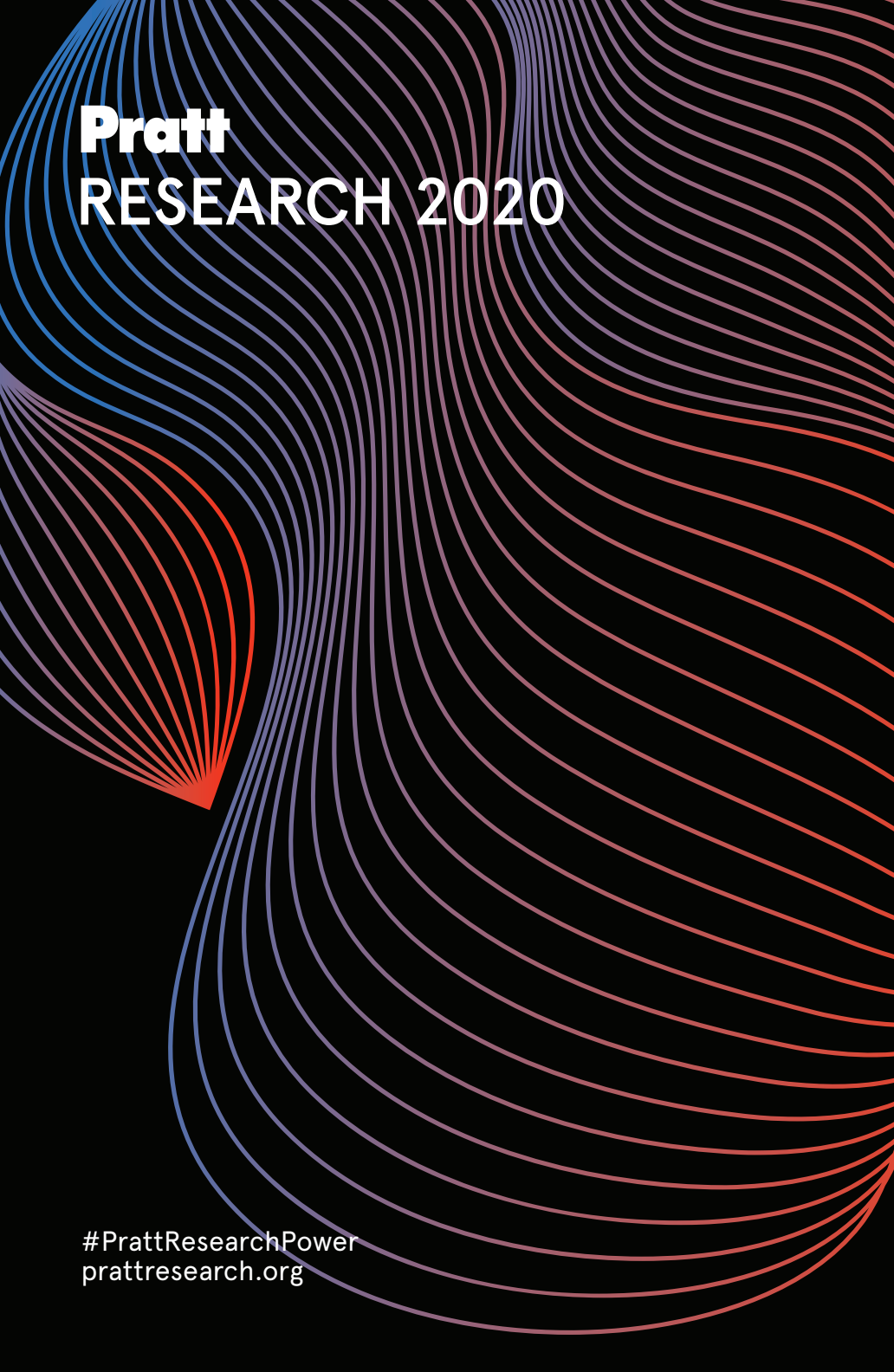
Pratt
RESEARCH 2020
#PrattResearchPower
prattresearch.org

Although we are disappointed that we could not host the Research Open House on our Brooklyn campus, we prioritize health, well-being, and safety above all things and remain committed to this priority. As the global health crisis regarding COVID-19 changes on a daily basis, we remain grateful to our leadership for preemptively making the decision to cancel the Research Open House as early as they did. This event, at its essence, is about communicating the hard work and brilliance of our doers and thinkers, and we remain dedicated to that mission. Although our 3rd Annual Event has been cancelled, what still remains is the incredible work that our faculty, staff, and students have accomplished, which is outlined here.

Within these pages, you will find over 60 projects involving over 200 partners and collaborators, which range from NASA wearable technologies designed by students, art that probes forms of creative public engagement, and the influence of the Persian Empire on Iranian culture and architecture. Whether through participatory design, engagement with materials and processes, or even the investigation of learning and pedagogy, new knowledge, artifacts, and experiences are possible.

Our hope is that these project summaries continue to pique your interest in research at Pratt Institute. Should something catch your eye, I do hope that you'll reach out with any questions or ideas on how we can create together. It is one of my greatest joys as an Associate Provost to discuss new avenues of collaboration; despite our current challenges, I believe that there are innumerable opportunities to improve the world we live in and the ways we connect with one another.

In these fraught times, I implore you to look to the future with positivity, innovation, and hope, so that we can face challenges head on and with the problem solving approach that Pratt Institute is renowned for worldwide. I'd like to thank Pratt Institute's Board of Trustees, President Frances Bronet, and Provost Kirk Pillow for their guidance through the current unknowns and their continued support.

Take care,

Allison Druin, Ph.D.
Associate Provost for Research & Strategic Partnerships
adruin@pratt.edu

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Mark Parsons, Executive Director

Aaron Beebe, Robotics Operations Manager

Katie Behrmann, STEM Coordinator

Phoebe DeGroot, Project Coordinator

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Ekin Guzer, BArch ’23

Daniel Hsu, BArch ’23

James Nanasca, MArch ’21

Nathaniel Quinn, MS Data Analytics and Visualization ’20

Abhipsha Ray, BID ’21

Celic Ruiz, BArch ’23

Ofer Shouval, MFA Interactive Arts ’20

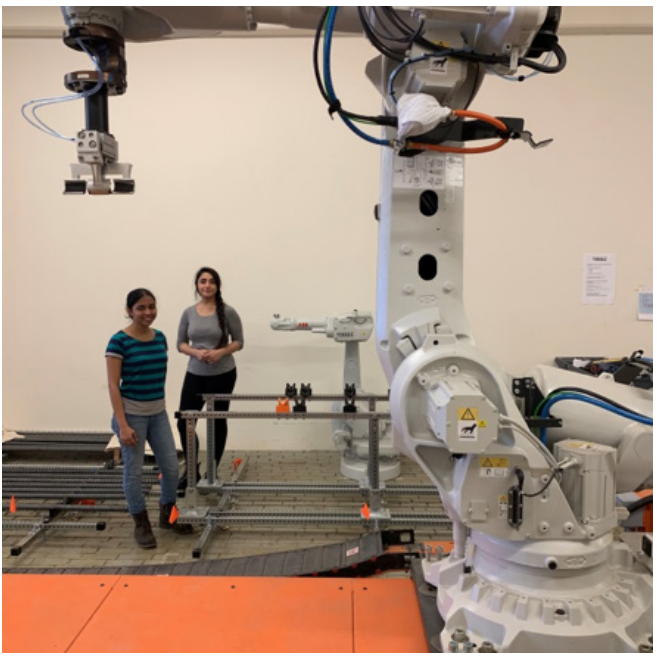
Mohit Shukla, MFA Interactive Arts ’20

Batuhan Ugurtan, BArch ’25

Consortium for Research & Robotics (CRR), Provost Center

Access to Robotic Technology · Access to Know-How · Access to Creative Research

The Consortium for Research & Robotics engages communities that benefit from access to extraordinary technology for research, including NYC’s largest industrial robot. As an outward-facing research center of Pratt Institute, we have worked with corporations like Samsung and Nike, museums like The Metropolitan Museum of Art, business startups that participate in our incubator program, and HUNDREDS of middle school and high school students from Title 1 schools, from Brooklyn to the Bronx.



Kats Tamanaha,
MFA Interior Design '21
Jordan Rekeweg,
MFA Interior Design '22

School of Design

This work was commissioned by the Graduate Student Engagement Fund of Pratt Institute.

Antiguo Palacio del Ayuntamiento: Renovating History for the Future

Antiguo Palacio del Ayuntamiento: Renovating History for the Future is an in-depth case study of the Antiguo Palacio as a pioneering example of a historic government building being renovated for the future. The old city hall in Mexico City was completely renovated in 2015 to preserve the historicity of the building while updating its functioning to be significantly more sustainable. Originally built in 1527, the structure is now the oldest building in the world to have been awarded LEED Gold status, and the first historic public building in Latin America to be LEED certified.

