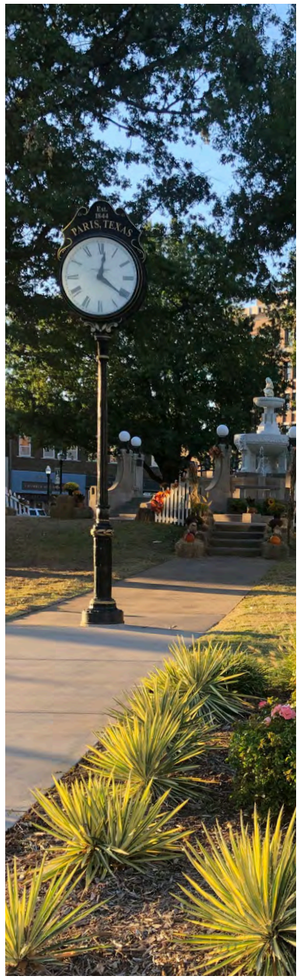
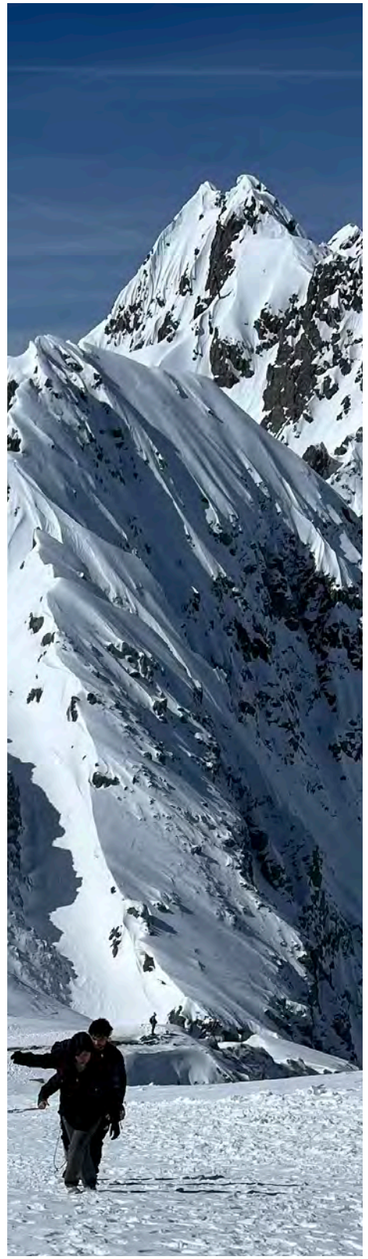
re/CAPPA

RECAPPING RESEARCH, REIMAGINING TOMORROW

2024-2025





LOCAL + GLOBAL IMPACT

2024 saw CAPPA advance local and global communities through innovative design, impactful research, and strategic collaborations shaping the built environment.

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From the Dean

As we reflect on the 2024–25 academic year, I want to begin by thanking Associate Dean **Karabi Bezboruah** for her leadership in launching the inaugural issue of **re/CAPPA**. This milestone publication reflects the vibrant intellectual community we continue to build. I am proud to celebrate the remarkable strides our faculty, students, and partners have made in advancing knowledge and innovation across our college. This year, CAPPA achieved a record number of interdisciplinary grants, expanded our research partnerships with local and global communities, and deepened our commitment to a sustainable and resilient built environment.

Our scholarship has directly addressed CAPPA's strategic themes—**Housing**, **Community Engagement**, **Transportation**, and **Sustainability**—with projects that explore climate resilience, fair housing, smart mobility, and community-centered urban development. These efforts not only align with UTA's broader 2030 Strategic Themes, but also position CAPPA as a leader in shaping livable, connected, and sustainable communities.

Our faculty published in top-tier journals and won prestigious design competitions, while our students presented at national conferences, demonstrating the strength and relevance of CAPPA's scholarship. We also launched new initiatives to support emerging scholars, including interdisciplinary seed funding programs and collaborative labs that encourage cross-disciplinary exploration.

These accomplishments reflect our vision of CAPPA as a hub for impactful discoveries that transform and uplift the communities we serve.

Thank you for your continued dedication and passion. As we begin our 10th year as a College, we'll celebrate through **CAPPA 10**—*A Decade Together, A Future of Possibilities*. This yearlong initiative will honor our history, showcase our impact, and envision our future through the people, projects, and partnerships that define us.

Ming-Han Li, Ph.D., AICP, PE, PLA
Dean

From the Associate Dean

Welcome to the first issue of ***re/CAPPA***! This publication highlights the impactful research, creative works, and achievements of our CAPPA community, spanning architecture, landscape architecture, interior design, planning, and public administration. These disciplines collectively equip us to transform the places where we live, work, and connect.

As communities face complex challenges, the work emerging from CAPPA—research, creative projects, and classroom innovation—is more vital than ever. This issue showcases how our faculty and students are reimagining the built environment, advancing climate-resilient infrastructure, restoring ecosystems, shaping inclusive urban policy, and designing public spaces that foster connection and well-being.

