DANIEL PHELPS, PH.D / M.F.A.
Curriculum Vitae

School of Literature, Media, and Communication
Georgia Institute of Technology
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EDUCATION

Ph.D., Digital Media | 2025 Georgia Institute of Technology, Atlanta, GA
Dissertation Focus: Immersive Technology Theory

M.S., Digital Media | 2021 Georgia Institute of Technology, Atlanta, GA

M.F.A., Integrated Media Arts | 2011 Hunter College CUNY, New York, NY

B.A., Media Communication | 2002 California State University, Sacramento, CA

ACADEMIC APPOINTMENTS

Lecturer, Full-Time Faculty | 2024-Present Georgia Institute of Technology,
School of Literature, Media, and Communication, Atlanta, GA

Assistant Professor, Tenure Track | 2015-2019 City University of New York,
Department of Performing and Fine Arts
York College Communications Technology Program, Queens, NY

Adjunct Teaching Faculty | 2006-2015 City University of New York,
Department of Academic Computing and Educatiuonal Technology, ACET
York College Communications Technology Program, Queens, NY

RESEARCH AND SCHOLARLY CONTRIBUTIONS

Research Focus and Expertise

My research examines the intersection of emerging technologies and creative practice, with particular emphasis on how immersive media technologies (VR, AR, XR) reshape narrative, audience experience, and the relationship between creator and viewer. My work bridges computational media theory, practice-based creative research, and critical examination of how technological systems shape cultural expression. Research interests include: immersive narrative and documentary practice; computational approaches to innovative storytelling; generative AI applications in creative workflows; visual epistemology and emerging media; ethics and representation in immersive technologies; and technology accessibility in creative industries.

Peer-Reviewed Publications and Scholarly Output

"The Affordances of Augmented Intermediate Layers (AILs) for Scientific Applications." Presentation at Oak Ridge National Laboratory, Visual Informatics for Science and Technology Advances (VISTA) Lab, 2021. Presented research on transparent screens for augmented reality applications in scientific visualization and data interpretation to 80-plus researchers in computational visualization.

"MedizDroids Project: Ultra-Low Cost, Low-Altitude, Affordable and Sustainable UAV Multicopter Drones For Mosquito Vector Control in Malaria Disease Management." IEEE Global Humanitarian Technology Journal, 2014. Peer-reviewed publication demonstrating a collaborative approach to applying emerging technologies for humanitarian public health applications in resource-limited settings. https://phelps.codes/droids

Intellectual Property

Provisional Patent: iPhoneoscope (3D Goggles for iPhone). United States Patent Office, 2010. Designed and pursued a patent for a stereoscopic viewing apparatus for smartphone devices. Patent process navigated through prior art considerations; subsequently contributed to open-source design philosophy for future development work. https://phelps.codes/phono

Conference Presentations and Invited Talks (National and International Venues)

"Virtual Reality and Robotics: A Gateway to STEM Outside of the Classroom." Fact2 AR/VR Symposium, SUNY Albany, 2018. Demonstrated customized VR toolset for non-fiction

storytelling, showcasing research and development efforts with robotics students and creative teams. Presentation marked the public debut of The Future American Retrospective project.

"360 Video and VR Realities in Filmmaking." Invited presentation at Script 2 Screen Symposium, IFC Center and The New York Black Filmmakers Collective, New York, 2018. Two-hour advanced workshop on VR/360 spherical video production techniques, deployment, post-production considerations, and future directions of immersive media as an emerging narrative form.

"Rapid Prototyping for NASA Competitions in Higher Education." Construct3D Conference, Duke University, 2017. Discussed strategies for under-funded, minority-serving, urban institutions to compete nationally in NASA competitions through rapid prototyping methodology and resource optimization. https://phelps.codes/duke1

"Creating Diverse Communities Within Interdisciplinary STEM Research Competitions." Mellon Diversity Project Conference: Creating Diverse and Inclusive Communities, 2016. Sixty-minute presentation articulating strategies for building diverse research teams and inclusive atmospheres within competitive STEM initiatives. Presented a case study of the York Astrobotics Program creation and inclusive recruitment strategies.

