Faculty Recruiting PhD Students

Interdisciplinary Design and Media PhD Program | Fall 2027 Start

College of Arts, Media and Design, Northeastern University

Last updated: November 10, 2026

Faculty at a Glance

Faculty are listed alphabetically by last name. Select a name to jump to the full profile.

Faculty	Lab	Research Interests
Michael Arnold Mages	Health and Wellness Design Lab	Participatory Design, Design for democracy, design for decision-making, therapy adherence coaching
Maitraye Das	Technology, Equity, and Accessibility (TEA) Lab	human-computer interaction, accessibility
Smit Desai	CHAI Lab (Conversational Human-AI Interactions Lab)	human-computer interaction, Conversational AI, personalization, aging, explainability, decision making, personality
Demi Fang	Structural Futures Lab	low-carbon structural design, design space exploration, data-driven design, computational design
Laura Forlano	Critical Futures Lab	STS, participatory design & design futures, critical disability studies, critical data studies
Casper Harteveld	Ghostlab	Human-computer interaction; games; XR; design; learning
Carmen Hull	XYZ Data Labs	Data Visualization, Data Physicalization, Visual Cognition
Chenyan Jia	Human, AI Technology, and Society Lab (HATS)	Human-computer interaction, Human-Centered AI, Political Communication, Misinformation, Social Media
Brennan Klein	Complexity & Society Lab	networks, communication, data justice, sports analytics, complex systems
Rebecca Kleinberger	INTERACT Animal Lab	Animal-Computer Interaction, human-computer interaction, Voice Technology, Music Technology
Wallace Lages	Reality Design	HCI, XR
Aston K. McCullough	Laboratory for the Scientific Study of Dance (LAB:SYNC)	dance, physical activity, algorithms, wearables, 2D/3D cameras, health, lifespan development
Eileen McGivney	XR ED Lab	Virtual Reality, Learning Technologies
Killion Mokwete	Africa Built Heritage	Heritage Architecture, Digital Preservation, Digital Twinning, Material Research, Architectural Preservation, LiDAR & Photogrammetry
Dani Snyder-Young	Data Theatre Collaborative	applied performance, community arts, embodied information design
Dakuo Wang	Northeastern University Human-Centered AI Lab	human-computer interaction
Lizzie Yarina	Adaptation Lab	Climate adaptation, urban design, urban theory
Victor Zappi	LDSP	audio, AI, machine learning, musical instruments, human-computer interaction

Faculty Profiles

Michael Arnold Mages

Department: Art + Design
Lab: Health and Wellness Design Lab
Affiliations: Center for Design
Website: Asomatic.net
Research Interests: Participatory Design, Design for democracy, design for decision-making, therapy adherence coaching

DESIRED QUALIFICATIONS

Strong writing skills, effective design skills, fundamental understanding of design research methods, and willingness to learn community engagement methods.

WHAT YOU'D WORK ON

Supporting Design for decision-making projects and therapy adherence coaching in a variety of healthcare settings. Supporting community based participatory research and collaborative projects between residents and government.

Maitraye Das

Department: Art + Design
Lab: Technology, Equity, and Accessibility (TEA) Lab
Website: maitraye.github.io | **Email:** ma.das@northeastern.edu
Research Interests: human-computer interaction, accessibility

DESIRED QUALIFICATIONS

At the Technology, Equity, and Accessibility (TEA) Lab, we welcome students who are excited about studying, designing, and building accessible technologies with and for people with disabilities. Students may come from a variety of technical and design background with expertise and interests in

- Human-centered research involving various methods for data collection and analysis. These methods may include but are not limited to interviews, field observations, co-design sessions, focus groups, diary studies, exploratory and experimental user evaluation, field deployments, etc.
- Programming and building user-centered systems/applications and/or experience with applied AI/ML.
- Designing accessible technologies, educational/learning tools, and/or technologies for children.