From innovative building technologies to accessible housing strategies, adaptive reuse of historic architecture to participatory design, the work featured here reflects the strength of interdisciplinary collaboration.

Landscape architects, public policy analysts, urban designers, and architects are collaborating to address problems through the application of sustainability science, digital tools, and social insights.

These stories are about more than research—they're about impact. As Associate Dean, I'm proud that CAPPA is turning theory into practice and vision into change. This collection showcases the transformative power of ideas to drive better outcomes for cities, communities, and the people who call them home. We hope it inspires thought, dialogue, and new possibilities.

Karabi Bezboruah, Ph.D.
Associate Dean for Faculty Success & Research

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Designing for Human Well-Being

2024 Interior Design Capstone

// A conceptual collage envisions vibrant temporary housing in Washington, D.C., with private units, shared spaces, and cherry blossoms symbolizing renewal and inclusion.

In 2024, led by **Dr. Barbara Marini**, students in the Interior Design program completed their final capstone showcasing the power of design to improve lives. Each student selected a real-world issue of global or local significance ranging from mental health and rehabilitation to sustainability and adaptive reuse. They each developed a comprehensive interior design solution grounded in research and evidence-based design (EBD).

The process began with in-depth research papers, where students explored how design impacts human well-being. They then translated their findings into concept maps, programming documents, and schematic designs. Using tools like Miro, students analyzed site conditions, user demographics, and building systems to inform their design strategies.

Their final deliverables included detailed floor plans, elevations, 3D renderings, and materials specifications, all supported by code analysis and design theory. Projects were presented in verbal, visual, and video formats, demonstrating creativity, technical skill, and understanding of how design addresses human needs.

This capstone experience empowered students to think critically, manage complex projects, and design with empathy, preparing them to enter the profession as thoughtful, research-driven interior designers.

// A conceptual collage envisions sustainable, affordable housing in Hawaii using local materials to address climate resilience and the housing crisis.

Wynn Terrace

A Tiny Home Community with Big Impact

The completion of twelve student-designed tiny homes in Arlington marks the culmination of a multi-year design-build and research initiative led by **Prof. Charles MacBride and Brad McCorkle**. Known as Wynn Terrace, the project represents a pioneering effort to explore alternative housing models for senior living while advancing hands-on architectural education and applied research.

Conceived initially as a six-home community in Kennedale, the project was relocated to Arlington, Texas after a shift in municipal support. The City of Arlington ultimately embraced the initiative, easing zoning restrictions to accommodate this first-of-its-kind development, signaling a growing openness to innovative housing solutions that address density, aging populations, and affordability.

The School of Architecture's design-build program engaged upper-level undergraduate students in every phase of the project, from site planning and permitting to prefabrication, budgeting, and construction. The students also tackled real-world challenges such as rezoning, scheduling, and working with community partners and city officials.

Wynn Terrace became a platform for comparative building performance research, supported by two **Geisel Grants** from the college and a multidisciplinary team including UTA engineering faculty. Four of the homes were constructed as performance prototypes, each meeting different energy standards: a baseline code-compliant home, an EPA EnergyStar home, a DOE Zero Energy Ready Home, and a Passive House. Two homes achieved net-zero energy status through solar integration. The project also tested alternative construction methods, including structural insulated panels (SIP) and insulated concrete forms (ICF).

Beyond its technical achievements, Wynn Terrace stands as a model for community-driven innovation in housing. It demonstrates how academic institutions, nonprofits, and municipalities can collaborate to create sustainable, affordable, and replicable housing solutions, while offering students a transformative, real-world learning experience.

// Students construct building prototypes for Wynn Terrace, applying innovative design and construction techniques as part of a hands-on architectural research initiative.

DESIGN + BUILD

// Students bring architecture to life at Wynn Terrace, where hands-on construction of twelve tiny homes marks the culmination of a multi-year design-build initiative exploring innovative housing solutions for seniors in Arlington, Texas.

//Robert Tsai Photography

AMBER RESIDENCES

Urban Housing Solutions

/01

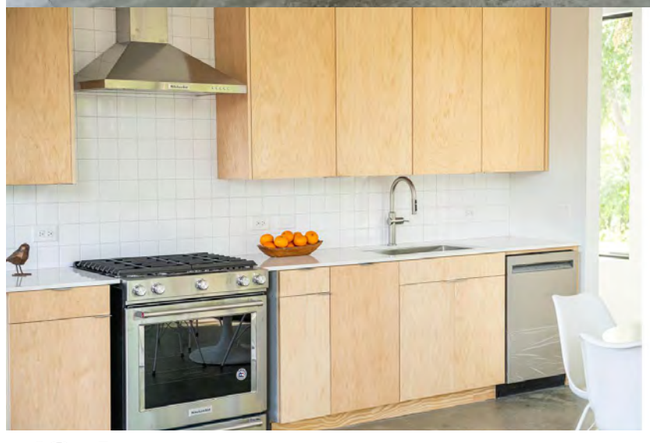
Images L-R
/01 Bedroom
/02 Unit Floor Plans
/03 Living Space
/04 Kitchen

