

Education:

2016 Carnegie Mellon University, Pittsburgh, PA
Master of Fine Arts, focusing on Virtual Reality & Robotics, School of Fine Arts
Full Tuition Scholarship, 2014–2015 (Competitive University-Wide Fellowship)
Thesis Title: “Experiments in Simulating the Human Experience”
Thesis Panel:
Dr. Ivan E. Sutherland, Ph.D., University of Portland, Oregon
Dr. Christopher Atkeson, Ph.D., Professor of Computer Science, Carnegie Mellon
Dr. Jessica Hodgins, Ph.D., Professor of Computer Science, Carnegie Mellon

2011 Rutgers University, New Brunswick, NJ
Bachelor of Arts, Double major in Visual Art, Literature & Minor in Psychology
Full Tuition Scholarship, 2010–2011, Dean's List, 2009-2011
Faculty Advisors:
Dr. Henry Turner, Professor Of English, Vice President For Academic Initiatives
Rutgers University, Department of English
Ardele Lister, Chair of Moving Image Division, Mason Gross School of Art,
Rutgers University

Positions:

2021- Current Research Associate, MIT Media Lab
Massachusetts Institute of Technology

- Researcher in Hiroshi Ishii's Tangible Media Group
- Develop novel interactive mediums for tangible user experiences
- Draft and collaborate on research articles, group philosophy, research goals
- Develop AR/VR and interactive simulations to assist in ideating with tangible input technologies

2020 – 2021 Associate Professional Specialist/Visiting Instructor
Princeton University

- Virtual reality specialist, developing and assisting instruction for remote courses on art & technology; including creative coding, 3D animation, robotics programming, and VR/AR/MR project development workflows
- Developed virtual learning environments for Zoom based courses, including a virtual simulation of the Princeton Art Museum, as well as 360° streaming video of remote dance performances and in-class technology demonstrations
- Managed and prepared technology kits for course support, including “Immersive Media Kits”, mini-PC's outfitted to support advanced Unity development, & XR research
- Collaborated with the Princeton LGBT center for an augmented reality “Drag Cabaret”, using Snap software; Lens Studio, to instruct students on creating augmented reality avatars for an event focused on Diversity & Inclusion initiatives

2018 – 2020

Research Assistant Professor in Immersive Environments
The Institute for Creativity, Art, and Technology, Virginia Tech

- Grant-funded researcher and creative technologist responsible for leading collaborations between faculty across art, engineering, and the sciences
- Project lead in one-of-a-kind \$15M immersive environment facility, “The Cube”, a VR research lab equipped with 150 spatially located audio speakers, 32 Qualisys motion capture cameras, and immersive 360° video projection environments
- Hardware expert and consultant for VR/AR technology, including Oculus Rift, Quest, HTC Vive, & Hololens, as well as multimedia workflows for immersive video projection mapping
- Instructed Honors courses on Unity development, open to all majors, incorporating animation, motion capture, VR/MR/AR and experimental projection mapping for storytelling or industrial prototyping

2018 – Present

SIGGRAPH Diversity & Inclusivity Committee
ACM SIGGRAPH International Conference

- Collaborate with industry peers to cultivate diversity, equity and inclusivity in computer graphics and interactive technology
- Plan panels, presentations and conference content, engaging audiences in issues relating to gender theory, critical race theory, queer studies, intersectionality, disability studies and related topics
- Host and contribute to annual “Diversity & Inclusion Summits”, encouraging conversations about best practices for cultivating inclusive cultures in the XR, VR, animation, interactive graphics and CGI industries

2018

Robotics Education Consultant
Gujarat Science Center, Ahmedabad, India

- Visiting consultant for Robotics Museum in development at the Gujarat Science Center
- Collaborated with design firms, officials from the India Government, and robotics programmers for interactive exhibit design
- Consulted on the development and creation of robotics/science exhibits
- Directed and oversaw project development of VR and AR prototypes for exhibit prototypes