Eleonora Del Federico

Tess Adams,
BFA Digital Arts '20

School of Liberal Arts and Sciences, Mathematics and Science

Back to the Roots: Ancient Dyes and Textiles

Since antiquity, humans have obtained colors from natural sources like plant leaves, flowers, and berries, primarily to dye textiles. This research shows our comparison studies of natural dyed textiles and modern synthetic textiles, which include color stability and durability, as well as how the color hue can be manipulated using natural additives. The stability studies of the dyed textiles were performed using Nuclear Magnetic Resonance (NMR) techniques, which allow us to predict how the textiles degrade at a molecular level, helping to determine which dyes would be the most durable through the understanding of the chemistry involved in their aging.

James Lipovac

Foundation

Seed Grantee
2019-2020

Baku Biennial Installation

At the invitation of the Republic of Azerbaijan's Ministry of Culture and the Baku Biennial's curator, Dilara Vagabova, James Lipovac traveled to Baku to create a site-specific work for their Biennial exhibition. Baku Biennial Installation explored notions of how histories and cultures are created, and this interdisciplinary installation was conceived as a fictitious entry in the Encyclopedia Britannica. With patches of truth, the work allows some things to be known while others remain hidden. It can be viewed as representation of an imaginary society or, perhaps, as representation of our own seen through a filter.

Farzam Yazdanseta

Daniella Calma, BArch ’19

Serra Ozdemir, BArch ’20

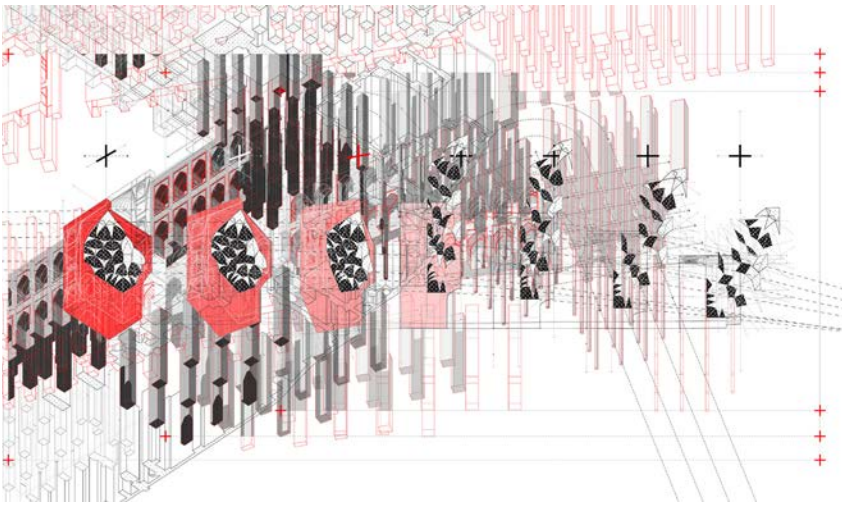
Alejandra Sanchez, BArch ’20

Emmet Sutton, BArch ’22

School of Architecture, Undergraduate Architecture

Banned Drawings

Geometry served as a key element in the emergence of Iranian architecture, which can only be examined alongside the cultural dimensions from which it emerged. Banned Drawings further demonstrates the relationship between the evolution of Iranian architecture, geometry, and mathematics with the political patterns of the Persian Empire. Studies are conducted in the form of innovative two- and three-dimensional analytical drawings in conjunction with experimental means of representation. These studies trace the growth of the Bazaar of Isfahan and its transformation as influenced by politics and religion.



Holly Adams,
BFA Digital Arts '20

Basem Aly,
Associate Director of Research and Strategic Projects, Interactive Services

Andrea DeFelice,
Adjunct Instructor, Digital Arts, School of Art

Mary Lempres,
Lab Technician, Math and Science, School of Liberal Arts and Sciences

Joseph Morris,
Form and Technology Labs Manager, School of Design

Helio Takai,
Interim Dean, School of Liberal Arts and Sciences

BetaSpace

BetaSpace is a place for exploration and play, with many learning resources at arm's length. The space can be used to develop or test VR on various headsets, utilize physical computing equipment and electrical components, play video games and board games, and use 3D and inkjet printers; whether someone has experience or has never used the equipment before.

Yi Luo,
MFA Communications Design '20

Gaia Hwang,
Associate Professor,
Graduate Communications/
Package Design

School of Design

Big Dumb Objects: Deconstructed and Reconstructed

Big Dumb Objects: Deconstructed and Reconstructed seeks to understand why some human constructs strike viewers as sci-fi-esque objects and what commonalities they share with big dumb objects (BDO). By examining some of the most iconic BDO from science fiction and breaking down the images to see in terms of form, function, and (human) reaction, much common ground was found in listing their attributes. So how can we build and reproduce our own BDO?

Jessica Smith, MID '20

Cindie Kehlet, Professor and Advisor, School of Liberal Arts and Sciences, Math and Science

School of Design, Industrial Design

Biomaterials for Design

Biomaterials for Design explores the characteristics of various bioplastics and their potential application within design. A collaboration between science and design, we created a spectrum of bioplastics with varying qualities of strength, flexibility, and durability and used them to create products ranging from bioplastic bags to light fixtures. The goal is to create new materials for manufacturing products that are non-petroleum based and completely biodegradable at the end of their intended use.

Tetsu Ohara, Visiting Associate Professor and Director of Sustainability of Interior Design, School of Design

Xiaoke Li,
MFA Interior Design '21

Jiahan Yu,
MFA Interior Design '19

Jiajie Xu,
BFA Fashion Design '21

Fanjin Zhao,
MFA Interior Design '20

Frank Millero,
Visiting Associate Professor, Industrial Design, School of Design

Carolyn Shafer,
Director, Pratt Sustainability Center

Jennifer Telesca,
Assistant Professor, Social Science and Cultural Studies, School of Liberal Arts and Sciences

Danielle Trofe,
Visiting Instructor, Industrial Design, School of Design

Carl Zimring,
Professor, Social Science and Cultural Studies, School of Liberal Arts and Sciences

School of Design, Interior Design

Biomimicry

Biomimicry is a collection of visual presentations and student design proposals containing biomimicry design theory and strategies. Students submitted work to the 2019 Global Design Challenge, sponsored by the Biomimicry Institute. The students pictured below submitted "Tomato's Home," which focused on design strategies to reduce waste in the post-harvest stage of tomatoes, particularly in Nigeria.

Danielle Begnaud, MID '20

Karol Murlak, Associate Professor, Thesis Advisor

School of Design, Industrial Design

*Elizabeth Bonsignore, Assistant Research Scientist and Director of Kids Team, University of Maryland College of Information Studies, Research Advisor

Brain Bridges: Exploring Boredom in Children through Co-Design

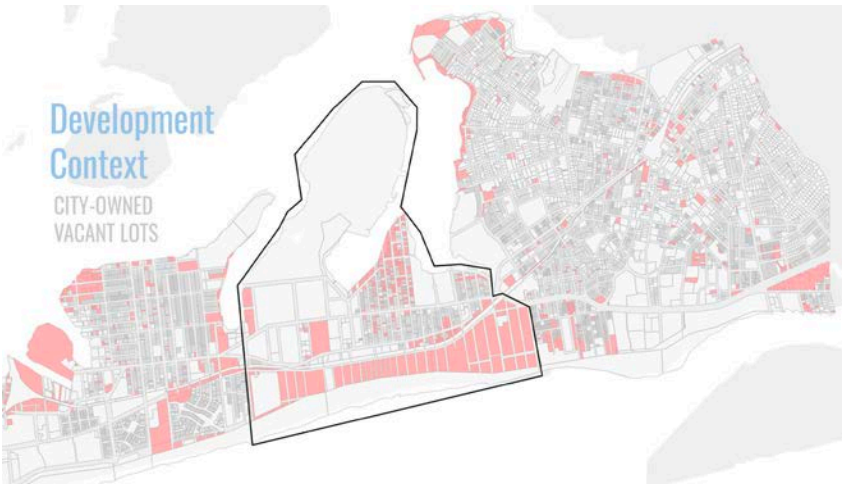
Brain Bridges: Exploring Boredom in Children through Co-Design is an examination into whether today's children are losing an ability to generate their own antidotes to boredom, and instead are growing more dependent on external sources of increasingly digital and ubiquitous forms of entertainment. We conducted five cooperative inquiry sessions with youth (7-13 years old) to explore the role that boredom plays in their lives and techniques to spark imagination and enhance their efforts to overcome boredom.

Erica Asinas,
MS City and Regional Planning '20
Ron Shiffman and Ayse Yonder, Advisors

School of Architecture, Graduate Center for Planning and the Environment (GCPE)

Building Equity through Managed Retreat: A Case Study on Edgemere, Queens

At present, sea-level rise alone threatens to displace 4.2 to 13.1 million Americans by 2100. As an adaptation response, managed retreat strategically relocates at-risk populations from vulnerable coastal areas. However, managed retreat in the US presents an issue of equity; its current practice perpetuates the existing racial wealth gap and cycles of displacement. Through an existing conditions analysis, participatory research, and local stakeholder engagement of the community, Building Equity through Managed Retreat: A Case Study on Edgemere, Queens, explores solutions for frontline communities by integrating community-driven healing, an economically just transition and reparations in adaptation policy and practice.