/Robert Tsai Photography
All photos

/02

CAPPA Faculty member and Far + Dang Architects co-founder, **Bang Dang,** is widely recognized for his innovative contributions to urban housing design. His project, Amber Residences, exemplifies a forward-thinking approach to compact and sustainable living in dense urban environments. Situated within Dallas' Urban Commons—an 80-home, pedestrian-oriented development—Amber Residences reimagines the urban starter home by blending the independence of single-family living with the spatial efficiency of higher-density design. Each 1,000-square-foot unit experiments with spatial fundamentals to create a sense of expansiveness within a compact footprint, offering a high-quality living experience without excess. As housing costs continue to rise, these prototypes offer younger individuals an accessible entry point into homeownership, promoting affordability, sustainability, and a strong sense of community. Through this work, Dang demonstrates how architecture can elevate everyday life and serve as a catalyst for smarter, more inclusive urban growth.

/03



/04

Affordability Without Sacrifice

A compact, modern home in Dallas' Urban Commons showcases how thoughtful design can deliver stylish, high-quality living at an affordable price point.

RESILIENCE ON THE MARGINS

How Sandbranch, Texas Illuminates the Hidden Struggles of Informal Settlements in North Texas

//Above Trash burning is the primary form of waste disposal in Sandbranch.
//Below Dr. Reyes-Sanchez (third from right) meets with local Sandbranch residents.

Just outside the booming metropolis of Dallas lies Sandbranch, a small, unincorporated community with a powerful story. Founded by formerly enslaved people in the 1870s, Sandbranch has endured for generations without access to running water or sewer systems. This isn't just a case of neglect—it's the result of exclusionary annexation politics that have systematically denied the community basic infrastructure and political recognition.

Over the past four years, **Dr. Ariadna Reyes-Sanchez**, alongside researchers **Josh Newton** and **Luis Macias**, has led an ambitious participatory action research project to document and understand the lived realities of Sandbranch residents. With support from the college's **Geisel Grant**, the team began by mapping the community through bottom-up GIS techniques and collecting oral histories that captured both the geography and the soul of Sandbranch.

This foundational work informed a broader research initiative on environmental and climate injustices affecting low-income Latinx communities across Texas. The project received a Crossing Latinidades Collaborative Grant from the Andrew Mellon Foundation, enabling deeper engagement with Sandbranch and similar communities.

Through sustained relationship-building with residents, community-based organizations, and local nonprofits, the team conducted detailed surveys that reached 80% of the population and carried out in-depth interviews with 15 families. Five families also participated in a photovoice project, using photography to document their most pressing energy and environmental justice challenges. These images offered a powerful visual narrative of life in a community where manufactured homes often lack insulation, central heating, or cooling—conditions that make residents especially vulnerable to extreme weather and energy insecurity.

These findings informed the 2024 article "An Index to Identify and Classify the Spectrum of US Peri-Urban Informal Subdivisions" in the Journal of Planning Education and Research. The article introduced a replicable, data-driven Housing Informality Index, with Sandbranch serving as a key case study to validate its accuracy in Dallas County. The research revealed how informal housing arrangements—often invisible in official data—are deeply tied to broader patterns of racial and economic exclusion.

In parallel, the team published "Just Energy Transitions" in Planning Theory & Practice (2024), which explored how energy insecurity in informal settlements intersects with environmental justice. The work highlighted how residents adapt to chronic infrastructural neglect through incremental housing improvements and community resilience.

In 2023, Drs. Reyes-Sanchez and **Dr. Evan Mistur** received an IRP grant to investigate how nonprofit organizations have responded to Sandbranch's long-standing water crisis. Collaborating with environmental engineers at UTA, they tested well water quality and assessed the effectiveness of aid efforts. Dr. Reyes-Sanchez also partnered with CAPPA faculty, **Dr. Julene Paul**, to examine transportation insecurity—another critical barrier that limits residents' access to stable employment. For many, factors like incarceration, lack of citizenship, and limited social networks make commuting to formal jobs nearly impossible, pushing them into precarious, low-wage work closer to home.

Together, these research efforts offer a comprehensive portrait of precarity in unincorporated communities like Sandbranch. They also provide a roadmap for more equitable urban planning—one that centers on voices often left out of policy. By confronting realities of housing informality, energy and water injustice, and transportation barriers, this work aims to inform more just and inclusive futures for marginalized communities across North Texas and beyond.

//Recreational vehicles are the predominant housing type in the Sandbranch.community.

2024 Dean's Interdisciplinary Research Grant Recipient

Rethinking Accessible Housing

3D Printing & Smart Design

As housing costs soar, over 23% of American renters now spend more than half their income on rent. A groundbreaking research initiative at UTA is tackling this crisis head-on. Led by **Drs. Mahmoud Bayat** and **Jianling Li**, the project explores how technology can make housing more affordable, sustainable, and scalable.

