

# **insight/***incite*

Research and Creative Activity  
in the Penn State College of  
**Arts and Architecture**

/ Issue 1

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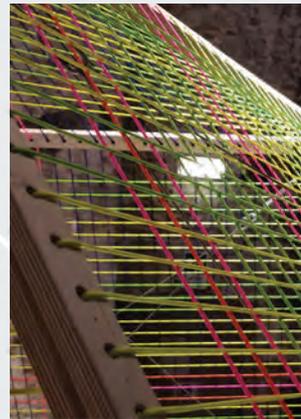


The College of Arts and Architecture (A&A) is a vibrant community of artists, performers, researchers, designers, historians, curators, and educators. We are nationally and internationally recognized as innovators who integrate arts and design research, creative practice, and transformative learning and teaching to investigate, inspire, and improve cultural, social, and environmental conditions.

In this publication, we highlight a selection of the exciting research and creative practice underway in the college. We invite you to peruse these pages, visit our website, and reach out to our scholars and creatives. Be inspired and engage.

**B Stephen Carpenter II**

Michael J. and Aimee Rusinko Kakos  
Dean in the College of Arts  
and Architecture  
The Pennsylvania State University



## **Enviromolecular**

**D.K. Osseo-Asare /**  
Associate Professor of Architecture  
+ Engineering Design

Work by D.K. Osseo-Asare, cofounding principal of Low Design Office, a design practice based in Austin, Texas, and Tema, Ghana, is featured in the 18th Venice Architecture Biennale. The featured project, titled “Enviromolecular,” has evolved from the Agbogbloshie Makerspace Platform (AMP) that Osseo-Asare launched in 2012 in Accra, Ghana, with Yasmine Abbas, assistant teaching professor of architecture. This transnational project helps to bolster maker ecosystems in Africa by co-designing the reuse and recycling of materials with students and young professionals.

### **D.K. Osseo-Asare**

*Amplifying circular processes of (re)making with others as a mode of collective habitation, open-source design kits build equity by replacing paradigms of innovation with reparative praxis of renovation for spatial justice across physical and digital realities.*

### **Pitch Exploration Lab**

**Directed by Bryan Nichols** / Associate Professor of Music

The Pitch Exploration Lab is a space for undergraduate or graduate students from any major to explore music, brain, and psychology topics. In the lab's latest research study on musicians' error detection skills – important for conductors and musicians of all kinds – researchers discovered that while working capacity accounts for some of the variability in error detection ability, so do factors like experience and training. Another project is examining the development of musician skills in a two-year longitudinal study, marking the first time the lab has attempted to track the development of musicians over time.

### **Unearthing Forgeries and Gems**

**Marica Tacconi** / Distinguished Professor of Musicology + Art History

Marica Tacconi is a preeminent scholar on the music, art, and culture of late medieval and early modern Italy whose interdisciplinary work exemplifies the integration of the arts and humanities. Her current research focuses on the music of Baroque Venice, where she is unearthing musical gems that have been neglected and unheard for centuries. In 2018, she discovered three “17th-century” songbooks at the Marciana National Library of Venice that were actually early 20th-century forgeries. She has collaborated with Grammy Award-winning Apollo's Fire-The Cleveland Baroque Orchestra and the internationally acclaimed Venice Music Project Ensemble to present programs based on her research.

### **Image and Infrastructure in Scotland**

**Paul Daniel Marriott** / Associate Professor of Landscape Architecture

Paul Daniel Marriott received a 2022–23 Fulbright Fellowship from the National Library of Scotland (NLS) for his project that examines the interface between travel and technology in the Scottish Highlands from the 18th to 20th centuries. Titled “Image, Infrastructure, and the Scottish Landscape,” the research provides new insights into transportation and tourism by investigating policies and designs of public roads in Scotland in two under-researched NLS collections: the Newman Collection of 17th–19th-century travel journals and maps, and the Bartholomew Archive of 18th–20th-century maps and automobile tourism.

### **Computing Constable**

**Elizabeth Mansfield** / Professor of Art History

Elizabeth Mansfield is co-principal investigator on a project that uses computer-aided image analysis to examine the depiction of clouds in 18th- and 19th-century European paintings with a particular focus on the work of John Constable, a British artist noted for the striking naturalism of his landscapes. The work is advancing art historical research through the innovative application of computer vision and machine learning and promises to enhance scholarly understanding of aesthetic concepts and artistic techniques used by Constable and his contemporaries. Funded by two grants from the National Endowment for the Humanities, the research is a collaboration with Penn State faculty and graduate students in information sciences and technology, meteorology, and statistics.