"Swarm Robotics and NASA's Crowdsourcing of Technology." CUNY IT Conference Panel Presentation, 2016. Interdisciplinary STEAM cohort discussion across multiple CUNY campuses. Focused on creating inclusive, well-funded makerspaces and alternative funding models for resource-constrained institutions.

"Makerspaces, Maker Pedagogy and the Promise of a Maker Commons." CUNY IT Conference, 2013. Discussed how makerspaces provide access to materials, tools, and technologies, enabling hands-on exploration and participatory learning across traditional and non-traditional pedagogies.

"iPads on Campus: A Look at the Positives and Pitfalls of Adopting Emerging Technology Platforms." CUNY IT Conference, co-presented, 2010. Explored technical solutions for bridging desktop functionality and tablet capabilities on campus networks.

"Content Management in the Cloud: The End of Locally Hosted Media." CUNY IT Conference, co-presented, 2009. Presented strategies for managing streaming video infrastructure while reducing storage costs and increasing reliability and flexibility.

"Changing Realities and Creating WAC Synergies Through Film: A Case Study of Institutional Embeddedness in Multiple Media." Conference on College Composition and Communication

(CCCC), co-presented, 2008. Reflected on the student-researcher production process and educational filmmaking approaches for mockumentary educational film, *Draft My Paper*.

Invited Presentations and Guest Lectures

Oak Ridge National Laboratory Presentation, 2021. Presented research on transparent screens for augmented reality applications to the Visual Informatics for Science and Technology Advances Lab, 80-plus researchers in computational visualization and applied sciences.

New York City College of Technology, Engineering Faculty Presentation, 2014. Outlined NASA's higher education crowdsourcing initiatives in physical design and programming for off-world exploration.

New York City College of Technology, Amazing Stories Symposium, 2016. An invited presentation focused on science fiction readings in the classroom to spur creativity in real-world research applications.

York College CUNY, Teacher Education Lecture (AC230), 2012. Explored learner-based teaching of 3D printing and provided lectures on 3D design pedagogy for K-12 teacher education students.

CREATIVE WORK: ARTISTIC PRACTICE AS RESEARCH

My creative practice serves as a primary research methodology, allowing investigation of how emerging technologies reshape narrative, perception, and cultural experience. Creative work spans film, VR, AR, spatial installation, and immersive experience design.

Major Recent Installations (2023-2026)

Silicon and Soil, 2025-2026. Hartsfield-Jackson Atlanta International Airport, Atlanta, GA. Year-long large-scale public art installation utilizing generative AI image processing and spatial projection to explore how digital imagery shapes human perception. Multi-sensory narrative examining the intersection of digital pathways and natural earth elements, featuring 3D-printed forms synchronized with projection. Employs forced perspective and AI aesthetics to encourage reflection on the organic and inorganic factors that connect contemporary experience. Serves as a public research laboratory examining human-computer interaction and visual perception in high-traffic public space. https://phelps.codes/sns

Prana, 2023. Hard Rock Atlanta/Reverb Hotel, Atlanta, GA. Fifteen-story-tall anamorphic installation exploring contextual digital simulacra. Uses uncanny valley aesthetics to reveal connections between urban infrastructure and natural processes. Single-point perspective directs viewers to a significant open landscape, grounding the audience in urban planning and metropolitan development through perceptual manipulation and spatial design. https://phelps.codes/pranaae

The Bridge to Simulacrum, 2021. This Anamorphic work is part of a collaboration with the School of Architecture, Georgia Tech Library, and Digital Media. https://phelps.codes/ad

Immersive Media Projects

MAP ROVER, 2025. Traveling around Downtown Atlanta, the MAP Rover is outfitted with a high-lumen projector and workstation that illuminates city buildings and unexpected places with digital artwork, film, and photography. https://phelps.codes/map1

Off the Wall, 2021. Co-created by Gregory Zinman and Micah Stansell. I designed and installed the system that runs this show as the project's CTO. Located above the Beltline and North Street Bridge. The LARGEST outdoor projection in the Southeast has come to Atlanta. https://phelps.codes/otw