In its first phase, the team combines computational modeling, parametric design, and concrete-based 3D printing to rethink residential construction. Their goal is to create efficient and customizable housing for low- and middle-income communities. They aim to meet community needs without incurring excessive costs.

Early results are promising. The research indicates that 3D printing can reduce construction waste by up to 60%, decrease labor costs by as much as 80%, and enable greater design flexibility. These innovations are especially relevant for manufactured housing, which shelters over 18 million Americans but often suffers from outdated design and stigma.

By merging engineering, architecture, and computer science, the project is laying the groundwork for a new era of affordable housing—one that's not only cost-effective but also beautiful and resilient. Future phases will focus on full-scale prototypes and industry partnerships to bring these ideas to life.

This project represents a potential model for change in the field of housing research.

// A large 3D printer constructs a concrete house layer by layer, showcasing cutting-edge technology in sustainable and scalable housing construction.

Beyond the Wall

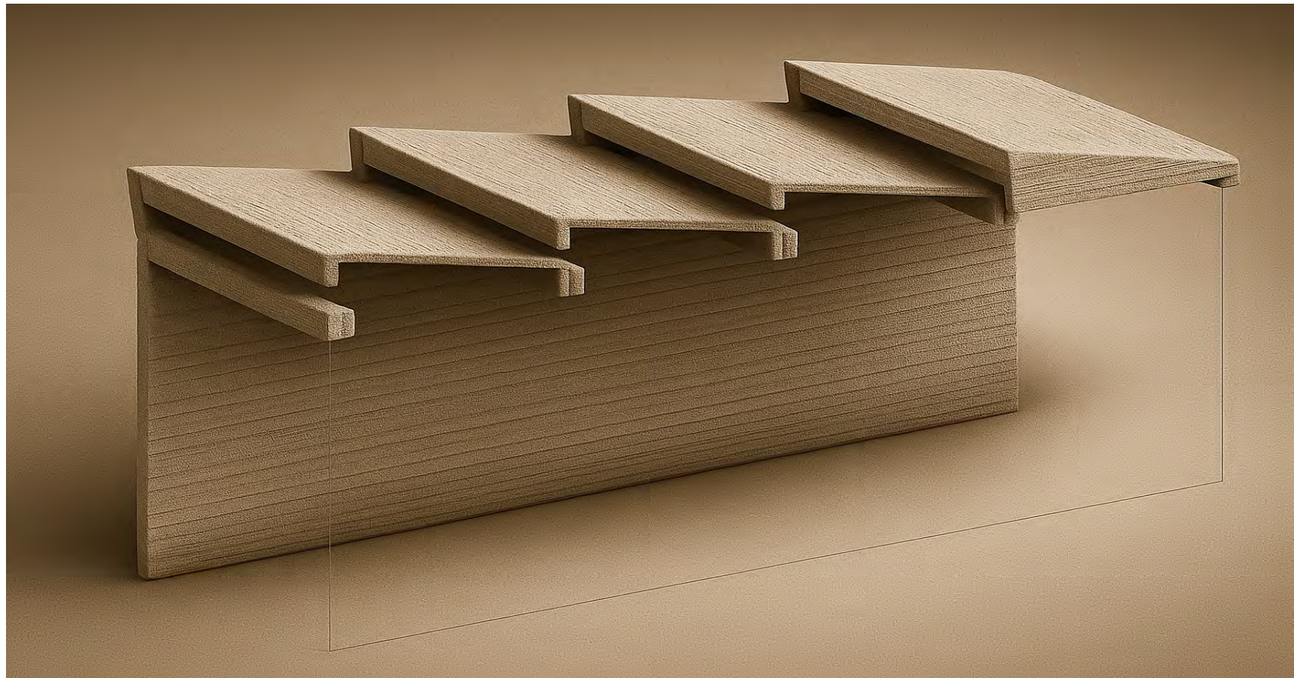
Innovating 3D-Printed Roof Systems in Architecture

3D concrete printing (3DCP) is reshaping construction by enabling faster, more sustainable, and resource-efficient building methods. Yet, while walls and foundations have advanced, roofing remains a challenge. **Gaurav Lunawat**, a Master of Architecture student at CAPPA, is addressing this gap through research led by **Prof. Shadi Nazarian** and supported by postdoctoral fellow **Dr. Negar Ashrafi**.