# Imaging Incidence Picturing Prevalence

The Diabetes Crisis in Ecuador,  
Senegal + Sierra Leone

Steven Rubin /  
Professor of Art

Rubin is a documentary photographer whose work highlights critical and contemporary issues in the United States and internationally, including health disparities, rural poverty, refugee migration, immigrant detention, and the social and environmental impacts of energy development.



**01** (previous page) Two men, whose amputations were a result of foot wounds that didn't heal (one of the complications from diabetes), do physical therapy at the hospital in Masanga, Sierra Leone.

**02** Free health screening in Mbakhana, Senegal, sponsored by Weer Africa, a small non-profit organization aimed at helping the Senegalese community overcome the burgeoning threat of diabetes and other Non-Communicable Diseases.

**03** Spice vendor at the main market in Mbour, Senegal. Many prepackaged spices in Senegal are full of sodium but are still used daily in traditional Senegalese cuisine.

**04** Weighing in at Mbakhana, Senegal. Free health screenings are a critical part of efforts to help Senegalese communities cope with growing rates of diabetes and other Non-Communicable Diseases.

**05** A worker with the first National Diabetes Prevalence and Associated Factors Survey in El Valle, Ecuador. Childhood obesity is a growing problem in Ecuador and in many places around the world.

**06** Dr. Estaban Lucero, a diabetologist with Hospital Monte Sinai in Cuenca, Ecuador, cares for the foot wounds of one of his patients with diabetes.

**07** A man who was begging at a Coca-Cola distributor in the city of Bo, Sierra Leone.

**08** Dr. Katy Estévez, a pediatrician and endocrinologist, meets with a family whose daughter has type 1 diabetes at La Casa de la Diabetes, a small non-profit in Cuenca, Ecuador.

See more at:  
[arts.psu.edu/research](https://arts.psu.edu/research)



05



06



07



08

While a growing number of researchers and public health workers are heeding the alarm regarding Non-Communicable Diseases (NCDs) such as diabetes, the issue and the people directly affected by it remain largely out of public sight on the world stage.

## Palmer Museum of Art

The Palmer Museum of Art, whose new facility is scheduled to open at the Arboretum in spring 2024, is dedicated to catalyzing groundbreaking research, scholarship, and publications and providing impactful, object-based learning for Penn State and K-12 students. The new museum building will allow the Palmer to foster academic collaborations across campus and strengthen student engagement through spaces like the Teaching Gallery, designed for innovative cross-disciplinary programs.

## Sustainability Initiative

**Directed by Mihyun Kang** / Research Professor, Director for Sustainability

Renewable energy art and design harnesses renewable energy for public art in city design. Researchers and artists in the A&A Sustainability initiative created various renewable energy prototypes to connect the community with art, design, energy, environment, and culture. “Luminos” – a solar-powered, sculptural installation – is closely inspired by the organic and layered aesthetic in the life of the Pennsylvania firefly (*Photuris pennsylvanica*).

## Center for the Performing Arts

A creative partnership between the Center for the Performing Arts and theater artist Marike Splint produced 200 Acres, a self-guided touring app that tests users’ knowledge of Penn State by providing new perspectives on the University’s original land, history, and purpose. Combining narrative, composition, and sound recordings, 200 Acres is a solo sensory experience that guides the user through designed and serendipitous paths between Eisenhower Auditorium and the Arboretum – “a reflective and poetic experience suggesting other ways of seeing,” Splint said.

## “Together, Tacit”

**Bonnie Collura** / Professor of Art

Bonnie Collura’s “Together, Tacit” project proposes an inclusive experience among low vision, blind, and sighted individuals to exchange tacit knowledge through the act of creative collaboration. One workflow uses a haptic, virtual reality glove, which has a vibrational feedback system that simulates a sense of sculpting in virtual space. Movements by visually impaired participants get translated as three-dimensional marks. Those virtual shapes are then 3D printed and become tangible models that, in turn, are used by sighted and visually impaired team members as springboards to collaboratively fabricate new forms. The other workflow explores how touch is translated through textiles and drawing. The project is a collaboration with faculty and students in Penn State’s College of Engineering.