Craig MacDonald and Elena Villaespesa
Mikiko Tokuhira, MS Information Experience Design '20

School of Information

The Center for Digital Experiences (DX Center)

The Center for Digital Experiences (DX Center) is a faculty-led, student-driven User Experience (UX) design, research, and strategy consultancy and academic research lab within the School of Information (SI). Our mission is to create better digital experiences through the application of a human-centered, ethical approach to the design and evaluation of user interfaces and interactive products.

John Gulliford, Visiting Assistant Professor

William Katavolos, Visiting Professor

Haresh Lalvani, Professor

Che-Wei Wang, Adjunct Assistant Professor

Naini Bansal, BArch '20

Juan Contreras, BArch '22

Jonathan Hamilton, MArch '20

Kevin Harris, BArch '21

Hoyeon (Haley) Lee, BArch '21

Earnest Maxwell, BArch '21

Safa Mehrui, BArch '20

Aaron Miranda, BArch '21

Matthew Mitchell (CES Student Assistant), MArch '20

Abhishek Thakkar, BArch '21

William Vandenburgh, MArch '21

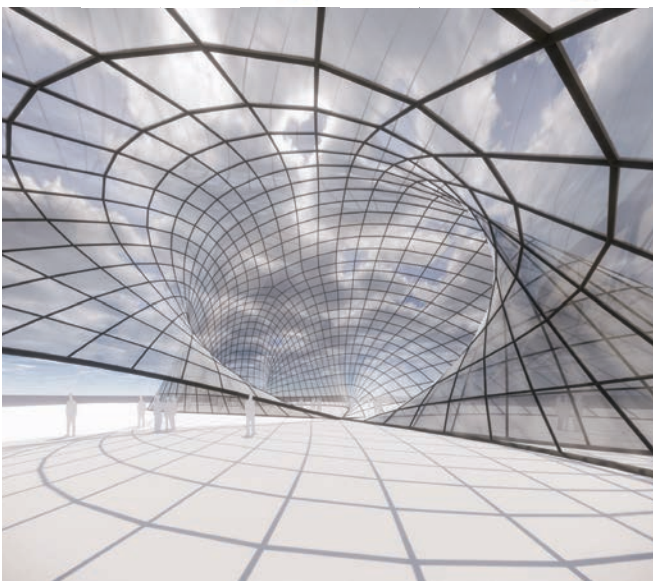
Peiye (Roger) Yang, BArch '21

School of Architecture, Center for Experimental Structures

*David Franck, Robinson Strong, Ahmad Tabbakh, and Peter van Hage

The Center for Experimental Structures

The Center for Experimental Structures explores hydronics architecture, actuated structures, hypersurfaces, minimal surfaces, and other experiments that combine morphology with various building and fabrication technologies, the physical as well as the digital. Our ongoing projects are available to see in the studios and laboratories located in Higgins Hall, including the development of new machines like the Crochetbot.

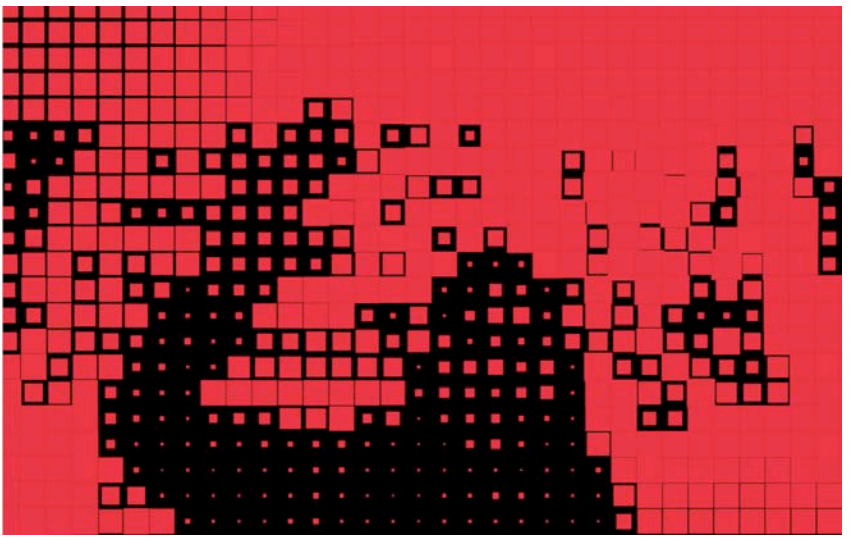


Swati Balasubramanian, MFA Communications Design '20

School of Design

Cohort of the "Smart"

When objects have the ability to clearly communicate with, understand, and get closer to us, the depth of these relationships grows exponentially. Cohort of the "Smart" is an attempt to investigate the promises of the techno-evolution and how deep the cohort of the 'smart' has infiltrated human systems. Through qualitative research methodologies, this project explores the rise of smart environments that has caused visible changes in the way people interact with the materialistic and humanistic.



Mark Rosin

Mohit Shukla,
MFA Interactive
Arts ´20

School of Liberal Arts and Sciences, Math and Science

Color Blind

How would colors appear if you had animal eyes or super-human vision? Color Blind explores the mind-blowing world of metamerisms, in which scientifically designed mixtures of light and color expose the limitations and potential of human vision. This exploratory applied-research project focuses on creating gamified approaches to designing responsive products for color blindness and on learning about the experiences of those with color blindness.

Alexandra Barker and Olivia Vien

Alexis Dorko, MArch ‘20

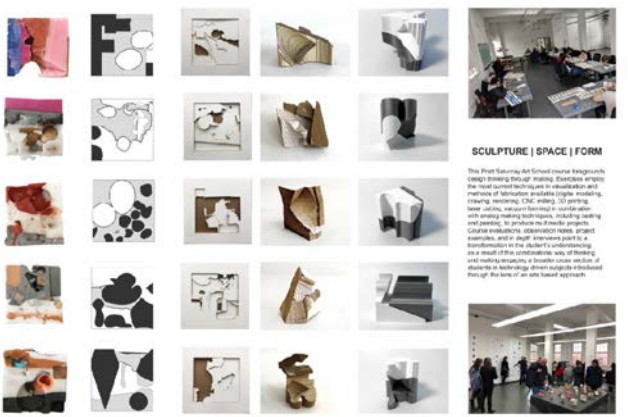
Sophia Kountakis, MArch ‘20

School of Architecture, Graduate Architecture and Urban Design

K-12 Seed Grantee 2019-2020

Curriculum Development in Architecture for Pratt Young Scholars

Curriculum Development in Architecture for Pratt Young Scholars introduces students to a series of design approaches to conceptualize architectural investigations using the most current techniques and methods of fabrication, and is based on the Pratt GAUD MARCH first semester studio course. Students typically receive one-to-one technical instruction on digital modeling, drawing representation, rendering, CNC milling, 3D printing, laser cutting, and robotics. Digital techniques are employed in combination with analog making techniques, including casting and painting to produce multimedia projects.



STEAMPlant Initiative

Iyapo Repository*
Daniel Wright
Caitlin Cahill

School of Liberal Arts and Sciences, Math and Science

*Ayodamola Okunseinde, Salome Asega, Mala Kumar, Mariama Jalloh

Emancipatory Urban Futures

Emancipatory Urban Futures is a STEAMPlant Initiative project at the intersection of art, technology, and research aimed at envisioning a more inclusive and just city for the next generation. By identifying challenges faced by community members and speculating solutions to these challenges, we hope to build futures that are self-determined and community-driven. Participatory workshops involving virtual reality sketching, game-playing, and discussion groups will help to envision the future that you/we are working toward, one of collective well-being and firmly rooted in community.

Judit Török,
Provost Office,
Center for Teaching and Learning

Erica Morawski,
School of Liberal Arts and Sciences,
History of Art and Design

An Experience of SOTL

The Scholarship of Teaching and Learning (SOTL) is a systematic inquiry into student learning and teaching practices. It advances the practice of teaching in higher education through rigorous research strategies to disseminate the findings publicly and broadly. An Experience of SOTL is a curation of our Faculty Learning Community projects, investigating inclusive classroom/ studio practices, including reflection, analysis, qualitative and quantitative data collection, primary and secondary research, to introduce current SOTL within our Institute and model a path for anyone to engage in it.

