

FEATURED PROJECTS



Concrete Interfaces

Justin Berry, Dr. Yetza Tuakli-Wosornu, and Johannes Sieberer are collaborating with Dr. Rory Cooper and his team at the University of Pittsburgh's Human Engineering Research Laboratories to examine concrete interfaces for emerging immersive media, such as virtual reality (VR). Inspired by the people that use wheelchairs, and learning from how they navigate the world, his team is building an intuitive and comfortable interface for VR using standard wheelchairs that is designed with the medium in mind rather than trying to adapt interfaces from pre-existing media.

▲ Athletes testing out the first version of an affordable wheelchair training system co-developed by Dr. Tuakli-Wosornu.

The Probabilistic Room

The Probabilistic Room was an immersive exhibit in which visitors used VR to walk through living room environments generated by a machine learning algorithm that visualized the latent space in a large number of conventional interior designs. Created by Yale School of Architecture student Sangji Han (SOA '22), visitors experienced the features and the artifacts that most living rooms share, removed from the functional needs of a physically built space. Visitors experimented, danced, and played within the installation — an unexpected result that gave Sangji new insights into people's relationship with architectural archetypes and the built environment. The Probabilistic Room premiered during the summer of 2021.



▲ A screen capture from Sangji Han's The Probabilistic Room

The Blended Reality Laboratory is an applied research hub for those exploring ideas that operate at the intersection of real and virtual worlds. Located at the Center for Collaborative Arts and Media (CCAM), the Blended Reality Laboratory draws upon CCAM's mission to connect the arts and sciences through experimental technology and collaborative research.

BLENDED REALITY

Yale Center for
Collaborative Arts
and Media (CCAM)