Smit Desai

Department: Art + Design
Lab: CHAI Lab (Conversational Human-AI Interactions Lab)
Affiliations: Khoury College of Computer Science, Center for Transformative Media
Website: chainortheastern.net | **Email:** sm.desai@northeastern.edu
Research Interests: human-computer interaction, Conversational AI, personalization, aging, explainability, decision making, personality

DESIRED QUALIFICATIONS

Applicants should have a demonstrated interest in conversational AI, broadly defined to include chatbots, voice agents, generative AI, AI agents, or related interactive systems. Prior research experience is desirable, along with familiarity with HCI and the research communities in which this work is published. I am particularly interested in students who are comfortable with, or willing to learn, a range of qualitative, quantitative, and experimental methods. Strong applicants should be able to articulate research questions they are genuinely interested in pursuing and show curiosity, independence, and a willingness to develop methodological breadth. Prior publications are not required.

WHAT YOU'D WORK ON

During the first two years, the student will likely contribute to ongoing CHAI Lab projects focused on conversational AI and human-AI interaction. Depending on the project, responsibilities may include conducting literature reviews, helping develop research questions and study protocols, preparing IRB materials, recruiting participants, collecting and managing data, building or refining conversational AI prototypes, and conducting qualitative, quantitative, or experimental analyses.

The student will also be expected to contribute to manuscript preparation and conference submissions, participate in regular project and lab meetings, and collaborate with other students and faculty. Early work will typically be more closely scaffolded, with the expectation that the student will gradually take greater ownership of study design, analysis, and writing as they develop methodological expertise and begin shaping an independent research agenda.

Demi Fang

Department: Architecture
Lab: Structural Futures Lab
Website: structural-futures.org | **Email:** d.fang@northeastern.edu
Research Interests: low-carbon structural design, design space exploration, data-driven design, computational design

DESIRED QUALIFICATIONS

Proficient in data analysis and management for building applications, familiar with life cycle assessment, analyzing material quantities and carbon emissions at urban scale

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Laura Forlano

Department: Art + Design
Lab: Critical Futures Lab
Affiliations: Center for Design, Center for Transformative Media
Website: lauraforlano.org | **Email:** l.forlano@northeastern.edu
Research Interests: STS, participatory design & design futures, critical disability studies, critical data studies

DESIRED QUALIFICATIONS

Master's degree in a relevant field; Strong writer, preferably with some academic publication experience; creative practice in design, making, performance and/or artistic research. 4 years of professional work experience;

WHAT YOU'D WORK ON

This position is part of a project on participatory design & research security. The RA would be running participatory design sessions & finding creative ways to engage stakeholders in thinking about future infrastructures, open knowledge systems & the future of universities in the context of socio-political change.

Casper Harteveld

Department: Art + Design
Lab: Ghostlab
Affiliations: Center for Design; EXCITE Institute; Center for Physical AI
Website: ghost.lab.northeastern.edu | **Email:** c.harteveld@northeastern.edu
Research Interests: Human-computer interaction; games; XR; design; learning

DESIRED QUALIFICATIONS

We have 1-2 positions available, contingent on fit and needs:

Position 1: at the OASIIS lab at Massachusetts General Hospital (MGH)

Needs to be familiar with extended reality (virtual reality, augmented reality, mixed reality). We are looking for either a candidate that is more technical and can help with AI pipelines (for personalization and data analysis) or one that is more design/artistically oriented and can help with improving our current interventions or building new ones. The candidate would still participate in Ghostlab activities, too.

Position 2: at the Ghostlab

We are looking for a candidate that is either strong in co-creativity and AI, for helping to build systems that can empower others to make creative technologies, such as games and extended reality; or we are looking for a candidate with strong statistical skills to analyze data from games.

For both positions, we value interdisicplinarily-minded candidates that are open to collaboration and look forward to joining and contributing to an active research lab. Strong candidates have experience with publications and practice-based experience in their portfolio.