## Hair, Fabrics, Computation & Identity

**Felecia Davis** / Associate Professor of Architecture

Felecia Davis is a lead researcher in the Stuckeman Center for Design Computing and director of the Computational Textiles Lab (SOFTLAB). She received the 2022 Cooper Hewitt, Smithsonian Design Museum National Design Award in the Digital Design category for her work exploring the use of computational textiles. Her research has been recognized by the SOM Foundation, as well as the Association for Computer Aided Design in Architecture (ACADIA). Davis’ Graham Foundation-funded “Hair Salon” project translates Black hair techniques (braiding, locking, etc.) to architectural materials and computational methods, and in doing so creates dialogue around topics of identity and design. Her “Textural Threshold Hair Salon: Dreadlock” is part of the 18th Venice Architecture Biennale.

## First There Was Chaos

**Joel Priddy** / Associate Professor of Graphic Design

Joel Priddy has published four graphic novels, most recently *First There Was Chaos*, based on a selection from Hesiod's "Theogony," a telling of the origins of the Greek Olympians. Published in fall 2023, the book chronicles the time before the Greek gods show up, starting from the point of nothingness and leading up to the birth of the first Olympian we recognize: Aphrodite. His previously published works are *Pulpatoon: Pilgrimage*, *The Preposterous Voyages of IronHide Tom*, and *The Gift of the Magi*.

## Integrating Art History and Materials Science

**Amara Solari** / Professor of Art History + Anthropology

For the last five years, Amara Solari has led a research team on an historical and, unexpectedly, scientific journey across the Yucatán peninsula to identify, document, interpret, and analyze murals painted inside churches by Maya Christian artists more than 400 years ago. The work combines art history and cutting-edge materials science in the only known cohesive study of these fragile artworks.

### Palmer Museum of Art

Rendering of the main entry plaza.

### Amara Solari

Integrating Art History and Materials Science

### Joel Priddy

First There Was Chaos

### Bonnie Collura

"Together, Tacit" 3D-printed sculpture made from Laura Shaffer's virtual carving using the haptic glove and haptic software.

### Felecia Davis

Hair, Fabrics, Computation & Identity

### Center for the Performing Arts

Users test the 200 Acres app during an artist residency in March 2023.

Photo by Mike Fleck.

### Sustainability

"Luminos"



### **Mycelium-Based Composites**

**Benay Gürsoy** / Assistant Professor of Architecture

Benay Gürsoy founded the Form and Matter (ForMat) Lab in the Stuckeman Center for Design Computing and leads a team of researchers investigating cultivation of mycelium-based composites. Mycelium is the vegetative root of fungi that absorbs and binds nutrients from organic matter. The treatment of mycelium results in a lightweight, biodegradable foam-like composite material that requires less energy to make than conventional structural building materials. ForMat Lab's MycoKnit and MycoCreate 2.0 projects have respectively received a SOM Foundation Research Prize and funding from the American Institute of Architects. Additionally, Gürsoy and Özgüç Bertuğ Çapunaman, a Penn State architecture doctoral student, were awarded grants totaling \$50,000 from Autodesk, Inc. for their "See-Sense-Respond" research project, which focuses on adaptive robotic fabrication.

### **Drawing and Mental Health**

**William J. Doan** / Professor of Theatre,  
Director of the Arts & Design Research Incubator

Since 2017, Bill Doan's research and creative work has focused on how drawing can be a tool for managing mental health. As part of "My Anxiety Project," he has produced more than 500 drawings, two original performance pieces, and two award-winning animated short films, *Sticks and Stones* and *Inhale, Exhale, Draw*. In his latest animated short film, *Frontline Nurses: Dispatches from the COVID-19 Pandemic*, the themes of anxiety, mental health, and wellness remain central. Doan is currently incorporating a science component into his research and creative work by collaborating with Penn State psychology faculty on a project that measures individuals' physiological responses while drawing.

### **Design Louder than Bombs**

**Ryan Russell** / Associate Professor of Graphic Design

Ryan Russell is a national and international award-winning designer whose work has been reproduced in some of the world's most renowned design publications, in addition to appearing in selective international exhibitions. Most recently, he was awarded the Grand Prize in the Experimental posters category of the United Designs Alliance Annual International Design Competition 2022 for "No War," which conveys a striking message about Russia's war in Ukraine. In addition, his "Mind Your Mask" campaign, a tongue-in-cheek series of illustrations and typography that promoted healthier habits during the COVID-19 pandemic, received honors from the University and College Designers Association and Graphic Design USA.

