

Brief Resume

EDUCATIONAL BACKGROUND

- 2015** Ph.D., Design and Computation. Massachusetts Institute of Technology, Cambridge, MA.
Playful Calculation: Tangible Coding for Visual Calculation. Advisor: George Stiny
- 2003** Masters of Architecture. Harvard University, Graduate School of Design, Cambridge, MA.
- 2001** BArch. Hampton University, Department of Architecture, Hampton, VA.

APPOINTMENTS

- 2024 - Present** Director of the Entertainment Technology Center, Carnegie Mellon University, Pittsburgh, PA.
- 2024** Full Professor & Department Head of Media Arts, Design and Technology, NCSU, College of Design,
- 2020-2024** Associate Professor & Department Head of Art + Design, NC State University, College of Design,
- 2015-2020** Assistant Professor, NC State University, College of Design, School of Design
Raleigh, NC. (*Tenure earned in 2020*)
- 2016-2020** Affiliated Assistant Research Professor of Architecture, College of Design, Department of
Graphic Design & Industrial Design, Raleigh, NC.
- 2015** Lecturer, Rhode Island School of Design, Department of Foundation Studies,
Providence, RI.
- 2014** Instructor, Harvard University, Graduate School of Design, Cambridge, MA.
- 2011** Instructor and Teaching Assistant, Massachusetts Institute of Technology, Department of
Architecture, Cambridge, MA.
- 2007-2010** Assistant Professor, Florida A&M University, College of Architecture, Department of
Architecture, Tallahassee, FL.
- 2004-2007** Assistant Professor, Hampton University, College of Engineering and Technology,
Department of Architecture, Hampton, VA.

SCHOLARLY ACTIVITIES 2015-2023

Refereed Activity

| | |
|---------------------------------------|------|
| Peer Reviewed Conference Proceedings | (4) |
| Peer Reviewed Book Chapters | (2) |
| Peer Reviewed Journal Articles | (5) |
| Conference Presentations | (8) |
| Peer Reviewed Film Festivals (VR) | (12) |
| Submitted Patents to US Patent Office | (2) |

Non-refereed & Invitational Activity

| | |
|-------------------------------|-----|
| Keynote Speaker | (4) |
| Workshop Leader | (4) |
| Expert Interview | (7) |
| Exhibits | (5) |
| Conference Presentation | (3) |
| Magazine Article | (4) |
| Technical Report /White Paper | (1) |
| NSF Panel Reviewer | (1) |

SCHOLARLY, CREATIVE, & PROFESSIONAL HONORS

- 2022** *Best VR Experience:* Ignite Film Festival
- 2022** *Official Selection:* Marché du Film Festival De Cannes (Cannes XR)
- 2021** *Reallusion Pitch + Produce Competition Grant Recipient*
- 2021** *NCSU Foundation Grant Recipient - (Mixed Reality for Social Impact)*

- 2020** *NC State University Faculty Scholar Award*
- 2020** *Epic Games Mega Grant Recipient*
- 2019** *AT&T Film Award*
- 2018** *Future of Story Telling: FOST Prize for Bridging the Divide in VR*
- 2018** *Nashville Film Festival Grand Jury Prize for VR | 360*
- 2018** *42nd Cleveland International Film Festival: 2018 Perspectives Award for Immersive Storytelling*
- 2017-2018** *NC State University Outstanding Extension Service Award*
- 2017-2018** *Oculus Launchpad Scholarship Award Winner*
- 2017-2018** *(Nominee) Gertrude Cox Award for Excellence in Teaching and Learning with Technology*
- 2017-2018** *(Nominee) NC State University Ebony Harlem Awards of Excellence*

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- 2016-2018** *Association of Colleges and Schools of Architecture (ACSA)*
- 2020-present** *ACM SIGGRAPH - 2022 Chair of the Immersive Pavilion*
- 2021 - 2023** *International Academy of Digital Arts and Sciences (IADAS)*