INDUSTRY PARTNER



PERSONNEL

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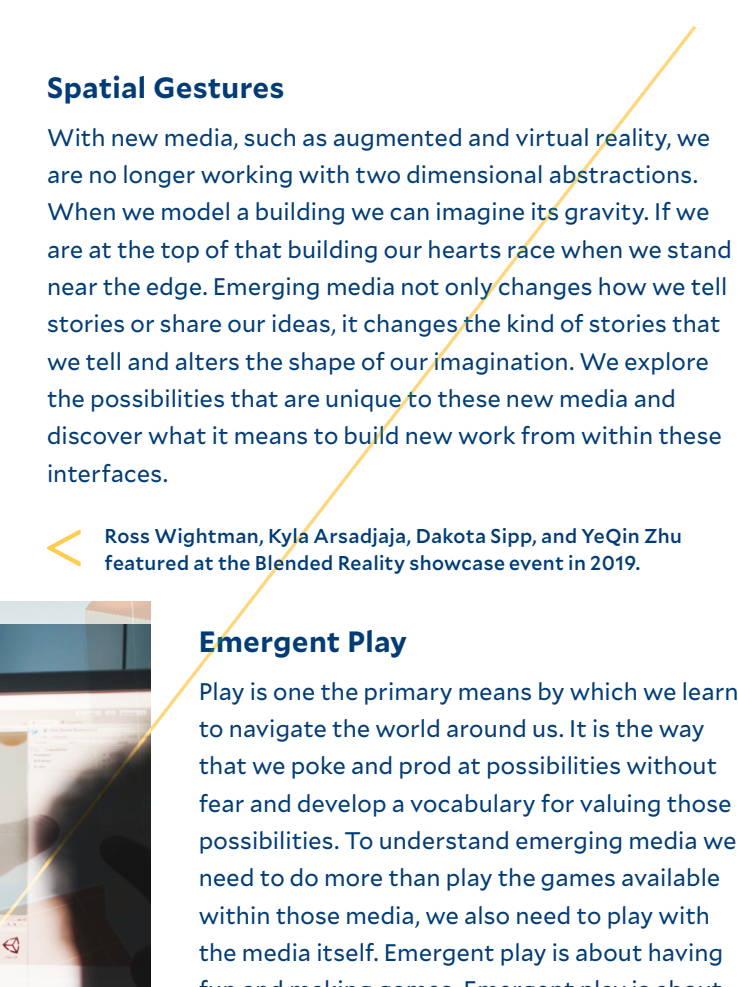
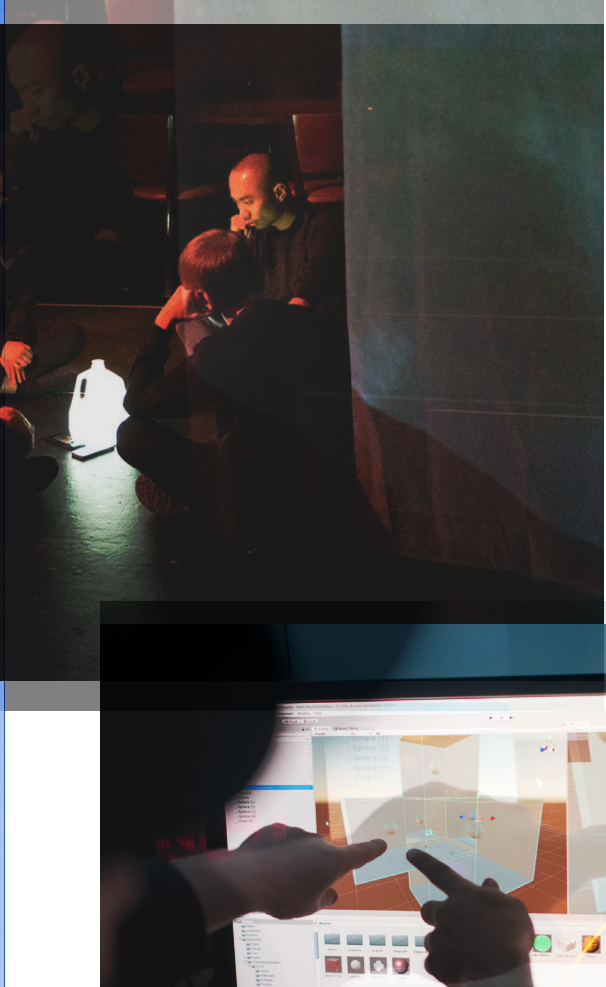
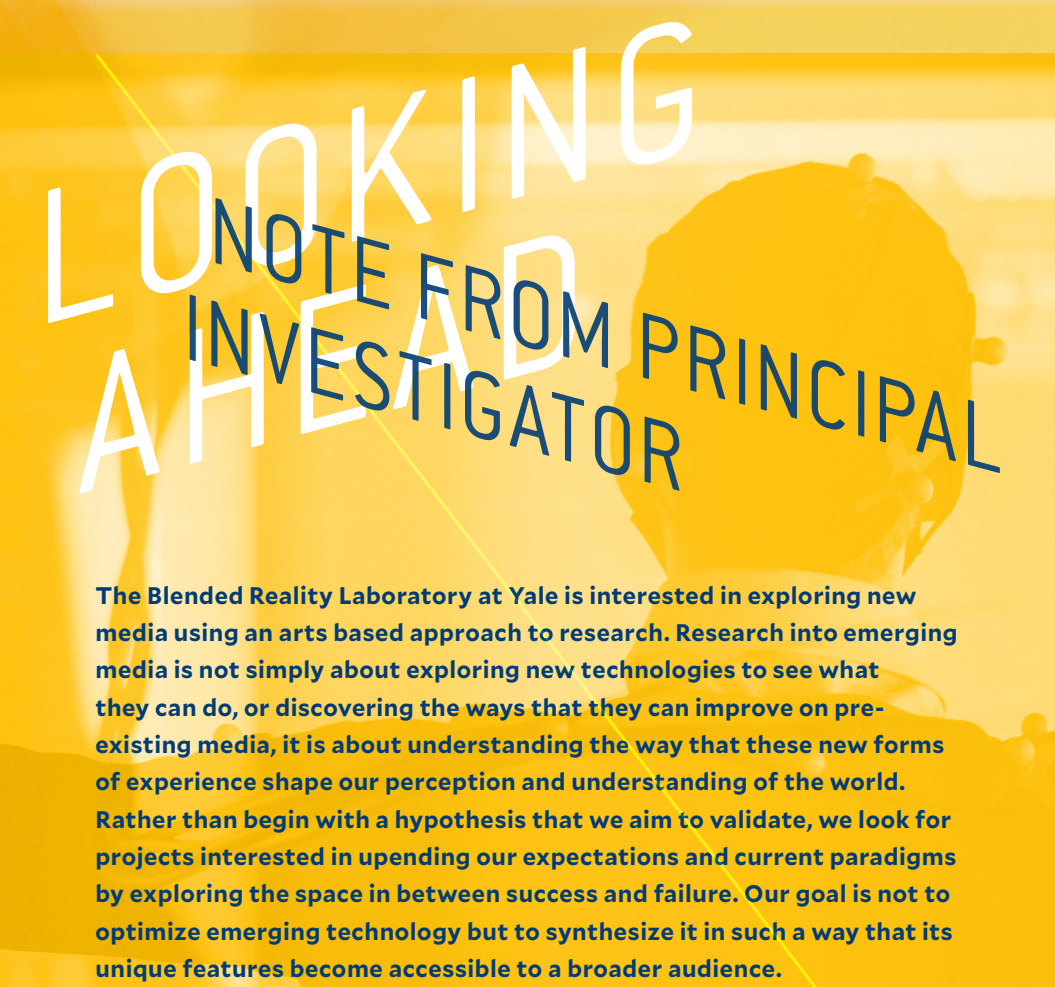
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For further information
and to get involved visit
BlendedReality.yale.edu.