### **Political Economy of Colorants**

**Sarah Rich** / Associate Professor of Art History,  
Director of the Center for Virtual/Material Studies

Sarah Rich is the principal investigator on "The Political Economy of Colorants in the Atlantic World, 1750–1850," a collaborative research project that seeks to uncover the economic and political contexts of the colorant trade in the Americas, Europe, and Africa, highlighting the relationships among artists and different trades while also situating colorants in the context of indigenous-settler relationships and the slave trade. Based in the Center for Virtual/Material Studies and supported by a Kress Foundation grant with supplemental funding from the Penn State University Libraries, the research will result in digital resources, publications, and multiple workshops with diverse scholars that will bridge art history and conservation science in impactful ways.

## Participatory Design in Peru

**Leann Andrews** / Assistant Professor  
of Landscape Architecture

Leann Andrews leads transdisciplinary action research and participatory design projects with vulnerable communities in the United States and Peru using One Health and Planetary Health frameworks, both of which aim to sustainably balance and optimize the health of people, animals, and ecosystems. In spring 2023, she took students in a design activism studio course to Claverito, Peru, a floating slum community in the Amazon jungle, to gather firsthand perspectives to inform their final designs addressing residents' concerns about infectious diseases, malnutrition, food insecurity, and other health issues.

## Fashion Archive Conservation

**Charlene Gross** / Associate Professor of Theatre

Charlene Gross has received grants to support the conservation of the School of Theatre's Fashion Archive, a collection of clothing, accessories, textile pieces, fashion magazines, pattern books, and other fashion ephemera dating from the 1850s used to guide production of historically accurate costumes. She is continuing her work with the Center for Virtual/Material Studies, managed by Carolyn Lucarelli, to inventory and photograph the collection so it can be made available online.

### Ryan Russell

*Design Louder than Bombs*

### William J. Doan

*Drawing and Mental Health*

### Leann Andrews

*Participatory Design in Peru*

### Sarah Rich

*Political Economy of Colorants*

### Charlene Gross

*Fashion Archive Conservation*  
Photo credit: Cody Goddard.

### Benay Gürsoy

*Mycelium-Based Composites*



### **Transdisciplinary Intersections**

**Aaron Knochel** / Associate Professor of Art Education

Aaron Knochel explores intersections among digital culture, learning communities, and creative inquiry in art and design. He is a mixed methods researcher with interests in transdisciplinary learning, critical social theory, and software studies in spaces such as schools, museums, and community centers. In 2022, he received a Fulbright Scholar Award from the University of Bergen, Norway, for his project, “The Mesh of Making: New Media Art, Maker Cultures, and Posthuman Pedagogies,” with outcomes impacting practice in technology-rich education and arts-integrated learning. Current funded research investigates generative artificial intelligence and impacts of creative inquiry within healthcare systems.

### **Rising to Challenges on Stormy Coasts**

**Peter Stempel** / Associate Professor  
of Landscape Architecture

Peter Stempel leads the Coastal Studio Penn State (CSPSU), which pairs experts at the University who are tasked with promoting the resilience of coastal communities facing existential challenges of sea level rise and coastal storms. Penn State design students apply scientific research to address community-identified problems, such as flooding and septic system failures. The studio illustrates future scenarios depending on the severity of climate change while offering solutions for community planners. In 2022, the studio received the Penn State Award for Community Engagement and Scholarship for its work with Portsmouth, Rhode Island.

### **Nationwide Directing**

**Steve H. Broadnax III** / Professor of Theatre

Steve H. Broadnax III is the director of Pulitzer Prize-winner Suzan-Lori Parks’ *Sally and Tom*, which premiered at the Guthrie Theater in Minneapolis and will open at the Off-Broadway Public Theater, one of the nation’s oldest and most prestigious nonprofit theaters, in March 2024. An acclaimed writer, his latest, *Bonez*, had its world premiere in fall 2023 at People’s Light (Malvern, Pa.), where he is associate artistic director. Broadnax also recently directed *Thoughts of a Colored Man* on Broadway.



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College of Arts and Architecture

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