PROFESSIONAL SERVICE ON CAMPUS

- 2018 - 2024** *Founder and PI of the NC State University, College of Design, Mixed Reality Lab for Innovation and Commercialization*
- 2018 -2021** *Doctor of Design (DDes) Steering Committee*
- 2018-2019** *Technical Director of the *Our Voices Concert*, a collaborative arts projects sponsored by the NC State University Sustainability Fund*
- 2017 - 2018** *College of Design's Scholarship, Research, Extension and Engagement (SREE) Committee*
- 2016 - 2017** *Poole College of Management Design Coach & Faculty Mentor for the Consumer Innovation Consortium (CIC) MBA 590 Innovation Practicum course*
- 2017 - 2018** *College of Design, Search Committee for Associate Dean*
- 2015 - 2024** *PhD Faculty, College of Design
Graduate Faculty, College of Design*
- 2017** *NC State University College of Design, Design Lab, Summer Program Instructor*
- 2016 - 2017** *Volume 38 of The Student Publication Advisory Committee*

PROFESSIONAL SERVICE OFF CAMPUS

- 2021 - 2024** *Raleigh ARTS Commission, Public Art and Design Advisory Board*
- 2018 - 2023** *Founder and CEO of the NC State University Startup Company, Logic Grip Inc.*
- 2017-2018** *Chair of the Association of Colleges and Schools of Architecture (ACSA) Education Committee*
- 2018** *NC State University Minority Science Education Network (MSEN) Summer Program Design Instructor, Rocky Mt., NC*
- 2016- 2017** *MIT Media Lab, "Code 2B" Research Group, Curriculum Consultant*

Extended Resume

LIST OF PUBLICATIONS, PRESENTATIONS, & EXHIBITS (2007 – 2024)

- 2023-24** **Film Festival** Ham D. 2024 Virginia Black Film Festival – Winner of Best Animated Short, “*The War-Torn Drum*” by Derek Ham
- Film Festival** Ham D. 2024 DC Black Film Festival – Winner of Best Animated Short, “*The War-Torn Drum*” by Derek Ham
- Film Festival** Ham D. 2024 Charlotte Black Film Festival – Winner of Best Animated Short, “*The War-Torn Drum*” by Derek Ham
- Film Festival** Ham D. 2024 NC Black Film Festival – Official Selection, “*The War-Torn Drum*”
- Film Festival** Ham D. 2024 Essence Film Festival – Official Selection, “*The War-Torn Drum*”
- Film Festival** Ham D. 2024 Harlem International FF – Official Selection, “*The War-Torn Drum*”
- Film Festival** Ham D. 2024 Roxbury International FF – Official Selection, “*The War-Torn Drum*”
- Film Festival** Ham D. 2024 Greenwood Film Festival – Official Selection, “*The War-Torn Drum*”
- Film Festival** Ham D. 2024 National Black FF– Official Selection, “*The War-Torn Drum*”
- 2022-23** **Presenter** Ham D. for the Research at Inside NC State a Special Immersive Experience for University Donors
- Invited Speaker** Ham D. for RISD class on Mixed Reality
- Interview** Ham D. on The Future of StoryTelling (FoST) podcast is a series of conversations between FoST founder and CEO Charlie Melcher and some of the world’s brightest storytellers across a range of disciplines, focusing on how stories can help provoke positive and lasting change in the world. <https://podcasts.apple.com/us/podcast/living-history-in-vr-derek-ham/id1501861146?i=1000622504327>
- Interview** Ham D. for News and Observer “NC State University design professor helps you experience the Negro Leagues through VR” <https://www.newsobserver.com/news/local/education/article276591831.html>
- Interview** Ham D. for AXIOS - “*In new VR, role-playing gives insight into racism*” - <https://www.axios.com/2023/05/15/new-vr-role-playing-insight-racism>
- Interview** Ham D. for USA Today Podcast - “*VR game transports players to Negro Leagues: 5 Things*” <https://www.usatoday.com/story/news/nation/2023/05/28/virtual-reality-transport-players-to-negro-league-games/70263668007/>
- Interview** Ham D. for NPR’s Morning Edition “*VR designer helps people experience what it was like to play in the Negro Leagues*” <https://www.npr.org/2023/05/24/1177847291/vr-designer-helps-people-experience-what-it-was-like-to-play-in-the-negro-league>
- Interview** Ham D. for Fox News Kansas City - “*New VR Reality Game lets users play as Negro League Stars*” - <https://fox4kc.com/sports/negro-league-baseball-museum/new-virtual-reality-game-lets-users-play-as-negro-leagues-stars/>
- Keynote** Ham, D. for Texas A&M School of Performance, Visualization & Fine Arts’ Research & Creative Works Day (<https://pvfa.tamu.edu/news/2023/02/17/faculty-explore-art-research-at-inaugural-symposium/>)
- Invited Speaker** Ham D. for Virginia Tech Institute for Creativity, Arts, and Technology (ICAT) Playdate <https://news.vt.edu/art/2023/march/doodle-mar-21-2023.html>
- Co-Author** Ham. D. FORTHCOMING - (Under Contract) - Selected to contribute a chapter to the forthcoming book *Fifty Years of Shape Computation* in which the MIT Department of Architecture will trace the impact of shape grammars with a special anniversary volume marking 50 years (1972-2022) of research and applications. This will be published by the MIT Department of Architecture, Nexus Network Journal and Springer’s Mathematics and the Built Environment book series