The Future American Retrospective (VR), 2019. Multi-location exhibition including The Gallery at York College (Jamaica, NY), Queens Pride Festival, and a sixty-eight-location Queens Public Library traveling installation. Large-scale VR narrative work exploring LGBTQ history and identity in Queens communities. Exhibited simultaneously across multiple venues, showcasing linear narrative VR form in immersive multi-channel space. The project represents sustained creative research into VR as a documentary and narrative medium for historically marginalized communities and underrepresented voices. https://phelps.codes/fv

Film and Video

Director, Cinematographer, or Editor

Augmented Interact Layers (AILs), 2020. Research visualization of AR applications. Several projects have been born this year that not only provides an example of an AIL but also serve as case studies for my dissertation. The first is the conclusion and evolution of a project that started with Oak Ridge National Laboratories. At the time of seed funding in 2021, this work was known as an Augmented Interactive Layer. Its intended use was data visualization and manipulating 3D objects before being manufactured using large-format 3D printing techniques (link). Due to the pandemic, funding was shifted from face-to-face travel support with ORNL to

equipment assistance to develop a consumer-oriented product using the technology. https://phelps.codes/ornl

Architecture AR Viewports, 2019. Architectural visualization with AR overlay. This thesis project explores the additional affordances that consumer technology display systems have to offer the augmented reality space. AR viewports provide an alternative interaction model for augmented reality adding to the myriad of ways AR can be deployed in practical applications with unique design constraints. This exploration will result in the development and creation of applied prototypes intended for multidisciplinary uses in storytelling and data visualization. https://phelps.codes/tcd

The Future American Retrospective (VR), 2019. VR narrative documentary. The Future American Retrospective: A Telerobotic VR Experience is a documentary film & installation project that incorporates robotic camera control, Virtual Reality, and novel Documentary filmmaking techniques into a truly social experience intended to question how our future selves will reflect upon this uncertain time in history.https://phelps.codes/fv

The Domino Effect, 2012. Documentary exploring New York City development and gentrification. Screened at New York Preservation Archive Project Film Festival, Jamaica Center for the Arts (JCAL), featured in Bedford and Bowery (New York Magazine), presented at York College Provost Lecture Series exploring public data and storytelling methodology. https://phelps.codes/tde

The Alley (3D Short), 2011. Stereoscopic short film screened at IMA Interactive Show, The New York Stereoscopic Society, and The Museum of Natural History. Demonstrates proficiency in 3D cinematographic techniques and immersive visual storytelling. https://phelps.codes/a3d

StartUpNY York College Commercial, 2015. Commercial production showcasing entrepreneurship initiatives. https://phelps.codes/sny

Additional Films: *NASA SEMAA Program* Documentary (2009), *The Grass is Greener* Short (2005), *City Beat* TV Magazine (2002-2004), *3rd Alarm* TV Magazine (2002-2004), Ed Koch Promo Commercial (2007). https://phelps.codes/video

Exhibitions and Curatorial Work

In Situ: Immersive Mediums, 2026-2029. The LOOP, Creative Quarter, Atlanta, GA. Curated exhibition. This event showcases the work of Daniel Phelps and various collaborators of his "Immersive Mediums" project. This project consists of 10+ installation pieces that use illusions like forced perspective, peppers ghost, lightfield displays, robotics, and holographic experiences. These

pieces showcase not only the technical work of Dr. Phelps, but of a host of other traditional, non-digital artists in the Atlanta area. For this event, Daniel will act as the immersive technologist for each medium, providing the technological expertise to analyze, decipher and re-convey the mission of each artist.

Deconstructing Design: The Art Inside Our Techno-Relics, 2017. The Gallery, York College, Jamaica, NY. Co-curated exhibition examining the interconnectedness of technology, art, games, and music. Explored how manufactured electronic objects reflect and influence human individuality. The curatorial approach emphasized deconstructive analysis, disassembling technology to examine past innovation and construction, then repositioning the resulting parts as artistic works.

