2019 Virginia Tech Magazine. "Imagine That."
https://issuu.com/unirel/docs/vtmag_summer2019_singles. Accessed October 9, 2019

- 2019 ABC13News. "Virtual Reality Event Lets Participants Experience World War One." <https://wset.com/news/local/virtual-reality-event-lets-participants-experience-world-war-one>. Accessed February 13, 2019.
- 2019 VT Daily News. "Immersive Technology Brings the Tunnels of Vauquois to Blacksburg." https://video.vt.edu/media/t/1_fo04kmwn/91886971?utm_source=cmpgn_news&utm_medium=email&utm_campaign=vtUnirelNewsDailyCMP_022019-fs. Accessed February 15, 2019.
- 2019 VT Daily News. "Tunnel Vision: Immersive Technology Brings the Tunnels of Vauquois, France to Blacksburg." https://video.vt.edu/media/Tunnel+VisionA++Immersive+technology+brings+the+tunnels+of+Vauquois%2C+France+to+Blacksburg/1_l6ycqwj7/91886971?utm_source=cmpgn_news&utm_medium=email&utm_campaign=vtUnirelNewsDailyCMP_011419-fs. Accessed January 3, 2019.
- 2018 WSLS-TV 10 News NBC. "Salem Museum opens virtual reality exhibit." Online news article. Accessed November 21, 2018.
- 2017 Virginia First WFXR Fox News. "VT research project allows people to experience life during World War I – broadcast news segment and online article." Local television broadcast news segment and online article. <http://www.virginiafirst.com/news/local-news/vt-research-project-allows-people-to-experience-life-during-world-war-i/704397021>. Accessed July 21, 2017.
- 2016 Virginia Water Radio. "Tornado Research through Virtual Reality at Virginia Tech's Cube." Podcast. <http://www.virginiawaterradio.org/2016/11/episode-342-11-14-16-tornado-research.html>. Accessed July 21, 2017.
- 2016 WHSV 3 ABC News. "Tornado Cube project in Virginia shows new way to view and study tornadoes." Local television broadcast news segment and online article. <http://www.wHSV.com/content/news/Tornado-Cube-project-in-Virginia-shows-new-way-to-view-and-study-tornadoes-375088851.html>. Accessed July 21, 2017.

SERVICE

- 2018 – Creativity and Innovation Destination Area Curriculum Working Group member. Virginia Tech
- 2018 – Curriculum Committee member. School of Visual Arts, Virginia Tech.
- 2018 – Communications Committee member. New Media Caucus
- 2018 – 2019 Organization Committee member, Cube Fest, Institute for Creativity Arts and Technology, Virginia Tech
- 2018 – 2019 Search Committee member. T/T faculty, Assistant or Associate Professor of Creative Technologies and Interdisciplinary 3D Media, School of Visual Arts, Virginia Tech

- 2018 – 2019 Search Committee member. Collegiate Assistant Professor in Technology, Creativity, and Innovation, Honors College, Virginia Tech
- 2017 – 2018 Search Committee member. T/T faculty, Assistant Professor Movement, Performance, and Integrated Media, School of Performing Arts, Virginia Tech
- 2017 – 2018 Search Committee member. Research Assistant Professor in Immersive Environments, ICAT, Virginia Tech
- 2017 – 2018 Committee Member. New Interfaces for Musical Expression 2018 conference, Special Programs and Telematics subcommittee
- 2018 Chair, Creativity and Innovation Destination Area Curriculum Working Group. Virginia Tech
- 2018 School of Visual Arts Curriculum Committee member. Virginia Tech
- 2018 Cube Fest 2019 Organization Committee member. Virginia Tech
- 2013 – 2014 Department Representative, Graduate Artists Association, Virginia Commonwealth University
- 2007 – 2009 Chair, Catering Committee, Signal Flow, Mills College
- 2007 – 2008 Co-chair, Fundraising Committee, Signal Flow, Mills College
- 2006 – 2007 Committee member, Student Advisory Board for the Dean of Arts and Humanities, Minnesota State University Moorhead
- 2003 – 2004 President, American Choral Director's Association, Minnesota State University Moorhead chapter
- 2002 – 2004 Co-President, Music Educator's National Conference, Minnesota State University Moorhead chapter

PROFESSIONAL ORGANIZATION MEMBERSHIP

- 2017 – Faculty Affiliate. Institute for Creativity, Arts, and Technology, Virginia Tech
- 2017 – Member. Center for Human Computer Interaction, Virginia Tech
- 2017 – Member. New Media Caucus