2021-22 **Film Festival** Ham D. 2021 FIVARS - Festival of International Virtual and Augmented Reality Stories

Film Festival Ham D. 2022 Capital City Film Festival

Film Festival Ham D. 2022 Florida Film Festival

Film Festival Ham D. 2022 Queensland XR Festival (Australia)

Film Festival Ham D. 2022 Philadelphia Independent Film Festival

Film Festival Ham D. 2022 Ignite Film Festival, (Best of Show Winner) - Marlborough, UK

Film Festival Ham D. 2022 Marché du Film Festival de Cannes. “CannesXR” as it is called, is the VR category to the Film Festival De Cannes, and was also a nominee for the VeeR Future Award.

Interview Ham D. featured on the *Ready Teacher 1* Podcast talking about VR and education

Interview Ham D. featured on a new podcast series by the *Penn State Stuckeman School* to celebrate diversity in design computing. The podcast, titled “Voices in Design Computing,” has been organized by Heather Ligler, assistant teaching professor of architecture, as part of her work as an inaugural Stuckeman Diversity and Inclusion Fellow.

Interview Ham D. featured on ISTE website as they were celebrating Black History Month interview

Keynote Ham, D. for the UCDA Annual Conference - DesignEducator’s Forum (spr. 22)

Panelist Ham, D. for the Black Digital Humanities Workshop, Temple University (spr. 22) **Panelist** Ham D. *Tech, Media, Democracy Panel* presentation (Along with my collaborators copied here, I teach this special graduate course called [Technology, Media & Democracy](#), a partnership of five academic institutions in New York City (NYU , Cornell Tech; [Douglas Rushkoff](#) at CUNY Queens College and [Emily Bell](#) at Columbia Journalism) This particular evening in the course we talked about race, gender and Technology.

Invited Speaker Ham D. at Columbia College Chair’s Leadership Council Lecture (spring 22)

Invited Speaker Ham D. at Weaver Academy Art for class presentation on VR

Moderator Ham D. with Gabo Arora for SIGGRAPH Over Coffee chat on Instagram on March 25, 2022

Moderator Ham D. with LIGHTSHED.IO founder, CEO and creative director for the SIGGRAPH Podcast

Interviewed Ham D. Featured in the AIGA Eye on Design (spr 22)

20-21 **Co-Author** Gallagher, V., Renner, M., & **Ham, D.** (2020). "Crafting A Necessary Space: The Virtual MLK Project." *Visualizing Objects, Places, and Spaces: A Digital Project Handbook*.
<https://doi.org/10.21428/51bee781.1848f8a9>

Co-Author Panda, P., Ho, C., Ham, D. (2021). "Morphaces: Morphable Surfaces for Tangible Sketching in VR." C and C 2021- Proceedings of the 2021 *Creativity and Cognition*.
<https://doi.org/10.1145/3450741.3465387>

Keynote Ham, D. *AIGA Annual Conference* in the Educator's Forum, fall 20.

Keynote Ham, D. ISTE Live 21 Conference; *ISTE* is the International Society for Technology in Education (ISTE), summer 21.

Invited Speaker (virtual lecture): Ham, D. "Spatial Narratives in the Virtual World" Clemson University's Design, Race, + Social Justice Lecture Series, spring 21.

Panelist Ham, D. Diversity and Inclusion Research Conference (DIRC) fall 2020

Invited Speaker (virtual lecture): Ham, D. "Reconnecting with History through Spatial Narratives" University of Arkansas School of Art, spring lecture series -
<https://www.youtube.com/watch?v=M7MdZbRLFkc>

2019

Author (peer-reviewed conference proceedings): Derek Ham. 2018. I am a man' virtual experience. In ACM SIGGRAPH 2018 Virtual, Augmented, and Mixed Reality (SIGGRAPH '18). ACM, New York, NY, USA, Article 19, 1 pages. DOI: <https://doi.org/10.1145/3226552.3226565>

Author (peer-reviewed conference proceedings): Ham, D. (2018) Design Computation With Eyes and Hands. In S. Krukowski & M. Swick (Eds.) *Proceedings of the 34th National Conference on the Beginning Design Student*. University of Cincinnati College of Design Architecture Art and Planning.