WHAT YOU'D WORK ON

MGH position: you are expected to work in the OASIIS lab in person and contribute to the activities in that lab

Co-creative/stats position: you are expected to contribute to various projects in the Ghostlab, specifically StudyCrafter and GeoExplorer

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Carmen Hull

Department: Art + Design
Lab: XYZ Data Labs
Website: carmenhull.com | **Email:** c.hull@northeastern.edu
Research Interests: Data Visualization, Data Physicalization, Visual Cognition

DESIRED QUALIFICATIONS

computational design, art and design

WHAT YOU'D WORK ON

Assist with building digital and physical data visualizations

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Chenyan Jia

Department: Journalism
Lab: Human, AI Technology, and Society Lab (HATS)
Affiliations: Institute for Information, the Internet & Democracy
Website: jiachenyan.com | **Email:** c.jia@northeastern.edu
Research Interests: Human-computer interaction, Human-Centered AI, Political Communication, Misinformation, Social Media

DESIRED QUALIFICATIONS

I am looking for students from communication, design, human-computer interaction, computer science, and related disciplines who are interested in how people interact with AI and how emerging technologies shape society. I'm particularly looking for students interested in designing and studying social media algorithms that reflect societal values, with opportunities to work on my current projects and beyond.

WHAT YOU'D WORK ON

Students will contribute to HATS Lab projects that connect social science research with the design and evaluation of AI-mediated experiences. A particular focus will be understanding the values people want social media to support and translating those insights into algorithms, interfaces, and prototypes that can be evaluated with users.

Brennan Klein

Department: Communications
Lab: Complexity & Society Lab
Affiliations: Network Science Institute, Institute for Experiential AI
Website: brennanklein.com | **Email:** b.klein@northeastern.edu
Research Interests: networks, communication, data justice, sports analytics, complex systems

DESIRED QUALIFICATIONS

I am recruiting along two lines and would take a strong student in either.

1) Data & justice: A student who wants to work on how inequalities in the U.S. criminal legal system are measured and communicated. This student should have interest/background in computational social science, data science, information design, and/or a quantitative social science; some fluency in Python; comfort with large, messy datasets. The core project is the Atlas of Municipal Courts, a public resource covering data from over 7,000 municipal courts across the country, and I'm looking for someone who is

interested in conducting statistical analyses alongside the design of public-facing tools that make institutional data accessible/legible to people outside academia. Experience with web-based data visualization is a strong plus but not required, as is any background in criminal-legal, urban, or civic-technology research.

2) Sports as a complex system: The same technical background, just applied to spatiotemporal data from sports (mostly men's/women's elite soccer at this point, but open to other angles). These are event and tracking data from professional soccer at the scale of tens of thousands of matches. The research is conducted through NetSI Sport, which is a research group I direct. I am looking for interest in how teams coordinate (off-ball movement, defensive structure, the signature of teams' style) and in building interfaces that let analysts, coaches, and the general public see it.

Across both, the qualification that matters most to me is a genuine desire to build things: tools, interfaces, public datasets, visualizations that people outside the project actually use. I would love to work with someone who is passionate about communicating broader research insights in addition to the quantitative analysis of a system.

Areas I would like to expand into with the right student: generative and AI methods applied to either domain, and more broadly the communication question underneath both: how quantitative evidence about institutions and about play becomes public understanding. That question sits between my appointment in Communication Studies and my methods work at the Network Science Institute, and it is the part of my program most in need of a student.

WHAT YOU'D WORK ON

1. Data & justice: Year one would be work on the Atlas of Municipal Courts: processing court records obtained from state administrative offices, building and documenting the data extraction pipelines that standardize these heterogeneous sources, and designing the public interface ahead of launch. Much of the data is already in hand, so a student could start on it early in their PhD. The analytical side (what these records show about how fines, fees, and case flow vary across jurisdictions) and the design side (how any of that becomes legible to someone outside academia) run in parallel.

2. Sports as a complex system: Year one would be spent analyzing high-resolution event and tracking data from tens of thousands of professional matches, building and validating measures of team coordination and communication. The measures and the visual tools for understanding them get built alongside one another.

In both cases I expect the first year to lean toward data, method, and infrastructure, with the student's own research question taking shape over the second year. I'd expect a conference presentation by the end of year one and a first-author paper underway by the end of year two. I don't expect anyone to arrive knowing all of this; I expect them to want to learn it.