—Kim Bobier, Visiting Assistant Professor, History of Art and Design
Owning the Assignment: Redesigning Reading Presentation Guidelines for Student-Centered Inquiry

—Natalie Moore, Assistant Chair of Foundation
Diversifying Course Reference Material to Increase Student Engagement

—Ane Gonzalez Lara, Assistant Professor, Undergraduate Architecture
Democratizing the Review Process

—Gaia Hwang, Associate Professor, Graduate Communications Design
Culture and Critique; Modelling the Relationship Between Departmental Culture and Teaching Practices

—Mrinalini Aggrawal, AICAD Post-Graduate Teaching Fellow, Fine Art
FIELD / Site in Process

—Fanny Krivoy, Visiting Assistant Professor, Undergraduate Communications Design
The Power of Choice: Student Outcomes in a Self-Driven Project-Centered Curriculum

—Micki Spiller, Adjunct Assistant Professor-CCE, Foundation
Team-Based Learning in a First-Year Foundation Studio

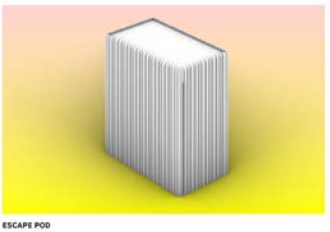
—Pirco Wolfframm, Assistant Chair of Undergraduate Communications Design, Adjunct Professor-CCE, Undergraduate Communications Design, Graduate Communications/Package Design
Open to ... Customized Learning Outcomes

Richard Sarrach
Scott Sorenson
Ted Ngai

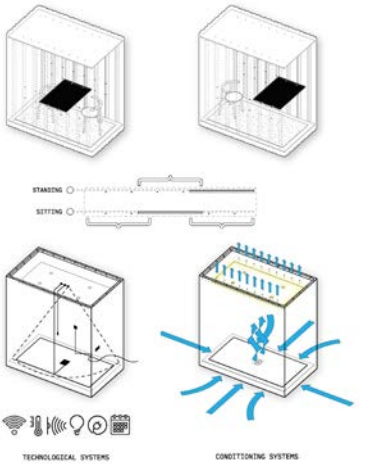
Interdisciplinary Technology Lab

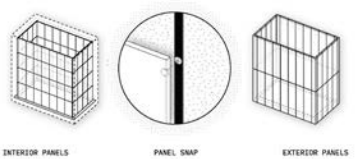
Escape Pod

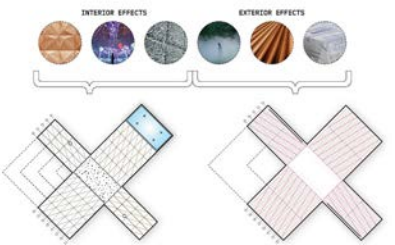
This flat-pack, easy to assemble Escape Pod allows for deployment within a range of interior environments offering an acoustical bubble with customizable interior workspace for one or two occupants.

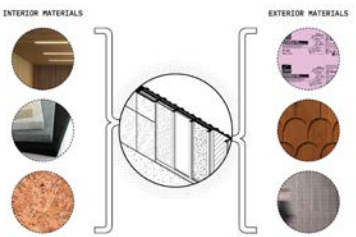


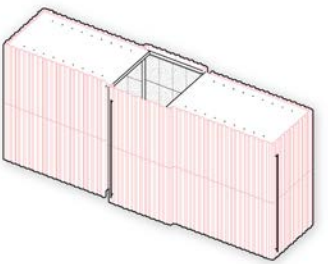
ESCAPE POD











Leanne Bowler

School of Information, Library and Information Science

Seed Grantee 2019-2020

Exploring Youth Data Literacy: Power to Youth in a Data-Centric World

Young people are growing up in a data-driven world, interacting with data on a daily basis and in myriad ways. But is data a tool for their control or their empowerment? Exploring Youth Data Literacy: Power to Youth in a Data-Centric World reports on preliminary work that explored teens and their data interactions and sets the stage for the next phase of the study, which aims to explore data-learning experiences that inspire and empower youth data activists.

Shireen Soliman
Cassidy Jackson,
BA Critical and Visual Studies '21

School of Design, Fashion Design

K-12 Seed Grantee 2019-2020

Fashion and Identity: Representation, Self-Esteem and the Muslim-American Narrative

Fashion and Identity: Representation, Self-Esteem and the Muslim-American Narrative is a workshop series designed to explore the direct correlation between awareness, agency, and perception of dress and self-esteem established with ownership of one's authentic narrative. Increased self-esteem and sense of self allows for young Muslim-American women to more readily step into leadership roles, ultimately contributing to positive and productive cohesion in communities and society—Muslim-American as well as the broader society-at-large.

Mrinalini Aggarwal

School of Art, Fine Arts

Seed Grantee 2019-2020

Field

Field is a research-led visual arts project within the public realm. Investigating systems of power embedded within the architecture and forms of contemporary public plazas and civic parks, the project will result in a landscape intervention in the historic site of the Frank H. Ogawa Plaza in Oakland, California. Using the plaza's most abundant resource—the grass—as its primary material, Field is a call, at once playful, introspective and emotional, for wider connections within shared space.

Yuting Wang, BID '20

School of Design, Industrial Design

*Ziqing Li, BS Computer Science '21, NYU

Flex VR

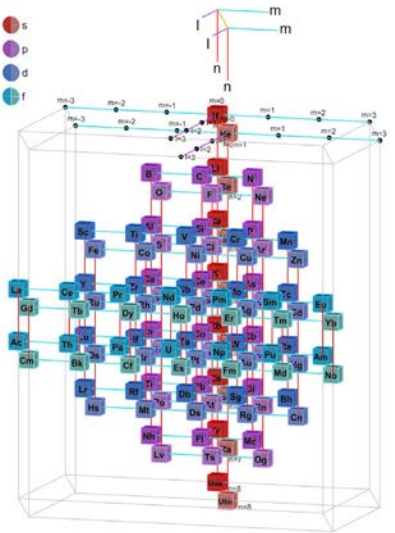
Flex VR is a virtual reality application to help aging patients reach their rehab goals by making repetitive movements more pleasurable, entertaining, and creative. Utilizing these technologies, we can transform the negative experience of PT exercise into a pleasurable one for the patient, providing sensory distraction and cues for feedback on performance. This technology will allow clinicians to collect data about the frequency and quality of the exercises, while also giving an accurate visual representation of the user's body and limb position. Doctors will then be able to measure results and monitor progress, improving medical care and patient outcomes.

Haresh Lalvani

School of Architecture, Center for Experimental Structures

The 4D Periodic Table of Chemical Elements

All matter–oceans, land, atmosphere, humans, animals, plants, food, materials, products, buildings–is made from 118 known chemical elements. These elements are ordered in the periodic table of elements taught worldwide. Over 1,000 different periodic tables have been proposed since Mendeleev originated the idea 150 years ago. If nature is one, shouldn't there be ONE periodic table? The 4D Periodic Table of Chemical Elements is an answer to this question, having a geometric structure related to the hypercube, a four-dimensional cube shown through computer animations and a physical model.



Rachel Hines, Marta Kostrzewa, Phillip Hunter (P.H.) Lawson, Suparkan (Pink) Niruktisart, and Carmen Noguera, MPS Arts and Cultural Management '19

Chris Shrum, Professor, Design Management

Mary McBride, Chair of Design Management

School of Art

This work was commissioned by the Graduate Student Engagement Fund of Pratt Institute

*James Brown, John Fanestil, Maria Teresa Fernandez, Dan Watman, Friendship Park

*Teddy Cruz and Fonna Forman, University of California, San Diego

*Anthony Graham, Museum of Contemporary Art San Diego

*Norma Iglesias-Prieto, PhD, San Diego State University

*David Peguero, Growth Hax

Fusión

Fusión is a capstone project that defines and explores the role that cultural resilience plays in the US-Mexico border at San Diego | Tijuana. Through comparative case analyses of key arts and cultural initiatives in the region, this study proposes that cultural resilience fosters sustainable community development in a time of change. The intention is to develop a cultural resilience framework so that community leaders in broader contexts can design initiatives with this frame of reference as a means of future scholarship.

Xingze Li,
MFA Fine Arts '19

Jackie Slanley,
MFA Fine Arts '20

Sara Greenberger Rafferty,
Director of Graduate Studies in Photography, Advisor

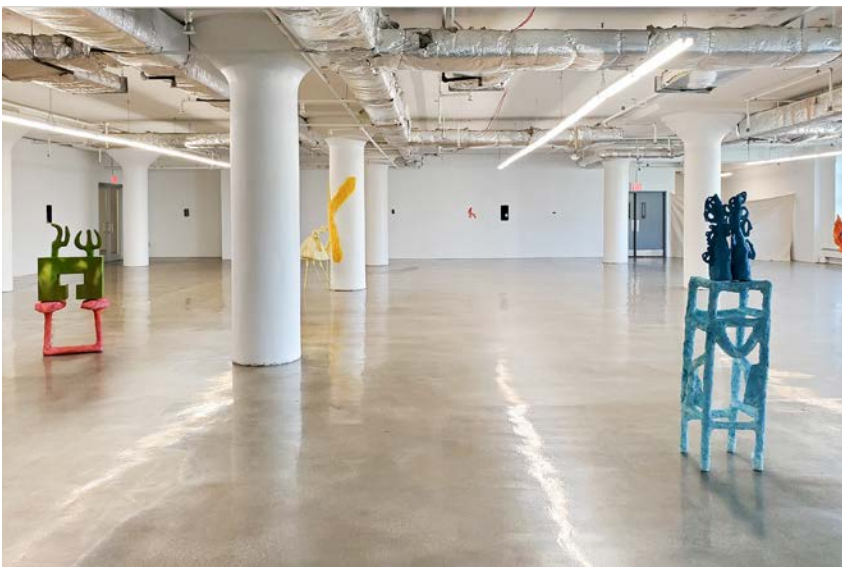
School of Art

This work was commissioned by the Graduate Student Engagement Fund of Pratt Institute

**Jane Bruce, UrbanGlass, Artist and Educator, Instructor*

Glass as Medium: Kilnforming

Glass as Medium: Kilnforming was an independent study at Urban Glass with support from the Pratt Institute Graduate Student Engagement Fund. Our excitement about glass motivated us to pursue individual study in kiln forming and share this knowledge with our MFA community. We believe that glass has the potential to be a critical player in the contemporary dialogue surrounding fine art and will open doors for artists in their own investigations.