Presentation (peer-review presentation & panelist) Ham, D., "I Am A Man VR" at SIGGRAPH, International Conference 2018, "Generations." Vancouver, BC, Aug. 12-16.

Co-Author (technical report): Ham, Bethany Lundell Garver, Francis Lyn, Rashida Ng, Carmina Sanchez, Elizabeth Seidel, Charles Setterfield, and Kendall Nicholson. "Moving Towards an Equitable Future." ACSA-arch.org. 2018. August.

Invited Speaker (web presentation/talk): Ham, D. "VR and Visual Storytelling" at the University of Virginia Department of Digital Media and Design, Charlottesville, VA. April 1.

2018

Author (peer-reviewed conference proceedings): Ham, D. (2018) "Kitoparts: A Virtual Playground to Explore Form, Space, and Order" in proceedings of the Al Azhar's 14th International Conference On: Engineering, Architecture & Technology

Author (magazine article): Ham, D. "Crayons, Cardboard, and Virtual Reality." In Ottiya a Creative Learning Magazine.

Invited Speaker (presentation/talk): Ham, D. "VR Design For Good & Evil" at the Triangle UXPA World Usability Day Celebration, Cary, NC. Nov. 8.

Exhibit (peer reviewed VR project): Ham, D. "I Am A Man VR" at the Virginia Film Festival, Charlottesville, VA, Nov. 3-4.

Co-presenter (peer-reviewed conference presentation & exhibit) Gallagher, V., A., Ham, D., Pettitway, K. "Crafting Necessary (Digital) Spaces to Explore Rhetoric, Black History and Civic Transformation" at the African American Digital Humanities National Conference, "Intentionally Digital, Intentionally Black," University of Maryland, College Park, MD, Oct. 18 -19.

Exhibit (peer reviewed VR project): Ham, D. "I Am A Man VR" at the Future of Storytelling (FOST), Judges included: Sarah Steel (program manager & producer for Google VR), Jake Zim (SVP, VR for Sony Pictures), Alexandra Shapiro (Executive VP, marketing & digital, USA Network & SyFy), Susan Betts (Senior Director, Brand Strategy Microsoft). New York, NY. Oct. 3-4.

Presenter (invited conference presentation) Ham, D., at the Design Libraries VII Conference, University of Calgary, Calgary, Alberta, Sep. 16-18.

Interviewee (expert interview): Interviewed by NexUX a UX collective in North Carolina's Research Triangle that considers technology's broader human impacts from an interdisciplinary perspective. This podcast introduces NexUX people and their ideas. August 17.

Presentation (peer-reviewed conference presentation) Ham, D., "Computing By Hand: Using Shape Grammars to Introduce Computational Thinking" at AIGA Design Educator's Conference, "MAKE," Herron School of Art & Design, Indianapolis, IN. June 7-9.

Invited workshop leader (master class): Ham, D. "VR For Historical Narratives" at the Chautauqua Institute, Chautauqua, NY. Aug 11-13.

Presenter (invited presenter and exhibitor) Ham, D., "I Am A Man VR" at the People's Film Festival in Harlem, New York, NY. May 3-4

Presentation (conference presentation): Ham, D., "Preserving Black History Through Virtual Reality" at the Black Communities Conference for Collaboration. Durham, NC. April 23 -25

Presenter (presentation): Ham, D., "VR For Historical Narratives" at the East Coast Games Conference (ECGC) at the Raleigh NC Convention Center. Raleigh, NC, April 18 -19

Panelist (panel expert): Ham, D., at the Indie Game Developer Summit (ECGC Pre-Conference) at the Raleigh NC Convention Center. Raleigh, NC, April 18

Invited Speaker (speaker, web-talk): Ham, D. "Experiencing the Civil Rights Through VR" at Georgia Tech's Digital Media program, digital humanities lab at Georgia Tech (DILAC/Digital Integrative Liberal Arts Center), Atlanta, GA. April 10