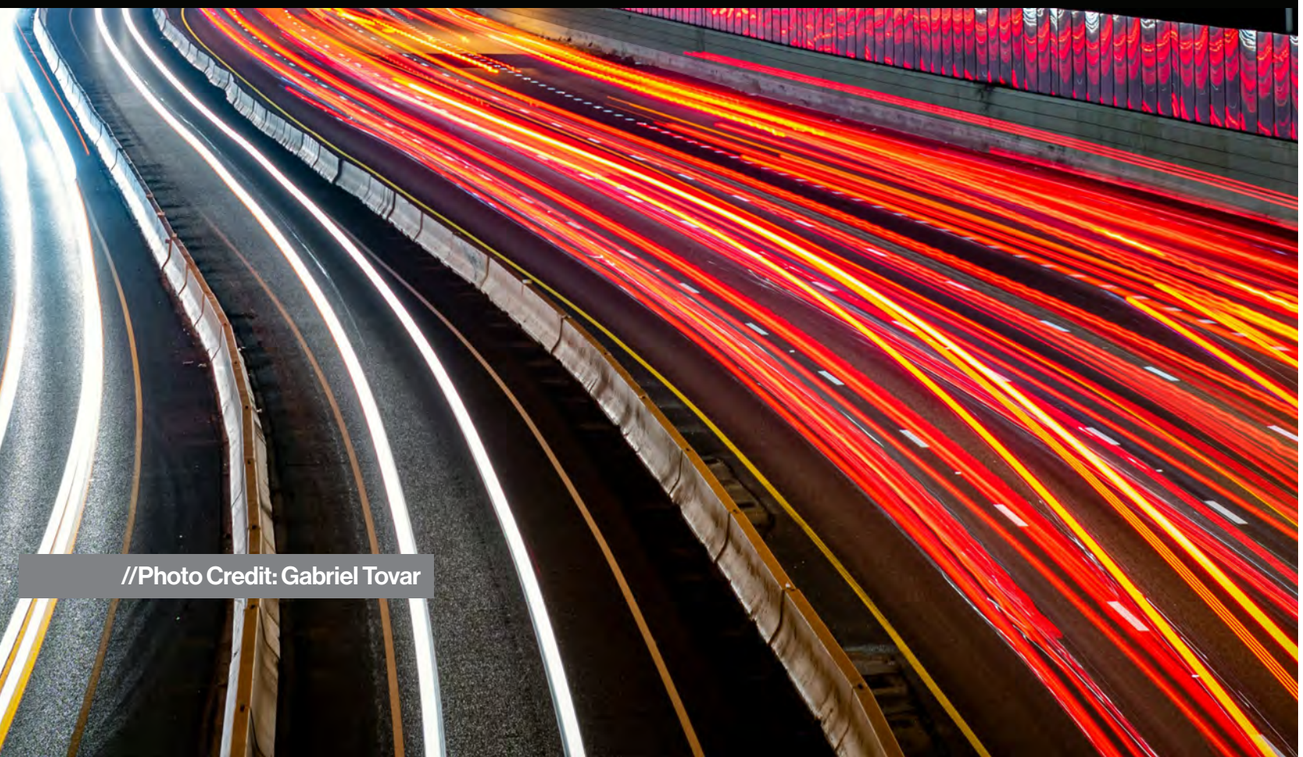
Originally part of a 2024 design studio focused on a 3D-printed tiny house, Gaurav's work evolved into a deeper exploration of 3D-printed roof systems. His research centers on fabricating a sawtooth roof—valued for daylighting and passive cooling—using robotic printing and custom toolpaths. This method eliminates the need for costly molds, allowing for integrated ventilation and varied geometries.

The project promotes mass customization in construction, offering adaptable, efficient solutions tailored to environmental and cultural needs. It also provides students with hands-on experience in sustainable design and digital fabrication. Accepted at several architectural and engineering conferences, this research highlights how emerging technologies, such as 3DCP, can bridge the gap between efficiency and design flexibility, paving the way for a more responsive and resilient built environment.

// 3D printed sawtooth roof structure with layered overhangs for efficient, mold-free fabrication.



//Transportation



//Photo Credit: Gabriel Tovar

Digital Twins

A New Era in Infrastructure Resilience

At CAPPA, **Drs. Mahmoud Bayat** and **Jianling Li** are pioneering a transformative Digital Twin (DT) framework to improve infrastructure resilience. With over 11,000 bridges in Texas needing repair and climate disasters on the rise, their work focuses on prioritizing investments that protect both structural integrity and community well-being.

The team's DT framework integrates cutting-edge AI with geospatial disaster simulations and socioeconomic data to create a real-time, equity-focused decision-support system. At its core is a hybrid Generative Adversarial Network with Focal Loss (GAN-FL), designed to overcome class imbalances in bridge condition data. This is paired with tornado impact modeling, downscaled to individual bridges using gravity-based spatial interaction models, and vulnerability assessments based on community-level socioeconomic indicators.

Initial results, published in the ASCE Journal of Structural Design and Construction Practice, show the system's ability to accurately predict bridge deterioration, simulate disaster impacts, and quantify economic and social losses. This enables planners to allocate resources effectively, focusing on bridges that are both structurally at risk and essential for vulnerable communities.