Francis Bradley

School of Liberal Arts and Sciences, Social Science and Cultural Studies

Seed Grantee 2019-2020

The Global South Center Oceans Project

The Global South Center Oceans Project activates a working group comprised of Pratt faculty, bridging the Global South Center with the Center for Materials Science to bring interdisciplinary perspectives to one of the most vital problems facing the world today: the degradation of the world's oceans. Helio Takai, Macarena Gomez-Barris, May Joseph, Carl Zimring, Francis Bradley, Cindie Kehlet, and Jennifer Telesca bring a plethora of dynamic perspectives to these problems with research that covers a range of issues from plastics in the oceans, ocean governance, maritime trade and human mobility, sustainable waste management, and exploitation of ocean resources.

Claire Donato

School of Liberal Arts and Sciences, Writing

Seed Grantee 2019-2020

I Was Not Sexual in the Zendo: A Novel

I Was Not Sexual in the Zendo: A Novel is a meditation on Zen renunciation told through the perspective of a 33-year-old adjunct professor living in a Buddhist monastery. Blending elements of poetry, narrative, philosophy, and art writing, the novel grapples with themes of attachment, desire, interdependence, refuge, renunciation, suffering, and how to wake up and practice one's life. A residency at Zen Mountain Monastery in Mount Tremper, NY, informed primary research and an immersion in Zen practice.

Maria Sieira
Alexander Creem, MS Arch '22

School of Architecture, Graduate Architecture and Urban Design

K-12 Seed Grantee 2019-2020

*Melissa Singer, Math Teacher, Brooklyn School of Inquiry, Co-Investigator

*New York City Public School 686

Informed Misuse: Hybrid Pedagogies for Architects and Mathematicians

Informed Misuse: Hybrid Pedagogies for Architects and Mathematicians is the collaboration between an architect and a mathematician. We are both in disciplines that appear to demand certainty—a building must stand up; a sum must add up, but the deeper and better work in both fields is more nuanced than the certainty of a correct answer. Our common ground is project-based pedagogy. We bring architecture into a middle school math curriculum, and new teaching practices develop into new paradigms for school design. Our focus group consists of 22 young mathematicians in 6th, 7th, and 8th grade.

Duks Koschitz

School of Architecture, Center for Design Research in Architecture

Innovative Construction Assemblies

Innovative Construction Assemblies investigates what kind of assembly systems can be developed that are fabricated in 2D and assembled in 3D without scaffolding or form work.

Helio Takai and Mary Lempres

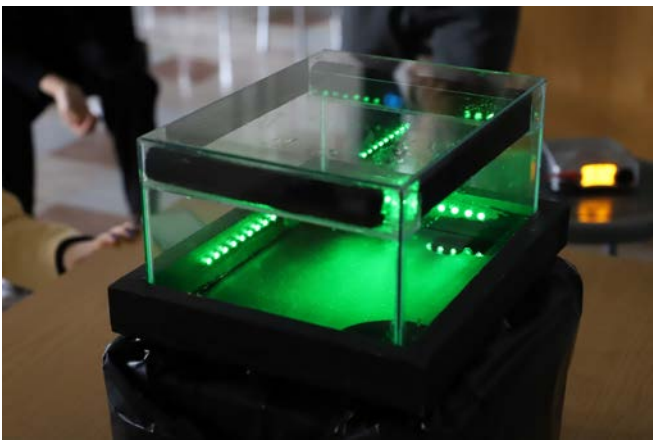
Cindie Kehlet, Professor of Chemistry, Advisor

School of Liberal Arts and Sciences, Math and Science

Blake Carrington, Assistant Professor, School of Art, Digital Arts, Collaborator

Interactive Learning Stations

We introduce the concept of Interactive Learning Stations to bring informal education in science through interactive art. Each interactive learning station can be placed in locations accessible to the public, allowing people to engage with interactive art and informally learn scientific concepts through the conversation between visitor, artwork, and its scientific backbone. We deviate from the traditional museum setting of informal learning, instead bringing interactive art to teach science where there is a public and communicate it in a multisensory fashion that could easily be replicated in virtually any space.



Sydney Ellison,
BFA Photography '22

School of Art

Intersections of Gaze and Agency in Sotheby's Auction Catalogs

Intersections of Gaze and Agency in Sotheby's Auction Catalogs is a fictional Sotheby's catalog that contains three groups of images intended to criticize the history of the nude in art and the dichotomy between male and female nudes. Criticism is shown through my self-portraits as male nudes from art history, images from contemporary art similarly reclaiming female autonomy, and works selected from existing Sotheby's catalogs in which male artists continue to perpetuate archaic ways of presenting female nudes.

Jeffrey Anderson, Graduate Architecture and Urban Design

Jason C Vigneri-Beane, Undergraduate Architecture

School of Architecture

Local Eyes

Local Eyes is an architectural platform that increases environmental awareness by bridging physical and virtual worlds. As a prototype cladding unit that turns architecture into hardware and software for harvesting data, it integrates sensors and augmented reality triggers that relay environmental information to dynamically updated digital visualizations. Data visualizations can be triggered locally by machine-graphics and camera-eyes or anywhere via users' gestural inputs. This modular design supports a variety of sensor plug-ins for use in different contexts, with the ability to harvest sound, light, humidity, temperature, air quality, air pressure, and motion.

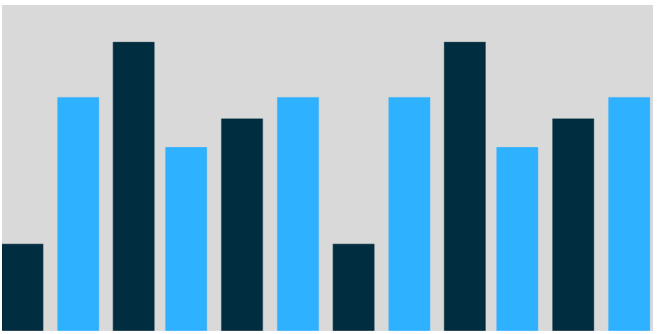
Morgan Miller

School of Art, Digital Arts

Seed Grantee 2019-2020

Margin of Error

Margin of Error is an examination on how polling affects our democracy. Extensive research and interviews inform the creation of a documentary that includes animated sequences, with the intention of entering the production phase with as much research and knowledge as possible.



Rhonda Schaller
Esmilda Abreu-Hornbostel
Sam Harvey

School of Continuing and Professional Studies

Seed Grantee 2019-2020

Mindfulness Resource Lab: Workforce and Business Development for the Creative Economy

How companies think creatively is one of the most significant areas of inquiry in business. Recent research into problem solving has shown a direct relationship between mindfulness, social progress, and creativity. Mindfulness Resource Lab: Workforce and Business Development for the Creative Economy looks at mindfulness as a business resource especially in the context of creative companies within a defined city culture. We hope to investigate the potential correlation between the cultivation of collective mindfulness with creativity and innovation.

Samuel Pressman, MS Sustainable Environmental Systems '20

Raymond Figeuroa, Jr., Visiting Professor

Paul Mankiewicz, PhD, Visiting Professor

Leonel Ponce, Visiting Professor

Ira Stern, Visiting Assistant Professor

Erica Asainas, MS City and Regional Planning '20

Isil Akgul, MS Sustainable Environmental Systems '19

School of Architecture, Graduate Center for Planning and the Environment (GCPE)

*Nos Quedamos, Huerto y Cultura, GAIA Technologies, EarthJustice, NYC Community Garden Coalition

Money Does Grow on Trees

Money Does Grow on Trees creates a framework for an educational and interactive digital platform to enhance urban well-being via greening land valuation and scaling ecosystem services in communities. An ecosystem services valuation report for each individual garden–which measures, quantifies, and monetizes the existing ecological layout–can serve as a valuation database for community gardens in NYC. Meant to represent the economic value of nature in the garden, this value can be added to the existing real estate value of the garden and ultimately show that there is value to be gained by protecting community gardens from development. This report shows how the economic value of nature in the garden can be added to its real estate value, ultimately demonstrating the economic benefit of protecting community gardens from development.