Co-Presenter (presentation & panelist): Ham, Bethany Lundell Garver, Francis Lyn, Rashida Ng, Carmina Sanchez, Elizabeth Seidel, Charles Setterfield, and Kendall Nicholson. "Moving Towards an Equitable Future" at the Association for Colleges and Schools of Architecture Annual Meeting: "The Ethical Imperative" in Denver, CO March 15-17

Presenter (presentation) Ham, D., "Design Computation With Eyes and Hands" at the *34th National Conference on the Beginning Design Student*. University of Cincinnati College of Design Architecture Art and Planning, Cincinnati, OH. March 1-3

2017

Author (peer-reviewed book chapter): Ham, D.(2018). Spatial Thinking as a Path Towards Computational Thinking. In H. Ozcinar, G. Wong, & H. Ozturk (Eds.), *Teaching Computational Thinking in Primary Education*(pp. 103-122). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-3200-2.ch006

Invited Keynote Speaker (conference keynote) Ham, D., at Spark Portland. Spark is afternoon of talks from four speakers whose ideas are at the forefront of digital learning culture. This event invites educational leaders to draw a breath of fresh air and focus on the big ideas. Portland, OR, Nov. 3.

Presenter (invited conference presentation) Ham, D., "From High School to Architecture School: Evaluating The Journey Map for Students" at the Association of Colleges and Schools of Architecture Annual Administrator's Conference, "Crossing Boundaries", University of New Mexico, Albuquerque, NM, Nov. 2-4.

Presenter (workshop & presentation): Ham, D., at Bridging the Gap: Uniting North Carolina K-16 STEM Education. Annual Conference in Raleigh, NC, Oct. 24 - 25.

Co-presenter (exhibit) Gallagher, V., A., Ham, D., and Pettitway, K. "VMLK Project" at the ACCelerate: Creativity and Innovation Festival at the Smithsonian National Museum of American History in Washington, DC. Oct. 12 -14

Presentation (peer-reviewed conference workshop) Ham, D., "Panofrom" at the SxSWedu Conference and Playground Exhibit, Austin, TX. March 6-9

Presentation (peer-reviewed conference presentation) Ham, D., "Teaching Coding with Shape Grammars" at the Fresh Take Educator's Conference, Davison, NC. January 27.

2016

Author (peer-reviewed journal article): Ham, D. (2016) How Designers Play: The Ludic Modalities of the Creative Process. *Design Issues*, 32(4), pp. 16-28.

Invited Speaker (presentation/talk): Ham, D., "VR and Film" at NC State University Hunt Library Films and Geeks Event, Raleigh, NC. Nov. 18.

Presenter (workshop & presentation): Ham, D., "Design Thinking With VR" at North Carolina Central University, Durham, NC, Oct. 27.

Invited workshop leader (workshop and lecturer): Ham, D., “Design Thinking and Shape Grammars” at The Metropolitan Autonomous University (Universidad Autónoma Metropolitana) also known as UAM.

Co-presenter (peer-reviewed conference presentation & workshop) Armstrong, A., Ham, D., “Dreaming in VR” at AIGA Design Educator’s Conference, “Frontier,” Montana State University, Bozeman, MT, Oct. 7-9

Co-presenter (presentation): Armstrong, A., Ham, D., “Designing for a Virtual Environment: A Tale of Two Workshops” at Cincinnati Design Week, Cincinnati, OH, Sep. 29 – Oct. 2.

Invited workshop leader (workshop presentation): Armstrong, A., Ham, D., at University of Miami Ohio, Oxford, OH, Sep. 29 – Oct. 2.

Invited Speaker (presentation/talk): Ham, D. at RTP180, where speakers from the research triangle’s three founding universities, local companies, and the community at-large are called upon to take the stage to speak passionately about what matters to them. Cary, NC. February 16.

Co-presenter (presentation): Armstrong, A., Ham, D., “Intro to Virtual Reality Prototyping” at NC State University Hunt Library Coffee and Viz Event, Raleigh, NC. Jan. 20.

Co-presenter (presentation): Armstrong, A., Ham, D., “Intro to Virtual Reality Prototyping” at Moogfest Music, Art, & Technology Festival Over the course of this workshop, participants prototyped content using a simple physical kit and then experienced their designs in 3D. The workshop concluded with ideas for adding music and motion to their own VR creations.

2014

Invited Speaker (presentation/talk): Ham, D., “Making Time for Play.” Invited as a speaker for the Second Friday Lecture series at the MIT Museum. I talked about the process of designing and building games as well as their importance to education and informal learning.