The Blended Reality Laboratory at Yale is interested in exploring new media using an arts based approach to research. Research into emerging media is not simply about exploring new technologies to see what they can do, or discovering the ways that they can improve on pre-existing media, it is about understanding the way that these new forms of experience shape our perception and understanding of the world. Rather than begin with a hypothesis that we aim to validate, we look for projects interested in upending our expectations and current paradigms by exploring the space in between success and failure. Our goal is not to optimize emerging technology but to synthesize it in such a way that its unique features become accessible to a broader audience.

Participants are not providing answers, they are asking questions and operating in a context that does not use success or failure as a metric. Projects are not measured by how well they perform their stated goals but by the extent to which their exploration reshapes our understanding of the technology and its potential. A low-stakes environment is one where risk is encouraged and where failure is seen as a learning opportunity. The metric of our success is not the number of projects that have achieved their initial goal but the number of participants whose creative trajectory is forever altered by their participation in the Blended Reality Laboratory.

Community is at the core of the Blended Reality Laboratory. We are an active group of 150 undergraduate, graduate and professional students, faculty, staff, alumni and industry partners who engage in weekly discussions, take research trips, share ideas, lead workshops, conduct research and support each other's learning and research journeys. Our diverse community includes artists, engineers, computer scientists, sound designers, sculptors, architects, pediatricians, musicians, surgeons, psychologists, playwrights, creative writers, actors, neuroscientists and others.



Digitizing the Material World

When we change the way that we see the world, the world that we see changes. Using new technologies we visualize things that were once invisible and describe things that were once ineffable. Volumetric video, 3D scanning, super-resolution photography, thermal imaging, and photogrammetry are all examples of tools that allow us to capture new forms of experience. We are interested in using these tools to better understand them and, in the process, discover unimagined forms of knowledge, experience, and beauty.

Michael Anderson and Farid Abdul creating a 3D scan from one of the Peabody Museum's dioramas.



Abel Negussie and Grayson Wagner working on Professor John Geibel's 3D bioprints project

"A big part of the experience is talking to or networking with fellow creators... having all these different talks and classes that the Blended Reality (project hosted) really prepared me..."

—MONIQUE BALTZER, YC '20

"The brainstorming sessions (were) the spark that lit the fire... you get so much creative feedback and so many great ideas..."

—ISAAC SHELANSKI, YC '20

"That (community) was really important because we were all feeding off of each other's energy and everyone had something different to bring to the table...that they had found throughout the week..."

—VALENTINA ZAMFIRESCU, ART '18

"They never told me that I was asking too many questions or that they were busy. I would bother them night and day, seven days a week, and they would still respond..."

—JACK WESSON, YC '19

(Re) Constructing Industry

Industry in a global economy is vast and highly distributed. For new ideas to develop and change the industrial landscape many elements need to be in place culturally, technologically, and logistically. We bring together people from diverse disciplines that need support, creating a foundation for experiences and interfaces that are worth doing and that make sense, but that are far enough ahead of the curve that they need a helping hand to get on their feet.



Emergent Play

Play is one the primary means by which we learn to navigate the world around us. It is the way that we poke and prod at possibilities without fear and develop a vocabulary for valuing those possibilities. To understand emerging media we need to do more than play the games available within those media, we also need to play with the media itself. Emergent play is about having fun and making games. Emergent play is about understanding how the games we play shape the values that we hold and the language that we use to describe those values.

Justin Berry and Bobby Berry working on the Verb Collective. Now available on the Unity asset store.

The Machine as a Mind

While machine learning and artificial intelligence are often described in terms of science fiction narratives, they are not exotic or futuristic. These technologies are used to plan cities, adjust photos, schedule flights, trade stocks, and more. Artists, scientists and innovators need to understand AI tools not as they are imagined to be, but in the ways that they actually inhabit our shared world. We are interested in new ways to understand the world around us, transforming data into experience, pushing at the boundaries of authorship, and exploring the ethics of gathering and interpreting fragments from our mediated lives.

Dakota Stipp, Sola Fadiran, and others collaborating with Professor Matthew Suttor on the opera *I Am Alan Turing*.