Rebecca Kleinberger

Department: Music

Lab: INTERACT Animal Lab

Website: interactanimallab.com | **Email:** r.kleinberger@northeastern.edu

Research Interests: Animal-Computer Interaction, human-computer interaction, Voice Technology, Music Technology

DESIRED QUALIFICATIONS

Students should have a strong technical background in computer science, engineering, HCI, or a related field, with demonstrated experience designing and building interactive systems. Applicants should have

strong programming skills and prior hands-on experience with physical prototyping, electronics, and/or physical computing. Experience with microcontrollers, sensors, embedded systems, CAD, digital fabrication, 3D printing, or related prototyping tools is particularly relevant.

Students should be interested in animal-computer interaction, multispecies interaction, and technology for animal welfare, and comfortable conducting interdisciplinary research and deploying systems in real-world settings with animal-care professionals. Prior experience in animal behavior or welfare is valuable but not required.

I am particularly interested in students who can expand the lab's technical capabilities in areas such as sensing and computational methods for studying animal behavior, adaptive and personalized interactive systems, multimodal interaction, and robust interactive technologies that support animal agency, choice, and enrichment.

WHAT YOU'D WORK ON

During the first two years, the student will contribute to ongoing research in the INTERACT Animal Lab focused on designing and evaluating interactive technologies for animals, in collaboration with zoos, aquariums, museums, and other animal-care partners.

The student will be expected to design, build, and iterate on functional interactive systems, including hardware, electronics, sensing, software, and physical fabrication; prepare systems for robust deployment in animal environments; develop research protocols and prepare IRB and IACUC applications; plan and facilitate workshops with animal-care professionals and other stakeholders; conduct field deployments and behavioral studies; collect and analyze quantitative and qualitative data; and contribute to research publications and presentations. The student will also coordinate with research partners to translate animal welfare, behavioral, and operational needs into technical and research requirements.

Over the first two years, the student will develop increasing independence in identifying research questions, designing studies, leading deployments and collaborations, and developing their own research direction within the lab's broader research program.

Wallace Lages

Department: Art + Design
Lab: Reality Design
Affiliations: EXCITE
Website: realitydesign.sites.northeastern.edu | **Email:** w.lages@northeastern.edu
Research Interests: HCI, XR

DESIRED QUALIFICATIONS

- Strong technical foundation (BS and MS in engineering, CS, ML, etc.)
- Prior research experience (published paper or MS thesis work)
- Demonstrated interest in interaction design, human factors, psychology, XR

WHAT YOU'D WORK ON

Assist in completing existing lab projects while exploring PhD research direction.

Aston K. McCullough

Department: Music
Lab: Laboratory for the Scientific Study of Dance (LAB:SYNC)
Affiliations: Institute for Cognitive & Brain Health
Website: labsync.sites.northeastern.edu | **Email:** a.mccullough@northeastern.edu
Research Interests: dance, physical activity, algorithms, wearables, 2D/3D cameras, health, lifespan development

DESIRED QUALIFICATIONS

The lab seeks to recruit PhD students with interest in dance/movement, wearable sensors and cameras, and algorithm development. A background in statistics, computer programming, or algorithm development is highly desirable.

WHAT YOU'D WORK ON

PhD students are expected to contribute to the development of new algorithms for quantifying and characterizing movement using wearable sensors and cameras; write software that analyze movement in relation to health outcomes and author manuscripts that report study findings; and contribute to the lab's efforts to make art and arts-based research accessible to the communities we serve.

Eileen McGivney

Department: Art + Design
Lab: XR ED Lab
Affiliations: Excite Institute; Center for Transformative Media
Website: xred.sites.northeastern.edu | **Email:** e.mcgivney@northeastern.edu
Research Interests: Virtual Reality, Learning Technologies

DESIRED QUALIFICATIONS

The XR ED Lab is seeking a doctoral student interested in effective learning design for immersive technologies. We seek students with experience in VR development, learning sciences, mixed methods research on learning with technology. Most importantly, we want to work with students who have a driving curiosity about how emerging technologies can support learning that goes beyond what students can read in a textbook, that puts them in the drivers seat of their education, and that support the real needs of teachers and learners.