Invited workshop leader (workshop and lecturer): Ham, D., I conducted a Teacher Training Seminar for the Harvard Franklin I-O STEM Program Training for Middle School. As a teacher trainer I conducted seminars on integrating the Arts into STEM curriculums; STEAM. The training seminars introduced these K12 teachers to project based learning and abstract calculation.

Presentation (peer-reviewed conference presentation) Ham, D., at the 2014 SXSWedu Conference I presented in their “Playground” session talks. The talk discussed the relationship between Play, Calculation, and Design. “Play” is an essential component to any creative endeavor. Likewise, algorithmic thinking and calculation are core activities to any design professional.

2013

Presentation (peer-reviewed conference presentation) Ham, D., The paper “*Enhancing Innovation in STEM by Exploring Aesthetics*” presented a model for educators of STEM courses to integrate aesthetic explorations in their curriculums. Bridging the Gap is an annual conference whose goal is to strengthen K-16 STEM education throughout North Carolina. It brings together educators, business leaders, government officials and others who play a role in STEM education to share ideas and resources.

Invited workshop leader (workshop and lecturer): Ham, D., LEFT- Learning Environments for Tomorrow. As a lead facilitator for this innovative symposium, I helped facilitate workshops that brought together educators and architects to discuss the future of educational environments. The conference is cosponsored by Harvard Graduate School of Education and Harvard Graduate School of Design.

2012

Co-Chair MIT 100K Design Charrette. I served as the co-chair of the first ever Design Charrette for the MIT 100K Entrepreneurship Competition. The charrette brought together local designers and participants of the 100K competition to work out graphic, visual, and sensory design components of their entries in a short, concentrated area of time.

2011

Invited workshop leader (workshop and lecturer): Ham, D., Upward Bound Storytelling and Animation Workshop. I taught a four-hour workshop over four days to minority Boston area high school students on the technique and artistry of animated storytelling. Students learned basic techniques of storytelling, drawing, and character development.

2010

Invited Speaker (presentation/talk): Ham, D., at the HBCU Design Education Symposium. This event was hosted by Howard University’s School of Architecture and was the first annual gathering of Schools of Architecture from the five Historically Black Colleges and Universities with these programs. I spoke on the evolution of Digital Design Practices.

- 2009** **Invited Speaker** (presentation/talk): Ham, D., “Designing Hands Free” at the Able Trust Florida High School/High Tech Annual Training. I participated on the Employer Panel Discussion presenting my summer research to educators who work with youth with disabilities. My project “Designing Hands Free” was an exploration in creating a design curriculum that uses voice activation and computer modeling with Google Sketch-up as a means to teach beginning design, to students with limited mobility.
- 2008** **Invited Speaker** (presentation/talk): Ham, D., “Altruism vs Egoism: The True Nature of Architecture.” Presented at the Harvard University Graduate School of Design, “Future Present” Symposium
- 2007** **Presentation** (peer-reviewed conference presentation) Ham, D., *The Acquisition of Grey* presented at the National Association of African American Studies Conference in Baton Rouge, LA.. The abstract was juried and selected by a blind paper review.
- Panel Moderator** at the ACSA Annual Meeting: Fresh Air. I served as the moderator for the panel *CHAD: A Model for Architecture in Secondary Education* at the ACSA 95th Annual Meeting. Panelist included Jenifer Baker, Don Matzkin, and Denise Scott Brown.
- Invited Speaker** (presentation/talk): Ham, D., I presented here at the 36th Annual National Meeting for the National Organization of Minority Architects (NOMA) at the Hyatt Regency in Washington, DC and at the 35th Annual National Meeting at the Disney Contemporary Resort in Orlando Florida.

LIST OF GRANT-SEEKING & FUNDED EFFORTS (2015 -2019)

2018 – 2019

PI (sponsored project): Valdese Weavers, GD592-001 Design Studio: Augmented Reality to serve as a walking tour for the oldest textile plant in NC. Grant value: \$15,000 over 4 months (funded).

PI (sponsored project): New Mark Knight Frank (NKF) , GD400-003 Design Studio: Envisioning the Future of Work Space with the Further Integration of Physical, Digital, and Virtual Experience. Co-PI: Tsai Lu Liu. Grant value: \$20,000 over 4 months (funded).

Co-PI (funded grant proposal): National Endowment for the Humanities (NEH), The Virtual Martin Luther King Project: Producing Digital Experiences and Recovering Civil Rights History. PI : Dr. Victoria Gallagher (CHASS). Grant value: \$200,000 over two years (funded).