2018

Researcher-in-Residence
Innovation Media Research Center, University of Maine

- Presented demos for a course titled *Artificial Intelligence and Art*, co-taught with Dr. Sofian Audry, using SoftBank’s “Nao” Robot and the Oculus Rift
- Presented lectures on creating interactive Unity applications with ARKit for IOS applications
- Visited and consulted graduate students, and consulted on the development of a Virtual Reality Lab in development

2016–18

Research Associate, The Robotics Institute
School of Computer Science, Carnegie Mellon University

- Artist-in-Residence in Dr. Christopher Atkeson's soft robotics laboratory
- Developed interactive robotics virtual reality projects for HTC Vive
- Archived and organized robotics collection using new media techniques
- Managed "Robot Museum", a physical collection of robots
- Created video tutorials and animations for programming and robotics education
- Proposal accepted for presentation of an overview of our work at iRos Robotics conference, Vancouver B.C.

2017- Ongoing

Virtual Reality Developer
Federico Solmi Studio, New York, NY

- Ongoing freelancer for Unity-based virtual reality art installations and exhibitions
- Developed virtual reality experience exhibited at Ars Electronica and Frankfurt Music Hall
- Created interactive environment in Unity, custom rigged VR hands, animated shaders, implemented 3D spatial audio

2016

Virtual Reality Consultant
Artsy, New York, NY

- Assisted in project development for a collaboration between Gucci & Facebook for an event in a projection-mapped dome during Art Basel, Miami
- Responsible for converting 3D video artworks into interactive Facebook 360° experiences, collaborated with artists Jon Rafman, Jacolby Satterwhite and Rachel Rossin

2016

Theatre Assistant Technician
The Wooster Group, Performing Garage, New York, NY

- Assisted the artist Deville Cohen during a residency to develop a new multimedia theatrical work, *Flatland*
- Developed video projection mapping timings with Isadora software and Max MSP
- Collaborated with Cohen to ensure that visual, animated, audio and performance elements functioned with custom kinetic sculptures and stage design

2015-16

Curatorial Fellow
Posner Center Rare Book Collection, Carnegie Mellon University, PA

- Collaborated with noted computer scientist Ivan Sutherland to tell the story of the invention of the first virtual reality headset, coded and developed VR application
- Developed digital humanities research overlapping the fields of computer science, computer graphics and automata
- Curated large scale exhibit with rare books, robotics, and embedded interactive virtual reality experience, printed images, text, edited and designed documents
- Coordinated invited lectures of Boston Dynamic's Marc Raibert and Dr. Ivan Sutherland, jointly hosted by the School of Art and the Robotics Institute

- 2013-16 Graduate Research Assistant
School of Art/School of Computer Science, Carnegie Mellon University, PA
- Learned and developed workflows with new technologies to assist faculty with projects
 - Instructed on the use of motion capture facilities, capture, rigging and re-targeting motion capture data
 - Taught storyboarding, video editing, 3D modeling and Maya, Blender and ZBrush animation workflows
 - Aided in students development of advanced technical skills, like cloth simulations, render layers & character rigging, as well as smoke, fire, and physics simulations
- 2015 Gallery Educator
David Zwirner Gallery, New York, NY
- Education and outreach for exhibition on “Light and Space” artist De Wain Valentine
 - Discuss and present on works to the public including collectors, visiting researchers and critics
- 2014 Artist’s Assistant
Skowhegan Residency, Maine
- Provided technical and administrative support for artist Thomas Lanigan-Schmidt, following his 2013 Museum of Modern Art retrospective
 - Managed correspondence as artist’s representative to plan visiting lectures, museum exhibitions, and gallery exhibitions
 - Traveled with artist for two weeks to Skowhegan, Maine, orchestrated daily agenda, studio visits, public lecture and events
- 2011-13 Digital Archivist
Elizabeth Dee Gallery, New York, NY
- Technical manager for all exhibits, hardware, software and technology infrastructure for digital media based fine arts exhibits
 - Designed and edited HTML/CSS for Wordpress CMS
 - Organized and maintained media database of image portfolios
 - Produced high-resolution photography of artworks and exhibition documentation
 - Developed Sketchup models, 3D diagrams and interactive mockups of exhibitions
- 2007-11 Research Assistant, Medical Decision Making Laboratory
Rutgers University, New Brunswick, NJ
- Conducted research using a program for simulation vaccination research applying game theory-based scenarios to decision making
 - Compiled user feedback data for analysis, developed surveys and metrics
 - Contributed to research literature and supported faculty as needed