WHAT YOU'D WORK ON

This student will work on the Virtual AI Patient Simulator project, a collaboration between the XR ED Lab, clinical faculty in the college of health sciences, the Playful Mind Lab, and faculty in computer science who specialize in virtual humans. As a research assistant you will help develop a VR application for simulating patient interactions, run studies of varied designs of the system including collecting mixed method and biometric data, and manage administrative tasks on the project.

Killion Mokwete

Department: Architecture
Lab: Africa Built Heritage
Website: african-built-heritage-nu.hub.arcgis.com | **Email:** h.mokwete@northeastern.edu
Research Interests: Heritage Architecture, Digital Preservation, Digital Twinning, Material Research, Architectural Preservation, LiDAR & Photogrammetry

DESIRED QUALIFICATIONS

Architecture, Architectural History, Building Material science & technology, Digital technologies (XR), Urban Planning. I am looking to expand into Digital Twinning and 3D Printing of Historic Building Materials (Earthen building materials).

WHAT YOU'D WORK ON

Student will collaborate on my ongoing Research Residency work at Autodesk focusing on heritage building material research, developing prototypes, testing and advancing new methods of using historic materials with new technologies such as earth construction through 3D printing techniques and improving mechanical properties of earth construction techniques. Another aspect of this research will include developing digital twins for heritage buildings documented in Benin and exploring the efficacy of digital twining in digital preservation in West Africa.

Dani Snyder-Young

Department: Theatre
Lab: Data Theatre Collaborative
Affiliations: Center for the Arts
Website: camd.northeastern.edu/people/dani-snyder-young | **Email:** d.snyder-young@northeastern.edu
Research Interests: applied performance, community arts, embodied information design

DESIRED QUALIFICATIONS

The successful candidate should have experience devising community-partnered theatrical performances and/or facilitating applied drama workshops in community settings. They should have strong writing, collaboration, and interpersonal communication skills and be passionate about rigorous impact evaluation of artistic practices. An MA or MFA in applied theatre or a related field is preferred but not required.

WHAT YOU'D WORK ON

Data Theatre Collaborative's (DTC) RAs participate in the creation, performance, and/or assessment of faculty-led community-partnered performance projects at the intersection of applied performance and cognate disciplines such as information design, public policy, and/or public health. Responsibilities may include collaborating on the design and facilitation of workshops, conducting ethnographic research as a participant-observer in performance events, liaising with community partners, developing publications and presentations based on data collected through DTC's activities.

Dakuo Wang

Department: Art + Design
Lab: Northeastern University Human-Centered AI Lab
Website: dakuowang.com | **Email:** d.wang@northeastern.edu
Research Interests: human-computer interaction

Lizzie Yarina

Department: Architecture
Lab: Adaptation Lab
Website: camd.northeastern.edu/people/lizzie-yarina | **Email:** e.yarina@northeastern.edu
Research Interests: Climate adaptation, urban design, urban theory

DESIRED QUALIFICATIONS

Background in a spatial design/planning field, and/or in qualitative research. Fluency in Khmer or Thai a plus.

WHAT YOU'D WORK ON

Urban research, collaboration on project development and scholarship

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Victor Zappi

Department: Music
Lab: LDSP
Affiliations: Center for Design
Email: v.zappi@northeastern.edu
Research Interests: audio, AI, machine learning, musical instruments, human-computer interaction

DESIRED QUALIFICATIONS

Students should have skills in software development, DSP, physical computing, and machine learning, with an interest in digital musical instrument (DMI) design and real-time audio systems. Backgrounds vary (from electrical/computer engineering to music technology) and we welcome students whose interests extend into related areas, such as the technology and culture of live electronic music and novel multimodal experiences. We are also looking to expand into embedded/edge deployment of neural audio models and interpretability of neural audio systems.

WHAT YOU'D WORK ON

In the first two years, students typically join an already-running lab project, with the possibility to branch out into brand new developments. Expectations include ramping up on the relevant tools and codebase, contributing to ongoing development and experiments, and working towards academic publications and international conferences (e.g., New Interfaces for Musical Expression, Digital Audio FX, International Computer Music Conference). The specific focus depends on the project and the student's background and interests.