Co-PI (grant proposal): Federal Highway Administration (FHWA) (Prime - US Dept. of Transportation (DOT)) Sustainability ROAD MAPS: Sustainability Research Opportunity for Asphalt Deployment Managing Auxiliary Plastics and Sludges. PI: Hakovirta, Marko Co-PI: Lucian Lucia, Yuan Yao, Richard A. Venditti, Youngsoo R. Kim, Benjamin Underwood, Michael A. Evans. Grant value: \$2,999,497 (not funded).

2017 – 2018

PI (sponsored project): National Civil Rights Museum Fall 2017 Studio Project. Co-PI: Tsai Lu Lui (Department Head), Co-PI: Scott Townsend. Grant value: \$22,107 over 8 months (funded).

Co-PI (funded research project): ITC Coatings, Testing and Research in Applications of ITC Coatings for Fire Protection and Energy Efficiency. PI: Soolyeon Cho (Architecture). Grant value: \$6,231 for one month (funded).

PI (grant proposal): National Science Foundation (NSF). VRtibles: Building Computational Thinking Through Spatial Reasoning. Co-PI: Celen Pasalar, Jenifer O Corn, Julia Rice. Grant value: \$2,945,433 for three years (unfunded).

Co-PI (grant proposal): National Science Foundation (NSF). BIOECON Academy: Promoting Informal STEM Learning and Computational thinking among rural Youth by Application of Serious Games. PI: Marko Hakovirta, Co-PI: Lucian Lucia, Michael A. Evans. Grant value: \$2,999,497 for three years (unfunded).

2016 – 2017

Co-PI (grant proposal): US National Park Service. Heads Up History: African American Music Trails - Kinston, NC. PI: Kofi Boone (Landscape Architecture). Co-PI: Rodney Swink. Grant value: \$40,000 for one year (unfunded).

Co-PI (grant proposal): National Science Foundation (NSF). Coastal SEES Collaborative Research: Sustainable Use of Connected Coastal Ecosystem Services and Society (SUCCESS). PI: Laura Taylor. Co-PI: Christopher Lee Osburn, Erin Lee Hestir, Celen Pasalar, Robert C. Abt, Jane Lindsay Harrison, Kelly D. Zering. Grant value: \$797,097 for three years (unfunded).

2015 – 2016

PI (grant proposal): Microsoft Research. Holographic Trading Spaces: Re-Visualizing Stock Market Data Interfaces for Immersive Environments. Co-PI: Jesse Aaron (College of Management). Grant Value: \$97,703 for one year (unfunded).

EXTENSION & ENGAGEMENT (2015-2019)

Oculus Inc. by Facebook Inc. (Menlo Park, CA): After completing the Oculus Launchpad Program, Oculus reached out to me to become a type of ambassador to talk with other VR developers about creating VR projects that focused on social justice and empathy. For the 2018 Oculus Developers Conference (OC4) in San Jose, CA I was brought in to exhibit my VR project and talk in a small closed-door session about VR and social good. I also was brought in as a coach for the 2018 Oculus Launchpad Boot-camp program to help the next generation of VR developers.

RTP Gaming and VR Communities (Raleigh, NC): On several occasions I have worked with the local VR/AR industry as well as gaming and game creator communities. The East Coast Games Conference (ECGC) is the region's largest video game conference in which I have spoken twice and frequently exhibited work from the College of Design. This has also served as a great recruitment tool to young conference attendees. *The Research Triangle Park VR MeetUp Group* is another group I have presented to on several occasions, and even helped host a meeting at NC State. This group is full of industry experts and has allowed me to help share and engage with local industry leaders.

MIT Media Lab CODE 2B (Cambridge, MA): I worked (remotely) with the lab PI Topper Carrew as a STEM curriculum consultant in his project to expand STEM education to under-represented minority youth. In my role, I helped craft the module on VR/AR technology (2016-17).

100 Black Men of Triangle (Raleigh, NC): I served as a panelist for the 100 Black Men's annual career day, a Saturday workshop aimed to expose youth to diverse professions. The 100 Black Men of Triangle East, is devoted to improving the quality of life for African-Americans—particularly young males—through programs focusing on health and wellness, economic empowerment, mentoring and education.

Chautauqua Institute (Chautauqua, NY): In 2018 I was invited by the Chautauqua Institute to teach a Master's Class on VR and Historical Narrative. I introduced audiences to the magic of VR and engaged in conversations about the future of the technology.