Rebeccah Pailes-Friedman, Adjunct Professor and Advisor

All team members are BID '21 students

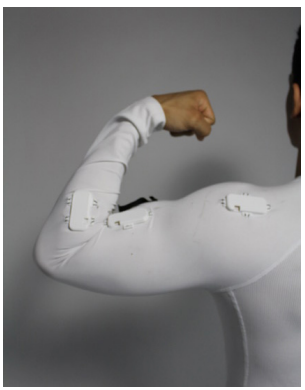
School of Design, Industrial Design

NASA Wearable Technology Challenge

Modular, Reusable Fasteners for Disposable Garments

The team will develop for Kimberly-Clark Corporation one or more reusable fastening systems that can be incorporated as a modular component into a disposable absorbent garment. The reusable fastening system would replace the hook-and-loop type fasteners currently integrated in most disposable absorbent garments, and preferably the integrated elastic waist band as well (depending on the proposed design). Ultimately, it will integrate into and firmly attach and detach, so that the modular garment can be comfortably and securely fitted to the body and perform its absorbency and containment functions.

Team FERN: Nil Islekel, Troy Reinert, Oliver Zichen Yuan



Wearability of On-Body Sensing Units: For the NASA Johnson Space Center, the group will design and implement a human factors study to determine: 1. Optimal aspect ratios of the hardware combination (antenna & circuit board). 2. Preferences between rigid and soft textile antennas. 3. Optimal on-body location map of the hardware combination (antenna & circuit board).

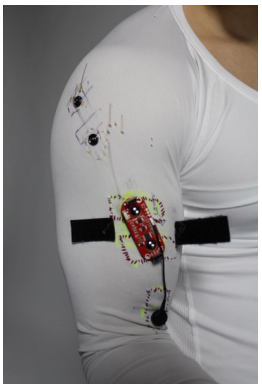
Team OSTA: Amy Zhao, Sitai Chen, Leo Zhang

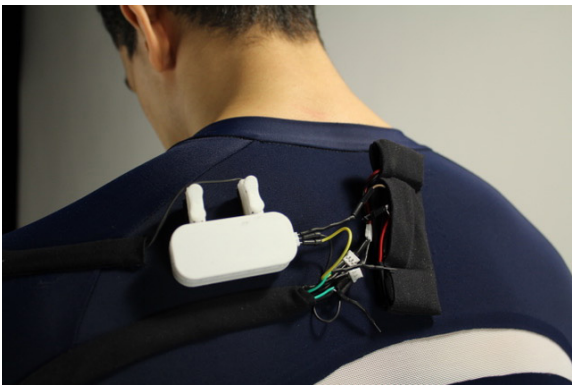
Fog-Proof Snow Mobile Helmet:
Design a solution for Klim to prevent the inside of the helmet visor from fogging.

Team HAVEC: Jake Weizenecker, Julius Zhiyuan Yang, Esther Shenxin Liu

MCTB-Based Crew Sleeping Compartment:
Unlike the International Space Station, which has dedicated crew sleeping compartments, future spacecrafts, like the Crew Exploration Vehicle, Orion, and the MiniHab on Gateway, do not have dedicated sleeping compartments.

Team BFG: Ellen ZhengYi Ren, Andrew Lee, Jihun Kang. Team PASCAL: Tia Hrubala, Abhipsha Ray, Thomas Chen





Yi Luo,
MFA Communications Design '20

Nicholas Sanchez,
Visiting Assistant Professor

Yeonji Choi,
MFA Communications Design'20

School of Design

NYC Fairy: Cruise in Conflict

NYC Fairy: Cruise in Conflict is a campaign to raise awareness of public transit equity and provide a clearer picture of the government's unreasonable subsidization of the NYC Ferry. Through months of research, observations and analysis, we came to the conclusion that NYC Ferry is an economically inefficient and unequal traffic system, serving mostly the higher-income citizens while running on the funding drawn from all taxpayers of New York City. In response to this data, our design started with a parody Instagram account, which then expanded into a 360-degree activation campaign encompassing mobile, product, experiential, digital, and social.

Chloe Smolarski

School of Art, Digital Arts

K-12 Seed Grantee 2019-2020

*Tasha Darbes, Pace University

NYC Immigrant Youth Stories: A Youth Participatory Research and Media Art Project

NYC Immigrant Youth Stories: A Youth Participatory Research and Media Art Project blends participatory research methodologies, oral history processes, and the media arts to further understand the lived experiences of Latinx, immigrant youth at Gregorio Luperón High School and empower them to respond to social injustices through media art. Students will be guided in conceptualizing and producing oral histories, photo essays, and video works as they participate in a series of workshops. A compilation of the generated materials will subsequently be presented as a digital archive.

Jean Brennan

Alison Chen,
MS Package Design '20

Shiao Ann Chang,
MS Package Design '20

School of Design, Graduate Communications Design

Seed Grantee 2019-2020

Out of Thin Air: Using Scent to Talk about Forest Succession and Atmospheric Science

Forests pre-logging smelled different from today's forests, and that smell is ever-changing as forest succession and climate change march on. Out of Thin Air: Using Scent to Talk about Forest Succession and Atmospheric Science uses essential oils and hydrosols to map forest succession in Prospect Park, Brooklyn—from old-growth to current and future scenarios. This project is a sensory teaching tool to talk about the delicate complexity of our forests in a warming climate.

Alex Schweder

School of Design, Industrial/Interior Design

*Ward Shelley, Artist, Collaborator

Performance Architecture

Performance Architecture represents over fifteen years of investigating connections between performance art and architecture. By occupying these built works, we discover the roles built space plays in constructing subjectivity and social relationships.

Ariane Harrison

Yuxiang Chen,
MS Arch '18

Mingyu Park,
MS Arch '19

School of Architecture, Graduate Architecture and Urban Design

*Dr. Jerome Rozen, American Museum of Natural History Apoidea Collection

*Dr. Kevin Matteson, Project Dragonfly, University of Miami at Ohio

The Pollinators Pavilion

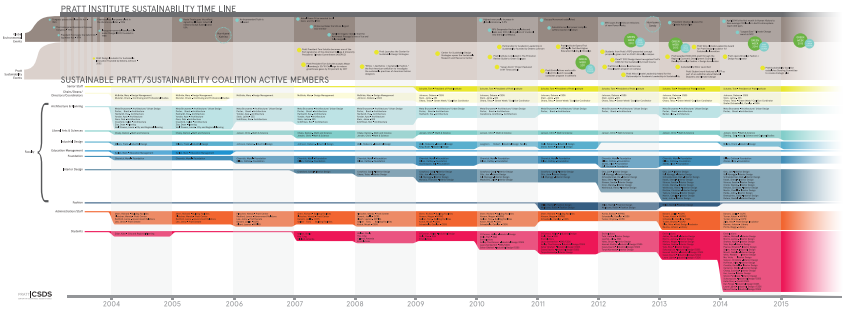
Pollinator decline poses a major threat to the global agricultural food supply; yet while honeybee decline is well documented, 90 percent of the planet's bees are native bees, responsible for 75 percent of non-agricultural pollination globally. Honeyless, hiveless, and stingerless, these primary pollinators provide a vital ecosystem service yet remain poorly understood: their discreet dwelling and diversity make them hard to identify. The Pollinators Pavilion addresses this gap by bringing architecture, machine learning technology, and conservation ecology together to prototype an analogous habitat / field station with an embedded monitoring system using machine learning to automate insect identification of solitary bees.

Carolyn Shafer

Pratt Sustainability Center, Provost Center

Pratt Institute Sustainability Timeline: Looking Back | Moving Forward

Pratt Institute Sustainability Timeline: Looking Back | Moving Forward is a graphical representation of the past 20 years of key sustainability initiatives at Pratt Institute and was coordinated by the Pratt Sustainability Center, the Sustainability Coalition, the Pratt Sustainability Committee and the Departmental Sustainability Coordinators.



Ashley Simone

School of Architecture, Undergraduate Architecture

Seed Grantee 2019-2020

[Re]presenting Tarará

[Re]presenting Tarará reconstructs the social and architectural genealogy of a community located in Habana del Este by examining the unique history, transformation, and current eerie and surrealistic character of an enclave built in the 1940s for upper-middle-class Cubans, which was later appropriated by Fidel Castro's regime. Using architecture as a lens and photography as media, this research documents the results of a socialist economy whose cultural and architectural production was executed in accordance with the tastes of the government, and reveals the present-day challenges the country faces as it implements free-market policies and transforms the built environment in Cuba.