Peripheral Visions: Casabella and Domus Interactive, 2012. The Lang Gallery, New York, NY. iPad art installation providing interactive analysis of design magazines Casabella and Domus from 1950 to the present. Pioneered the use of tablet interfaces for gallery-based interactive experience. Presented in conjunction with the Peripheral Visions art show. https://phelps.codes/pv

FIT 3D Live, 2010. Fashion Institute of Technology, New York, NY. Commissioned to design and engineer a custom 3D rig and signal chain for a fully immersive stereoscopic 3D simulcast of a fashion runway show. Project represented the first 3D simulcast runway show in the United States, requiring innovative technical engineering and creative direction to capture and transmit an immersive visual experience. https://phelps.codes/fit

Additional Screenings and Exhibitions

BeFilm International Film Festival; The New York Stereoscopic Society; The Museum of Natural History; IMA Interactive Show; The Conference on College Composition and Communication (CCCC).

TEACHING EXPERIENCE AND PEDAGOGY

Teaching Philosophy

My teaching approach integrates artistic foundations, technical skill development, and critical thinking about technology's role in creative practice. I teach students not simply how to use tools,

but *why* those tools matter to contemporary creative expression. All studio courses emphasize project-based learning, student-centered pedagogy, and connection to professional practice and community. Design teaching is grounded in active, creative practice. So I remain intellectually engaged in research and artistic work that inform course content and demonstrate authentic engagement with the field.

Current Courses (Georgia Institute of Technology)

LMC 2700: Introduction to Computational Media (Spring 2026, Ongoing) Foundation course in computational thinking and creative coding applied to media production. Studio-based project course teaching students to develop interactive media experiences using programming languages and computational design principles. Average enrollment: 40-50 students. Emphasis on intersecting creative expression with technical problem-solving and computational literacy.

LMC 2720: Principles of Visual Design (Fall 2020, Ongoing) Studio course training students to visually organize and present ideas. Comprehensive curriculum covering color theory, typography, composition, layout, and visual communication across multiple platforms (print, web, motion, interactive). Average enrollment: 80 plus students per semester. Developed a comprehensive syllabus emphasizing foundational design principles transferable across disciplines and media. Student work connected to local design firms and nonprofit organizations for real-world application and professional context.

LMC 2730: Constructing the Moving Image (Fall 2021, Ongoing) Multi-modal studio course in cinematic composition, visual narrative, and moving image production. Students develop proficiency in shot composition, sequencing, temporal narrative, and visual storytelling techniques. Incorporated emerging media forms (VR/AR) and contemporary cinematic practices. Strong emphasis on both technical execution and conceptual rigor. Enrollment: approximately 50-70 students per semester.

LMC 3402: Graphic and Visual Design (Fall 2025, Ongoing) Advanced course in visual systems design, interface design, and digital design principles. Prepares students for professional roles in tech, media, and creative industries through a project-based curriculum that connects classroom work to industry standards and practices.

LMC 4813: Generative AI in Production (Spring, 2026, Ongoing) Advanced studio course examining applications of generative AI in creative workflows. Explores how machine learning and AI extend creative work to individuals without traditional artistic or programming backgrounds. Addresses both technical affordances and critical questions about AI in creative practice. Enrollment: 25-35 mid-level students.

Previous Teaching (City University of New York, York College)

Associate Professor, Tenure Track (2015-2019);
Teaching Faculty (2006-2015)

Advanced Digital Video (2015-2019). Upper-level production course teaches students to develop sophisticated video projects. Covered digital cinematography, non-linear editing, color correction, and emerging video technologies.

Basic Television Studio Production (2015-2019). Foundation course in studio-based television production, including multi-camera techniques, live switching, lighting design, and audio engineering. Laboratory-based course with hands-on technical training.

Advanced Documentary Production (CT355, 2011-2019). Comprehensive documentary filmmaking course covering pre-production planning and budgeting, scripting and story development, field production techniques (camera, sound, lighting), editing and post-production, and documentary history and critical frameworks. Students produced complete documentary projects in small groups, resulting in exhibition-ready work.

Intro to Motion Graphics (CT345, 2013-2017). Introduction to motion graphics production techniques for television and video. Taught video effects, animation, blue screen techniques, and advanced non-linear editing workflows. Students produced professional-quality motion graphics packages using industry-standard software.

Studio Television Production (CT240, 2008). Contemporary digital television production focusing on multi-camera techniques, lighting, sound, studio, and field production. Students developed proficiency in studio operations and remote production workflows.