Looking ahead, the project will expand to include other climate hazards, such as flooding and extreme heat, and integrate with platforms used by state Departments of Transportation and FEMA. This research shows how civil engineering, artificial intelligence, and urban planning can build smarter, safer, and more accessible infrastructure systems for the future.

Photo Credit: Alek Burt

Shaping the Future of Mobility

CTEDD's 2024 Milestones

In 2024, the Center for Transportation, Equity, Decisions, and Dollars (CTEDD) continued to lead impactful research and collaboration under the direction of **Dr. Qisheng Pan**. Dr. Pan oversaw all research, financial, and HR operations, while **Dr. Teresa Qu** joined as program manager in January, strengthening the center's leadership.

CTEDD supported and completed numerous research and educational projects throughout the year, including five finalized by March and seven more by September. The center also submitted key proposals, including a $2.97 million USDOT grant on mobility equity and a $425,000 National Cooperative Highway Research Program (NCHRP) proposal focused on community-centered transportation.

As part of its ongoing efforts, CTEDD's 2024 Summer Summit in Arlington brought together over 40 participants from UTA, USF, and other University Transportation Centers. The event featured eight research presentations, poster sessions, and dynamic discussions on transportation equity, safety, and economic impact.

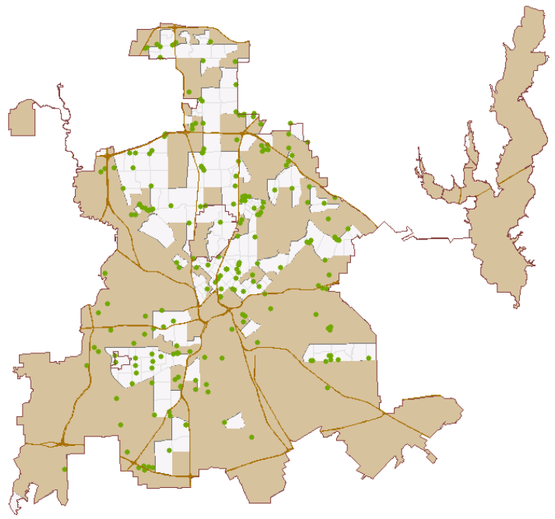
In addition to hosting events, Dr. Pan also represented CTEDD at major national events, including the CUTC meetings and the Future of Transportation Summit in Washington, DC, engaging with federal and academic leaders.

With a strong year of research, outreach, and strategic growth, CTEDD reaffirmed its role as a national leader in advancing equitable and data-driven transportation solutions.

// Dr. Qisheng Pan (left) joined **Dr. Joe Zietsman**, (right) Deputy Director of the Texas A&M Transportation Institute, at the 2024 Future of Transportation Summit in **Washington, D.C.**

Hungry For Change

How Transportation Fuels Food Insecurity in Dallas



// This map highlights Dallas neighborhoods with limited access to high-produce stores, underscoring how transportation barriers contribute to food insecurity across the city.

Across Dallas, thousands of families face a daily struggle that goes beyond hunger—it's a matter of mobility. Food insecurity remains a pressing issue, especially in low-income, predominantly minority neighborhoods where access to healthy, affordable food is limited not just by geography, but by transportation.

A 2024 needs assessment, a collaborative effort led by CAPPA's **Dr. Karabi Bezboruah** and College of Nursing & Health Innovation's (CONHI) **Dr. Matt Brothers**, supported by doctoral students and the **UTA Interdisciplinary Research Grant**, highlights the strong link between transportation and food access. Using surveys, focus groups, and interviews, the study found that many residents live in "low-income, low-access zones," where grocery stores are scarce and public transit is unreliable or nonexistent.

Without a car, getting to the supermarket might require lengthy commutes involving multiple bus transfers, assuming public transit is even an option. Rising food prices only worsen the burden. While programs like SNAP and local food pantries offer some relief, they often fall short in nutritional quality and accessibility. Many eligible residents remain unaware or face barriers to enrollment.

Community-led efforts, including urban farms, CSA programs, and nonprofit partnerships, are making strides; however, they face challenges in securing funding, obtaining policy support, and achieving scalability.

The consequences are far-reaching. Poor access to nutritious food contributes to chronic health issues, especially in communities already facing economic hardship.

The report calls for bold action, including expanding food assistance programs, investing in transportation infrastructure, easing zoning restrictions to attract healthy food retailers, supporting local food production, and promoting nutrition education.

Precarious Ground

Housing, Transit, and the Future of East Fort Worth

In summer 2024, **Dr. Julene Paul** and doctoral student **Jenifer Reiner** launched a research project exploring the intersection of housing precarity and transit-oriented development (TOD) in East Fort Worth. With support from doctoral student **Luis Macias**, they conducted focus groups with 20 residents of a local mobile home park to better understand community perspectives on TOD and public transit.

Residents shared their hopes and concerns about how new development might affect affordability, access, and quality of life. Many expressed interest in improved transit options but voiced skepticism about whether TOD would truly serve their needs—or push them out.