Melissa Eidson

School of Liberal Arts and Sciences, Humanities and Media Studies

Slow Fashion

Slow Fashion is a feature length documentary in three parts: Part 1 follows women weavers from a remote village in southern Mexico and the appropriation of their ancient textile designs by Western fashion designers. Part 2 follows women weavers and an American designer in Laos and the question of appropriation vs. appreciation. Part 3 follows one fashion designer's journey collaborating with block print artisans in villages near Jaipur, India. Issues of cultural appropriation, the commodifying of culture, and relationships between weavers/block printers and designers are examined, as well as solutions provided by new business practices.

Nancy Smith

School of Information, Information Experience Design

Seed Grantee 2019-2020

Smart Hives: Designing for Native Bees

Smart Hives: Designing for Native Bees is design specific for native, solitary bees, which are some of our most important pollinators. Found and recycled materials, as well as clay, paper, wood, and plants are utilized in construction. In addition, the hives contain digital components, such as sensors and monitors, designed to capture information about the bees who live in them and the environment in which they are placed. Exploring well-being among animals, this project suggests ways to imagine beyond domestic honeybees when developing technologies to support ecosystems and pollinators.

Amanda Huynh
Kai Wen Chuang, BID '20

School of Design, Industrial Design

Seed Grantee 2019-2020

Social Practice Kitchen

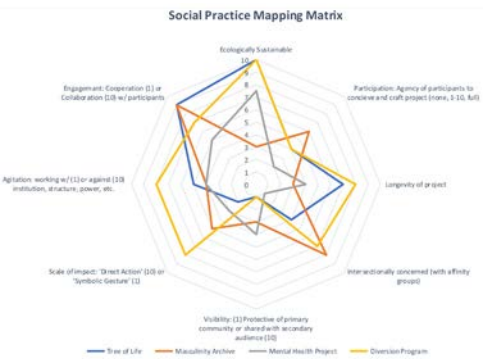
Social Practice Kitchen is a mobile kitchen, designed to be a site of interdisciplinary investigation across the School of Design. Using food as both a material and tool for communication allows for an exploration on the topics of food waste, cultural impact, community building, social innovation, food security, and service design. The kitchen itself will be available for booking by the faculty, staff, and students for School of Design courses, events, and research, continuing the work of bridging the fields of design and social practice.

Shaun Leonardo
Duff Norris,
MFA Fine Arts '20

School of Art,
Fine Arts

A Social Practice Matrix

The Social Practice Matrix was developed as part of A Social Practice Laboratory, Shaun Leonardo's PROJECT THIRD residency. The lab investigated forms of creative public engagement through student-driven projects exploring the interpersonal potential of art in various social spaces. With Leonardo's guidance and input from student participants, Duff Norris (MFA '20) created the Matrix as a tool for understanding the boundaries of a project and how different projects might overlap, conflict, or collaborate. The tool can be used to negotiate an individual project's needs as the work changes over development and execution; to identify synergies, redundancies, and/or deficiencies within projects among collaborating artists; and to assess works, set priorities, and identify intersections organizations want to support when selecting fellowships and awards. Removing the dichotomy ill-fitted for socially engaged work and embedded in standard models for assessment, this evaluation brings a different kind of language to the appraisal method.

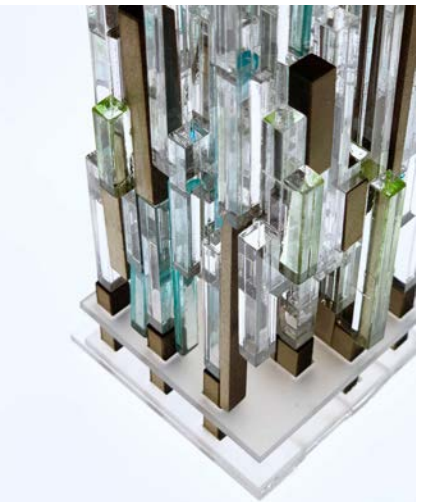


Tak Ying Chan,
BFA Interior Design '20
Melissa Cicetti,
Adjunct Associate
Professor

School of Design,
Interior Design

Symbiosis

The system of the contemporary society is heavily based on the consummative style of living, especially in highly developed cities like New York. Symbiosis seeks to address how urban consumerism, which has almost always been in the direction of exploitation of the environment, be replaced with a better system of living through accomplishing the opposite: to live and work in symbiosis with nature, adapting a mutualistic relationship between us and the environment.



Case Wyse and Can Sucuoglu

Anna Yie,
MS Sustainable Environmental Systems ’20

Zack Walker,
MS Data Analytics and Visualization ’20

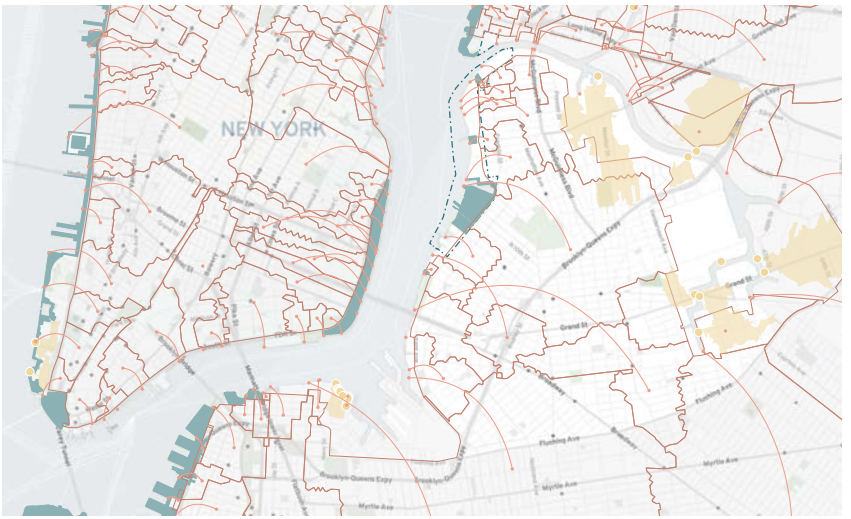
Haley Balcanoff,
MS Sustainable Environmental Systems ’20

Spatial Analysis and Visualization Initiative (SAVI), Provost Center

*Anthony Buissereth

Toxicity Map

Toxicity Map, also known as the NBN ELI (Environmental Legacy & Improvements) Map, is a tool for learning about and collaborating on environmental hazards in Greenpoint & Williamsburg. Data used to compile this map came from city, state, and federal sources, guided by on-the-ground knowledge from local activists. Data layers on the map can be clicked through to understand certain neighborhood trends, such as population density and asthma-related hospital visits, and can also help locate specific sites, such as the former NuHart Plastics factory and the Exxon oil spill.



Martha Wilson

School of Liberal Arts and Sciences, History of Art and Design

Seed Grantee 2019-2020

*Harley J. Spiller, Franklin Furnace

*Mary Suk, Franklin Furnace

Transcending Tradition: The Role of Performance Art in Elementary Education

Transcending Tradition: The Role of Performance Art in Elementary Education aims to study how time-based performance art is uniquely effective in the elementary school classroom and makes available various methods we observe to promoting equity in educational settings.

Photo by Darya Bavkina

Connie Fu

School of Art, Fine Arts

Trust-Events in the Art of Pedagogy

Trust-Events in the Art of Pedagogy is the culmination of the inaugural Pratt/VACI Fellowship and is also supported by the Center for Teaching and Learning and the Department of Fine Arts. This project introduces trust-events to the field of art pedagogy, providing examples and analysis. Trust-events are concrete moments in space and time that form the foundation of a healthy student-teacher relationship. By focusing on crafting a sequence of trust-events rather than reaching learning objective benchmarks, educators may approach curricular design with greater sensitivity to students' growth and needs.

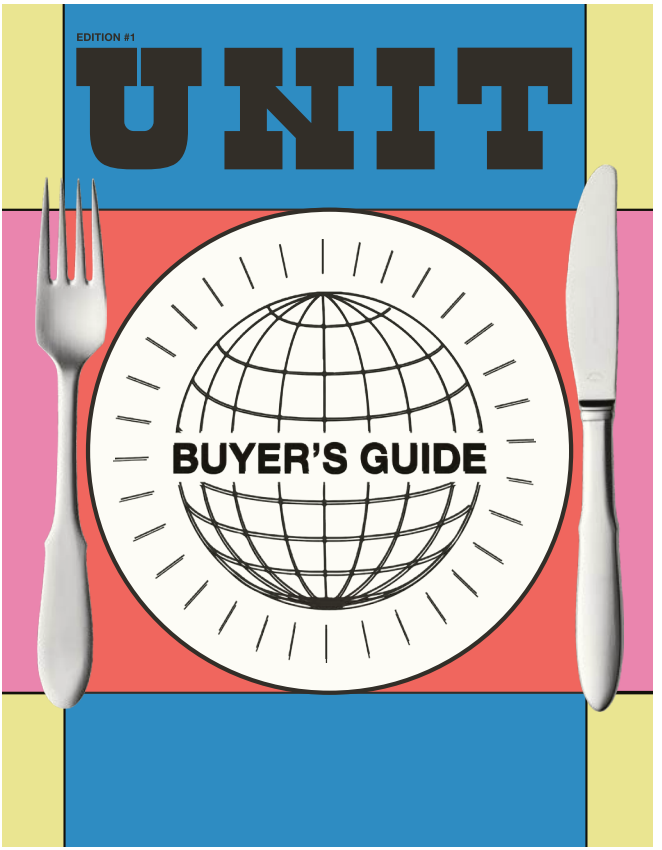
Clara Martin,
BFA Communications Design '20

School of Design

*Yvan Martinez, Professor of Graphic Design at Central Saint Martins, Critique and Feedback

Unit, A Guide to Ethical Buying

Currently, 10 multinational corporations own 90 percent of all brands we find in supermarkets. What if this was reflected in the consumer's shopping experience? Unit, A Guide to Ethical Buying emulates that idea within the framework of a catalog. Imagine, entering a supermarket, and instead of seeing the usual selection of brands, everything came in a white box with its multinational's logo stamped on the front.