Courses Taught:

- 2022 *Narrative Design for Immersive XR Experiences*, Spring 2022, UCLA Extension Center for Immersive Media
- 2020-2021 *Transformations in Engineering & the Arts*, Spring 2021, Princeton University, Princeton, NJ
Technology & Storytelling for Performance, (Assisted), Fall 2020, Princeton University, Princeton, NJ
- 2019 *UH 3004: Immersive Virtual Environments for Art, Data, and Research*, Virginia Tech, Honors College, Blacksburg, VA
- 2018 *UH 3004: Immersive Virtual Environments for Art, Data, and Research*, Virginia Tech, Honors College, Blacksburg, VA
- 2016 *Animation, Art & Technology*, Spring 2016, Teaching Assistant, Dr. Jessica Hodgins & James Duesing, Carnegie Mellon University, Pittsburgh, PA
- 2015 *Technical Character Animation*, Fall 2015, Teaching Assistant, Assistant Prof. Spencer Diaz, Carnegie Mellon University, Pittsburgh, PA
- 2014 *Experimental Animation*, Spring 2014, Teaching Assistant, Professor Jessica Hodgins (C.S.), Professor James Duesing (Art), Carnegie Mellon University, Pittsburgh, PA
Foundations Concept Studio; Space and Time, Fall 2014, Teaching Assistant, Visiting Prof. Jonathan Armistead, Carnegie Mellon University, Pittsburgh, PA
- 2013 *Electronic Media Studio: Animation & Video*, Spring 2014, Teaching Assistant, Prof. Paolo Pederecini, Carnegie Mellon University, Pittsburgh, PA

Advising:

Nikita Shokhov, *Mixed Reality Independent Study*, with Aisling Kelliher, Masters in Creative Technologies, School of Visual Arts, Virginia Tech
Mark Manual, Master's Thesis, Department of Computer Science, Virginia Tech
Yao Xiao, Advisor, Department of Computer Science, Master of Science, Virginia Tech

Technical Qualifications:

Software

Unity	Depthkit	Substance Designer	ZBrush
Maya, Autodesk Software	Blender	Unreal	Adobe Suite

Hardware

Hololens	Oculus Quest 1&2	HTC Vive	Magic Leap
Kinect Azure	Microcomputers	3D Printing	Leap Motion

General Skills

Windows 10	Mac OS	Ubuntu	Programming
Project Planning	Asset Management	Computer Vision	Networking

Lectures, Presentations & Academic Service:

2021	Invited Speaker, <i>High-Performance Graphics Conference</i> , DEI Panel Discussion Diversity, Equity & Inclusion Volunteer, <i>SIGGRAPH 2021</i> SIGGRAPH LGBTQ+ Meetup, "Augmented Reality Drag Show" using AR via Zoom (Event), ACM SIGGRAPH International Conference Invited Speaker, Princeton ResInDe Virtual Conference, <i>IDEA- Inclusion, Diversity, Equity, and Accessibility</i> , Princeton University
2020	<i>Living at the Intersection Symposium (LIS)</i> , Princeton University, Animation Collaboration with musician Bora Yoon
2019	Visiting Lecture, UCLA Digital Media Arts, Summer Course, invited by Miles Peyton Visiting Lecture, <i>Imitation of Life</i> , Virtual Reality Workshop, Cooper Union, New York, NY Invited Lecture, <i>Gender Representation in Computer Graphics</i> , <i>SIGGRAPH Asia</i> , Brisbane, Australia Panel member & organizer, <i>Rendering Gender</i> , with Jacob Gaboury, Bo Ruberg, Siggraph Conference, Los Angeles, CA
2018	Organizer, <i>Diversity and Inclusion Summit</i> , Siggraph Conference, Vancouver, BC Founder, " <i>Others</i> " in <i>Computer Graphics</i> , Siggraph Conference, Vancouver, BC Invited Lecture, <i>Robotics and the History of the Humanoid</i> , Lecture, University of Maine IMRC, Orono, MN Invited Lecture, <i>Introduction to Augmented Reality using ARKit</i> , Workshop, University of Maine IMRC, Orono, MN Visiting Lecturer, <i>Artificial Intelligence and Art</i> , with Prof. Sofian Audry, University of Maine IMRC, Orono, MN
2017	Invited Lecture, <i>Towards an Artist in the Lab Framework</i> , iRos Robotics Conference, Workshop, Vancouver, BC Science Educator, with Dr. Chris Atkeson, Robotics Institute, Carnegie Mellon University, Pittsburgh PA Visiting Lecturer, <i>Figure Drawing for Humanoid Robots</i> , Columbia University School of the Arts, New York, NY Visiting Critic, <i>Physical Computing</i> , Carnegie Mellon University, Pittsburgh, PA
2016	Visiting Critic, <i>Senior Studio</i> , Carnegie Mellon University, Pittsburgh, PA Visiting Lecturer, <i>Six X Eight</i> Artist Lecture Series, Silver Eye Center for Photography, Pittsburgh
2015	Committee Member, <i>Open Engagement</i> , Public Arts Project Selection, Pittsburgh, PA Undergraduate Review Committee, Carnegie Mellon University, Pittsburgh, PA

Selected Projects and Exhibitions:

- 2021 *Jone of the City*, Urban Augmented Reality Theatre Project (freelance consultant, in development)
Blind Man Running Through the Light of the Night, Virtual Reality Documentary (in production)
- 2020 *Virtual Princeton Art Museum Exhibit*, online virtual experience of Princeton University Art Collections
Federico Solmi: The Bacchanalian Ones, Rowan University, NJ (Freelance VR Developer)
- 2019 *Boo Box: VR installation*, New Orleans Film Festival, Cinema Reset VR Exhibit, curated by Rachel Lin Weaver, New Orleans, LA
Index Art Center, *New & Improved*, Group Exhibit curated by Sophie Sobers, Newark, NJ
Dancing Plants, Science Festival, The Institute for Creativity, Art, and Technology, Virginia Tech, Blacksburg VA
Visual Language of Chromatin Architecture, ICAT Day, The Institute for Creativity, Art, and Technology, Virginia Tech, Blacksburg VA
Curator, *Open at the Source*, Exhibit on the intersection between Art & Science, The Institute for Creativity, Art, and Technology, Virginia Tech, Blacksburg VA
- 2018 *History of Computer Graphics*, Interactive Animation, SIGGRAPH Art Gallery, Vancouver, Canada
The Blue Plate, University of Mary Washington, Fredericksburg, VA
Mainframe, Mint Museum, Charlotte, NC
- 2017 *Robot Museum*, Interstate Projects, Brooklyn, NY
Et Tu, Art Brute? Andrew Edlin Gallery, New York, NY
- 2016 *Grandmother's House*, Space Gallery, Pittsburgh, PA
Virtual Newell/Simon Simulation, Miller Gallery, Carnegie Mellon MFA Thesis Show, Pittsburgh, PA
Ivan Sutherland's Trojan Cockroach, Posner Center, Carnegie Mellon, Pittsburgh, PA
- 2015 *Grandmother's House*, Little Berlin, Philadelphia, PA
An Evening with Cara Benedetto, Performance, Museum of Contemporary Art, Cleveland, OH
The Blue Plate: History of Computer Graphics, Carnegie Mellon University, Pittsburgh, PA
Intergalactic Immigration Office, curated by Jen Delos Reyes, Open Engagement 2015, Pittsburgh
- 2014 *Andy Warhol's Living Room*, The Warhol Museum, Pittsburgh, PA
City of Lost Men, Kresge Theatre, Carnegie Mellon University, Pittsburgh, PA
- 2013 *Grandmothers House*, 4022 Woolslayer Way, Pittsburgh, PA
Digital Archive 2011-2013, curated by Rebecca Jampol, Newark Penn Station, Newark, NJ
- 2012 *Queer Profiles in Courage*, curated by Christopher Mitchell, Leslie/Lohman Museum of Gay & Lesbian Art, NY, NY
- 2010 *Mix23 NYC Experimental LGBTQ Film Festival*, Theatre for the New City, NY, NY
- 2009 *Last Days of the Iron Maiden*, Gallery Aferro, Newark, NJ
Mason Gross BFA, Rutgers University, New Brunswick, NJ
One City, Jajo Gallery, Newark, NJ
Multiformity: The Art of Disease curated by Deana Haggag, Jajo Gallery, Newark, NJ