Webcasting (CT380, 2011). Course exploring streaming media solutions and technologies. Covered compression standards, delivery systems, streaming media architecture, and server configuration. Provided hands-on experience in configuring and managing streaming media infrastructure.

Internship Coordination (CT490/491, 2007-2019). Coordinated internship placements for all non-fiction television and web design concentration students. Established partnerships with local media organizations, production companies, and design studios, connecting students to professional opportunities and mentorship networks.

Guest Lectures

Advanced Broadcast Journalism (JOUR389). Ongoing guest instruction in advanced reporting, interviewing techniques, and broadcast news writing and production formats.

Teacher Education (AC230), 2012. Explored learner-based teaching of 3D printing and provided lectures on 3D design pedagogy for K-12 teacher education students.

Teaching Outcomes and Student Impact

Over fifteen years of teaching, I have ushered hundreds of undergraduate students across studio, lecture, and seminar courses. Consistently developed strong student portfolios with graduates placed in major production companies, design firms, IT groups, and creative industries. Many of my students have gone on to careers at major studios and technology companies. Maintaining personal relationships with past students while engaging the current undergraduate cohorts at a professional level establishes a direct line of engagement with those who complete the program.

Mentoring and Advising Philosophy

My advising approach emphasizes individual student development, career preparation, and connection to professional networks. I maintain active mentoring relationships beyond coursework, helping students navigate career transitions, develop portfolio work, and connect to industry opportunities. As a faculty member with sustained professional relationships in creative industries, I can directly connect advisees to internship, mentorship, and career opportunities. I view advising as integral to student success, not supplementary to teaching.

AWARDS, HONORS, AND RECOGNITION

Create-X I2P Fellow, 2022. Georgia Institute of Technology. Recognized as an Innovation to Practice Fellow, supporting venture development and entrepreneurial education through Georgia Tech's premier entrepreneurship acceleration program.

Presidential Fellowship, 2019-2023. Georgia Institute of Technology. Prestigious fellowship supporting doctoral research and scholarly development at Georgia Tech.

Telly Award, 2003, 2004. International recognition for broadcast and non-broadcast television production excellence across two years.

NCAA All-Academic Award, 1998, 1999, 2000, 2001, 2002. Recognition for academic excellence while competing as an NCAA Division I athlete.

EXTERNAL FUNDING AND RESEARCH SUPPORT

NASA MSI Technology Grant, 2015-2018. 25K/yr

Secured funding for York Astrobotics Program's participation in the NASA Robotic Mining Competition and Swarm Robotics iniative. Competitive federal funding from NASA's Minority Serving Institution (MSI) program supporting undergraduate research and technology development. 15K

Create-X Program Support, 2022. ARUI venture selected as Finalist for Georgia Tech Create-X Program (sponsored by Georgia Tech and ATDC). Demonstrates validation by Georgia Tech's entrepreneurship ecosystem and competitive selection process. 35k in-kind.

PROFESSIONAL EXPERIENCE AND INDUSTRY ENGAGEMENT

Chief Technology Officer and Creative Technologist, 2021-2026
Cousins Properties and Central Atlanta Progress | Atlanta, GA

Led technology integration and creative development for major public-facing installations in Atlanta's downtown core. Primary projects include 725 Ponce *Off the Wall* project (2021-2023), a fifty-meter-by-fifty-meter outdoor projection installation using dual high-powered laser projectors. Designed technical architecture, managed equipment systems, navigated institutional partnerships, and delivered high-impact public art installations in collaboration with civic and corporate partners.

Founder, ARUI (AR User Interface), 2023-Present
Georgia Tech Create-X Accelerator Program | Atlanta, GA

Founded ARUI to develop novel (non-headset) augmented reality experiences for aerospace, heavy industry, automotive, and operational sectors. The company was selected as a Finalist in the Georgia Tech Create-X Program, demonstrating validation from Georgia Tech's entrepreneurship ecosystem. ARUI exemplifies the intersection of creative technology vision, practical industry application, and commercial viability.