Universidad Autónoma Metropolitana (Mexico City, MX). I was an invited workshop leader at the Metropolitan Autonomous University in Mexico City where I gave a three-day workshop and lecturer on "Design Thinking and Shape Grammars." The lecture series would be later translated into Spanish and more widely distributed to faculty and students.

Wake NCSU STEM Early College High School Program (Raleigh, NC): For the AP US History Class at the Wake STEM Early College High School at NCSU I gave a lecture on my I Am A Man VR project showing the students how VR can help bring history to life! The lecture was given at the NCSU Witherspoon African American Center.

The Tech Museum (San Jose CA): I worked with the Tech Museum (remotely) to help them set up and use Panoform within a hands on exhibit. With it they developed a standalone exhibit kiosk, on the HP Sprout Pro G2 hardware, that incorporates the Panoform project installed on their *Reboot Reality Exhibition*. The goal is to make immersive technologies, and especially the creation of content for VR/AR/XR, more accessible to a wider population through design and making.

Weatherstone Elementary School (Cary, NC): I participated in the annual STEM Expo to engage families and kids with hands on VR making activities using our tool Panoform. I would later work with the elementary school's administration to help them get a micro-grant towards purchasing Google Cardboards and mobile devices for teachers and students

Hillburn Elementary School (Raleigh, NC): Under my leadership I sent two of my PhD students to do training for teachers in the hands-on VR making activities using our tool Panoform. Teachers would go on to use the tool through the following academic year.

North Carolina Central University, NCCU (Durham, NC): I gave a lecture at the Department of Art showing what can be done with Panoform and the use of immersive technology (AR/VR), as it pertains to the arts. I would later work with the department to include them on the NSF proposal *VRTibles: Building Computational Thinking Through Spatial Reasoning* for almost 3 million dollars over three years, but was never funded.

SERVICE ACTIVITIES (2015-2020)

2019

Organizer (technical director): Served as the technical director for the “Our Voices Will Be Heard” Concert and mixed media event in honor of the 150th anniversary of the Suffrage Movement

Organizer (exhibit organizer): Organized an MLK Day Exhibit for the Witherspoon African American Cultural Center at NC State University

2018

Speaker (keynote speaker): Speaker for the 2018 NC State University Honor’s College Convocation

Organizer (exhibit organizer): Organized the Exhibit for NC State University Board of Trustees spring meeting and visit

Co- Organizer (exhibit organizer with Prof. Scott Townsend): Co-organized the Black History Exhibit for the Witherspoon African American Cultural Center at NC State University

2017

Speaker (speaker): Speaker for the 2017 New Student Dinner Discussion in Talley Student Center for freshmen students across the university

Speaker (speaker): Speaker for the 2017 Departmental Fall Convocation for new and returning students in the College of Design

2016

Speaker (speaker): Speaker for the 2016 and 2017 Building Future Faculty Program. This Program brings visiting prospect faculty from diverse and minority backgrounds to NC State for a two-day discovery program.

Instructor (summer instructor): Instructor for three separate week-long sessions of the summer Design Camp program for high school and middle school students.

Panelist Reviewer (grant reviewer): Served on a NSF virtual review panel for the Division of Research on Learning in Formal and Informal Settings (DRL). The panel was for the Innovative Technology Experiences for Students and Teachers (ITEST) program.

COLLEGE-LEVEL COMMITTEES (2015 -2021)

Associated Dean Search Committee

In 2018, I served on the search committee for an Associate Dean position. While the search was restricted to internal faculty, we did review four candidates and interviewed three faculty members for the position. Dr. Sharon Joines was ultimately selected as Associated Dean.

Scholarship, Research & Engaged Efforts (SREE) Committee, College Committee

Beginning in the spring of 2017, I joined the SREE Committee. We concluded the year with a three-hour retreat to develop a more effective research strategy for the College of Design.

Volume 38 of The Student Publication Advisory Committee

From 2016-2017 I served as an advisor on the *Volume 38 of The Student Publication*, we are writing to request your participation on our Advisory Committee during the Fall 2016 Semester. *The Student Publication* is one of the oldest student curated design journals in the country

Doctor in Design Program Advisory Committee

Since 2018 I have served on this committee. We have had numerous documents to review and comment upon as the College has started this new program. Additionally, we were tasked with reviewing applications for incoming students.