The research team also analyzed city planning documents and U.S. Census data, with help from doctoral student **Aisharya Bhattacharjee**. Their findings revealed clear patterns: areas with high poverty rates, limited vehicle access, and large mobile home populations often overlap with neighborhoods lacking safe pedestrian infrastructure.

Presented at the 2024 Association of Collegiate Schools of Planning (ACSP) Conference in Seattle, this work highlights the importance of including vulnerable voices in planning conversations. Dr. Paul's ongoing research continues to center transportation equity and community engagement, and invites the audience to be part of a continuous process of change.

// Neighborhoods with higher poverty rates and limited vehicle access often lack safe, well-maintained pedestrian infrastructure.

//Community Engagement

//Photo by Jason Flowers

CLASSROOM TO COMMUNITY

How CAPPA Turns Education into Action

At CAPPA, education extends beyond learning design or policy. It is about applying that knowledge to make a meaningful difference in communities. From North Texas and beyond, our students and faculty are transforming classrooms into powerful platforms for civic engagement and transformation.

The **South Oak Cliff Renaissance Park** in Dallas is a shining example of this transformation. Once a neglected, crime-ridden lot, the 1.8-acre site has been reborn as a vibrant, solar-powered community park. This transformation was not a solitary effort, but rather a collaborative one. Designed in partnership with residents and students from South Oak Cliff High School, the park now features outdoor classrooms, fitness equipment, a basketball half-court, and climbing boulders, all of which were shaped by community input. The project, part of the Trust for Public Land's Five Mile Creek Greenbelt initiative, has already led to a 58% reduction in crime and increased community engagement. CAPPA students, guided by **Prof. Letora Anderson**, a Landscape Architecture Foundation (LAF) CSI Fellow, contributed through research and community engagement efforts, applying insights from her fellowship to support accessible, place-based inquiry.

The transformation of South Oak Cliff Renaissance Park is a testament to CAPPA's commitment to community-driven design. The park's solar-powered lighting and free public Wi-Fi enhance safety and accessibility, while the all-weather exercise equipment and outdoor classroom provide spaces for physical activity and learning. The basketball half-court and rock-climbing boulders, designed by students, reflect the community's vision for a healthier, more connected neighborhood. This project demonstrates how academic expertise can be leveraged for the public good, resulting in tangible improvements in public safety, health, and community pride.

Just a few miles away, another CAPPA-connected initiative is growing. Joppy Momma's Farm, located in the historic Freedman's town of Joppa, is a community-led urban farm addressing food insecurity in a federally designated food desert. The farm not only provides fresh produce but also serves as a hub for education, job training, and cultural preservation. CAPPA students, guided by **Prof**. **Julia Lindgren**, have supported the farm through research on food justice, sustainable land use, and community planning, as well as hands-on assistance with its design and construction—showing how academic work can directly strengthen grassroots resilience.

> "We're not just teaching students how to design buildings or write policy—we're teaching them how to listen, collaborate, and lead."
>
> — **Dr. Diane Jones Allen**
> Director, Landscape Architecture Program

Joppy Momma's Farm is more than a source of fresh produce—it's a powerful symbol of community empowerment and resilience. The farm provides education and job training in sustainable agriculture, equipping residents with valuable skills while addressing systemic food insecurity and poverty in Joppa. CAPPA's involvement, including student contributions and faculty guidance, reflects the college's commitment to social justice and community engagement. The project's impact was further recognized with an AIA Student Design Award, underscoring how thoughtful design and planning can drive fair, sustainable change.

This commitment to cultural and historical preservation is also central to the work of CAPPA faculty like **Dr. Diane Jones Allen**. As part of CAPPA's Black History Month programming, Allen shared her mission to preserve Black cultural landscapes—spaces shaped by the histories and experiences of African American communities. Her work includes designing memorials to victims of racial violence, supporting the survival of historic Freedmen's towns like Garden of Eden in Fort Worth, and researching "maroon landscapes" in Louisiana—wetland communities established by self-liberated enslaved people who learned to live with the land rather than against it.

Allen's work is a powerful example of how landscape architecture can be used to honor and preserve cultural heritage. By designing memorials and supporting historic communities, Allen is helping to ensure that the stories and experiences of African American communities are recognized and remembered. Her research on maroon landscapes in Louisiana highlights the resilience and ingenuity of self-liberated enslaved people who created sustainable communities in challenging environments.

/01

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/03

/04

Allen's work demonstrates how design can be a tool for social justice, cultural preservation, and community empowerment.

Whether through student-led design competitions, faculty research, or community partnerships, CAPPA is redefining what it means to be a school of architecture, planning, and public affairs. It's not just about buildings or policies—it's about people, place, and purpose.

From revitalized parks to regenerative farms, from cultural landscapes to community classrooms, CAPPA is proving that education can be a powerful force for justice, sustainability, and transformation. By engaging with communities and collaborating on projects that have tangible impacts, CAPPA students and faculty are making a difference in North Texas and beyond.