Matthew Hoey

School of Design, Industrial Design

Untitled prototype 2020

Coming into direct contact with the human body, chairs are one step away from fashion — arms, legs, back, seat — as we enter the era of mass individualization our bodies will be scanned and component parts printed on demand!

Niyousha Zaribaf, MArch '21

School of Architecture, Graduate Architecture and Urban Design

Urban Houses Morphogenesis

Urban Houses Morphogenesis aims to regenerate the urban block through a series of experiments, comprehending and applying the theory of morphogenesis and developing the neighborhood into a space to create a series of computational iterative models, either done in 3D modeling (Rhino) or a scripting environment (Grasshopper). These results are then analyzed and evaluated according to optimum values and referred to as multi-fitness criteria, which will be the evolutionary goal.

Niyousha Zaribaf, MArch '21

School of Architecture, Graduate Architecture and Urban Design

Urban Housing Redevelopment

Deteriorated areas in cities have value, whether social, climatic, geographical, cultural, historical, which cannot be disregarded in designing around them. Urban Housing Redevelopment asks which design strategies should be considered toward housing in these areas? The Koushk sub-neighborhood in Tehran (part of the Lalehzar neighborhood) serves as a case study with in-depth interviews of thirty residents of Koushk. Attempts were also made to understand behaviors and needs related to residential buildings. Software programs were used to find principles and patterns of pedestrian movement, as well as sight view based on the current network from the buildings' origin.

Vi Vo,
BFA Fashion Design '21

School of Design, Fashion Design

A Vietnam Bias

Inspired by my father's immigrant journey to America after escaping the Vietnam War at 14 years old, A Vietnam Bias is a five-look pre-spring collection. This semester-long design collection was made utilizing my own old denim jeans from high school, which were repurposed by redyeing and rebleaching to create a new, abstract wash. My collection also showcases the use of NoSo technology to create a new fabric with reused denim that results in a contemporary silhouette, minimizing seams and machine stitching.

Elira Duro,
MID '22

Elizabeth St. George

School of Design,
Industrial Design

We Are Both, We Are All: The Influence of Cultural Fusion on Design

We Are Both, We Are All: The Influence of Cultural Fusion on Design probes the intricate nature of cultural tension and the complex exchanges when cultures fuse. The inevitability of fusion is apparent as we look around us, noticing more and more objects that are the physical embodiment of cultural tensions, things that have various influences working together to create a unified appearance.

As humans move from one place to another and cultures mix, products are becoming the artifact of that mixing.

Meta Brunzema

Eniko Marton, Visiting Assistant Professor

Khue Trinh, MArch '20

Justin Heu, MArch '20

Allison Barker, MArch '20

Aline Theodokaris, MArch '20

School of Architecture, Graduate Architecture and Urban Design

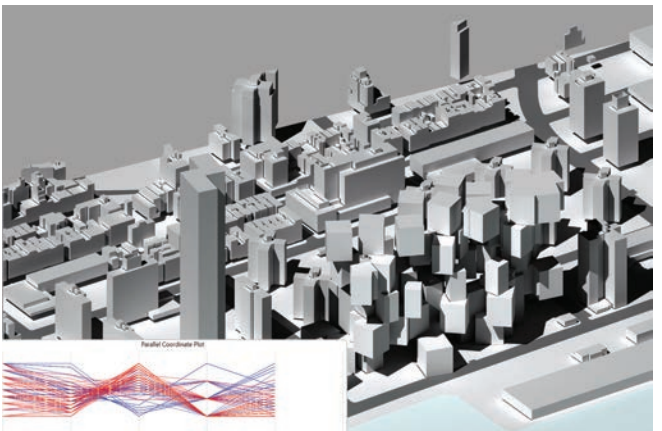
*Good Old Lower East Side Inc (GOLES)

*Taconic Foundation and Pratt Center for Community Development

*New York State Health Foundation

WE_GENERATE (beta)

In dense and growing cities like New York, meaningful community participation in planning and urban design projects is essential to further equitable and sustainable development. Our team is co-developing a set of interactive digital tools—WE_GENERATE (beta)—that democratize neighborhood planning in Chinatown by empowering citizens to visualize and shape complex urban projects, analyze trade-offs in real-time, and make persuasive data-backed choices that further resilience, preservation, and urban justice. These user-friendly digital tools will actively engage local constituents in the planning process to ensure that their priorities are reflected in a proposed Special District for the Chinatown Waterfront.



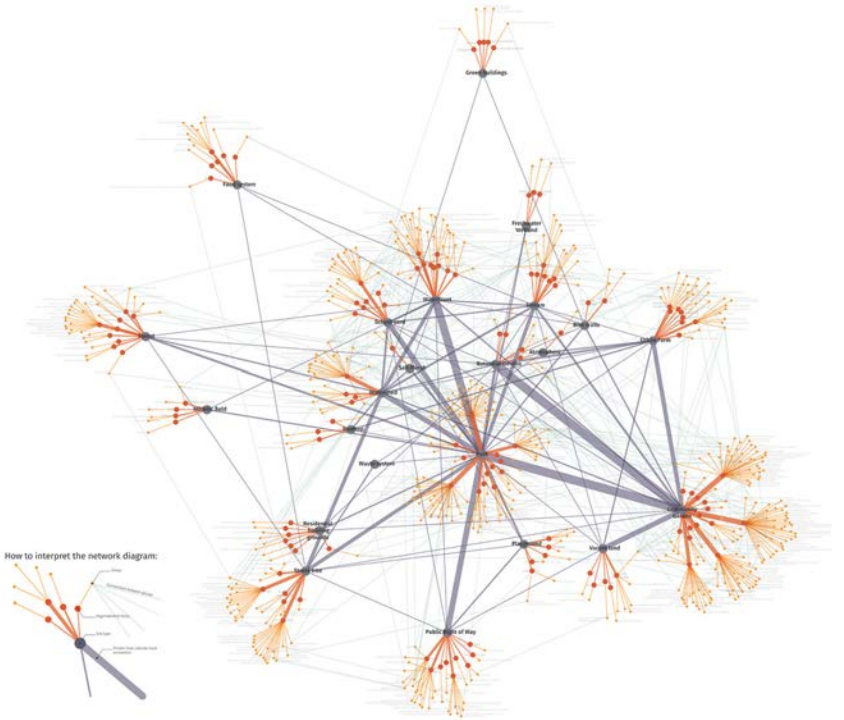
Can Sucuoglu
Case Wyse
Josephine Matterson, MS City and Regional Planning '20
Zack Walker, MS Data Analytics and Visualization '20

Spatial Analysis and Visualization Initiative (SAVI), Provost Center

**Jessie Braden, Lindsay Campbell, Erika Svendsen, Michelle Johnson*

Who Takes Care of New York?

Who Takes Care of New York? is an exploration of the variety of civic groups that exist and thrive in New York City, and the ways that they care for and support their local environments. Displayed through maps, art, and storytelling, this exhibition aims to empower visitors with an understanding of their capacity to make lasting change and impact in their own neighborhoods.



Hannah Anousheh and Lidia Henderson, MS City and Regional Planning '20

School of Architecture, Graduate Center for Planning and the Environment (GCPE)

This work was commissioned by the Graduate Student Engagement Fund of Pratt Institute

Women on the Frontlines of the Resiliency-Building Efforts in Puerto Rico

Women in Puerto Rico have been on the frontlines of the efforts to change their island from the inside out. Women on the Frontlines of the Resiliency-Building Efforts in Puerto Rico explores several women-led initiatives to transform Puerto Rico into a community-led, just, equitable, and sustainable utopia.

Dale Cohen

School of Architecture, Undergraduate Architecture

Writing Women Architects on Film

Writing Women Architects on Film is a 1-minute student film competition about women architects, defined expansively. This project seeks to demonstrate that women have been vital to the practice of architecture for decades, while radically under recognized. This project works with other global efforts to change that! These are women who were educated as architects, or educate others to become architects, and women from wide and diverse practices, demonstrating the myriad ways women trained as architects have participated and continue to participate in the built environment and design-related fields.

INDEX

Acknowledgements

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