Residencies:

- 2021 Media Archaeology Lab, the University of Colorado at Boulder (Forthcoming)
- 2018 University of Maine, Innovative Media, Research and Commercialization Center
Researcher in Residence, Orono, ME
- 2017 Interstate Projects, Brooklyn, NYC, NY
- 2016 The Robotics Institute, Carnegie Mellon University Pittsburgh, PA

Selected Bibliography:

- 2021 Pittsburgh City Paper, *CMU launches Project showcasing the History of Robotics at the University*, by Lauryn Nania.
NEXTPittsburgh, *Robotics Project traces the roots of today's robots to CMU*, by Michael Machosky
Ground Truth, *Carnegie Mellon University Launches The Robotics Project to Preserve and Promote the Field's Legacy*, by GT Staff.
TribLive, *Carnegie Mellon's Robotics Project aims to preserve History of Robotics with large-scale Archive*, by Julia Felton.
Pittsburgh Post Gazette, *From trading cards to 'cannibalized' robotic parts, CMU embarks on a mission to archive the Robotics Field*, by Lauren Rosenblatt.
- 2020 Virginia Tech News, *The Sound of Plants Dancing*, Max Esterhuizen.
The Virginian Pilot, *Virginia researchers are studying 'the sound of plants dancing' to better the future of agriculture*, By Katherine Hafner
- 2017 Vice, Creators Project, *An Artist built an exact replica of Artificial Intelligence's Birthplace*, by Sean Neumann.
Digital Trends, *Artist re-creates the birthplace of Artificial Intelligence*, by Dyllan Furness .
- 2016 Atlas Obscura, *Where Should Robots Go When They Retire?*, by Sarah Laskow.
iProgrammer, *Sutherland's Trojan Cockroach On Show*, by David Conrad.
- 2015 Pittsburgh City Paper, *The Year in Visual Art* by Robert Raczka.
- 2014 The Warhol Blog, *Andy Warhola's Living Room*
Pittsburgh Post Gazette, *Grandma's belongings live as art installation in Lawrenceville*, by Donna Nelson-Jones.

Grants and Scholarships:

- 2018 ICAT Major SEAD Grant, *Dancing Plants*, Virginia Tech
ICAT Sead Grant, *Visual Language of Chromatin Architecture*, Virginia Tech
Steelcase Education Grant, Virginia Tech
- 2017 *Robotics Artist-in-Residence Grant*, Carnegie Mellon University
- 2016 Innovation with Impact, Graduate Research Grant, Carnegie Mellon University
Rembacher Chamber Music Award, Carnegie Mellon University
- 2015 Studio for Creative Inquiry Grant, Carnegie Mellon University
- 2014 Full Tuition Merit Based Scholarship, Carnegie Mellon University
- 2010 Public Art Scholarship, Rutgers University

Professional Affiliations:

Special Interest Group on Computer Graphics and Interactive Techniques, SIGGRAPH
Association for Computing Machinery