Founder, XR Works, 2022-Present
Georgia Tech Startup Competition Program | Atlanta, GA

Established XR Works as a workforce development company delivering custom extended reality (XR) software solutions and proven XR learning methods. Aims to vet, train, and prepare low-income individuals for blue-collar work by connecting emerging technology vendors, local government, and industry leaders with the urban workforce. Demonstrates commitment to equity in emerging technology industries and practical application of immersive technologies for social benefit.

STEAM Program Coordinator, 2015-2019
York College, CUNY | Queens, NY

Led interdisciplinary team of student fellows competing in NASA-sponsored applied science competitions (Robotic Mining Competition, NASA Swarmathon). Directed undergraduate research initiatives in STEM-related fields with emphasis on inclusive team development. Pioneered strategies for creating diverse and inclusive communities within competitive STEM research environments, resulting in consistent team placements and increased student participation from underrepresented groups. Presented research on inclusive STEM pedagogy at the 2016 Mellon Diversity Project Conference and CUNY IT conferences.

Program Coordinator, Communications Technology Program, 2015-2019
York College, CUNY | Queens, NY

Managed curriculum development for the Communications Technology Program, redesigning courses to maintain technological relevance in the evolving media landscape. Coordinated internship placements for all non-fiction television and web design concentration students, establishing partnerships with local media organizations and production companies. Developed syllabi and course structures across eight courses spanning digital video, television studio production, documentary, motion graphics, and emerging technologies.

Multimedia Production Specialist, 2006-2015
York College, CUNY | Queens, NY

Managed York College's television studio and multimedia facilities, supporting all Communications Technology courses. Directed budget planning and technology research and purchasing decisions for the CT Program, evaluating emerging technologies and making recommendations for facility upgrades, and produced all commercial materials, including web advertisements, cable content, and educational videos. Mentored students in production techniques and provided technical support across studio operations.

Founder and Director, York Astrobotics Program, 2014-2019
York College, CUNY | Queens, NY

Founded York Astrobotics as an innovative student competition team competing in NASA-sponsored robotics competitions at the national level. Grew program from concept to sustained operation, securing a $25K/yr NASA MSI Technology Grant (2015-2018) for Robotic Mining Competition. Established mentoring framework connecting undergraduate researchers with faculty advisors in engineering and computational disciplines. Created inclusive recruitment strategies that attracted diverse student participants to STEM research and competition.

Professional Media Production Work (2001-2006)

Head of Production, Lead Editor, Producer. Royster Productions, Los Angeles, CA, 2004-2006. Directed and produced broadcast and non-broadcast productions for diverse clientele. Served as purchaser and rental manager for high-definition equipment inventory. Oversaw all post-production operations, including offline editing, color correction, and physical media duplication.

Chief of Production, Lead Editor, Lead Videographer. Peppers Associates, Sacramento, CA, 2001-2004. Led editorial and production operations for two award-winning television shows airing on Sacramento's ABC affiliate (News10) and headed the creation of all motion graphics, print media, DVD authoring, and design for broadcast and promotional materials.

Freelance Photographer. Adore Shop Magazine, Los Angeles, CA, 2005. Specialized in commercial photography for a nationwide fashion magazine.

SERVICE AND PROFESSIONAL CONTRIBUTIONS

Interdisciplinary Collaboration and Network Building

Established and maintained partnerships with creative studios, technology vendors, startup companies, and nonprofit organizations across Atlanta. Collaborated with Central Atlanta Progress, Cousins Properties, CMII, GSU, and Community Development Initiatives on major public art and urban innovation projects. Contributed to Georgia Tech's emerging creative economy initiatives and interdisciplinary research networks. Also an active participant in Georgia Tech's creative technology and emerging media communities.

Diversity, Equity, and Inclusive Community Building

Presented on Creating Diverse Communities Within Interdisciplinary STEM Research Competitions at the 2016 Mellon Diversity Project Conference. Designed and implemented inclusive recruitment and mentoring strategies for STEAM programs and competitive research teams. Contributed to CUNY IT Conference discussions on creating inclusive makerspaces and alternative funding models for resource-constrained institutions. Demonstrated consistent commitment to expanding STEM research and creative technology access to underrepresented student populations through teaching, mentoring, program design, and advocacy.