CAPPA In Action

/01 Aerial image of South Oak Cliff Renaissance Park // Photo by Jason Flowers.

/02 Joppy Momma's Farm outdoor community garden and classroom.

/03 CAPPA students and faculty enjoy a well-deserved break in the newly erected outdoor classroom.

/04 Kim High draws inspiration for her thriving farm from her great-grandmother, Annie Collins Horn—affectionately known as Joppy Momma.

PRESERVING THE SOUL OF JOPPEE

A Community's Fight for Identity Amid Development Pressures

// PILOT SITE PLAN

Joppa, also referred to as Joppee, is a historic Freedmen's Town located in South Dallas, established in 1872 by formerly enslaved African Americans. For over 150 years, this resilient community has stood as a testament to Black heritage, self-determination, and cultural continuity. But in recent years, Joppee has found itself at a crossroads, caught between the promise of revitalization and the peril of erasure.

The turning point came in 2017, when Shalondria Galimore, President of the South-Central Civic League and Joppee Neighborhood Association, raised the alarm. Speaking at the Dallas African American Museum, she voiced concerns about Habitat for Humanity's well-intentioned but disruptive development efforts. While the organization had built over 100 homes in the area, its shift toward becoming a full-scale developer threatened to overwrite the neighborhood's unique character—its modest homes, tree-lined streets, and deep-rooted sense of place.

//PILOT SITE RENDERING

Galimore's call for allies was answered by CAPPA faculty member **Dr. Austin Allen**, and Director of the Institute of Urban Studies (IUS), **Alan Klein**, who pledged long-term support. This partnership ultimately led to the 2022–2023 Housing Stabilization Project, funded by the **Geisel Grant** and spearheaded by UTA's Institute of Urban Studies. The project aimed to help the community establish a Stabilization Overlay—a set of zoning guidelines designed to protect Joppee's architectural and cultural identity.

Through extensive community engagement, the team developed thoughtful recommendations: modest housing sizes, height limits of 20 feet, generous setbacks, and a commitment to preserving mature trees. A pilot site at 4505 Corregidor Street served as a testing ground for these ideas, proposing six homes that respected the neighborhood's scale and spirit.

However, the journey toward preservation is seldom without its challenges. While many residents supported the vision, others were concerned that new regulations might infringe upon their property rights. Developers, too, expressed reservations. As the grant period ended, consensus remained elusive—but the dialogue continues.

What emerged from the project is more than a set of zoning rules. It's a renewed commitment to community-led planning, a reminder that true revitalization must honor history, not erase it. In Joppee, efforts to preserve its legacy are ongoing and gaining momentum.

Dallas Police Memorial

On a two-acre site near Dallas City Hall Plaza, a striking memorial honors police officers killed in the line of duty. Designed by former School of Architecture Dean, **Ed Baum** and Prof. **John Maruszczak**, with Oglesby Greene as architect of record, the project blends symbolism and civic purpose. A stainless steel structure rises like a protective shield, engraved with badge numbers and names of the fallen. One plane hovers above, casting a shadow that recalls the mourning bar worn on police badges, while another follows the land's slope, allowing visitors to read and touch the names. Built with fragments of Dallas streets, the memorial connects memory, place, and service. Maruszczuk's design contributions helped shape this meaningful space, demonstrating how architecture can honor public service and foster collective remembrance.

// A striking stainless steel structure rises from a triangular park near **City Hall Plaza**, forming a symbolic officer's shield that honors fallen **Dallas Police** officers with illuminated badge numbers and engraved names etched into fragments of Dallas streets.
Photos Courtesy of **Oglesby Greene Architects**

Building Belonging

Expanding Engagement in Arlington's Downtown Cultural District

Community engagement is a cornerstone of vibrant urban life, especially in cultural districts where public spaces intersect with civic identity. In Arlington, Texas, **Drs. Emily Nwakpuda** and **Karabi Bezboruah** are exploring how the city's downtown cultural district can better connect with both current residents and future ones—particularly vulnerable populations and UTA students.

With support of the **Geisel Grant** from the college, the project partnered with the Levitt Pavilion and the City of Arlington's Department of Economic Development. Graduate students from CAPPA's Department of Public Affairs and Planning joined the effort, conducting a needs assessment, analyzing survey data, and designing a new engagement survey.

The findings of this project have brought to light significant disparities in participation: wealthier, less diverse residents were more likely to engage with cultural programming, while others faced barriers. UTA students also showed limited interest in staying in Arlington after graduation, raising questions about the district's long-term appeal.

This research was featured as a keynote at Texas A&M's 2024 symposium on community-engaged scholarship, showcasing its innovative approach to inclusive civic engagement. City leaders and residents praised the collaboration as a model for university-community partnerships.

At the center of this work is the Levitt Pavilion, a venue that exemplifies how free, inclusive programming can transform public space into a shared civic stage. As cities seek to deepen public life, Arlington's approach offers a compelling roadmap for using cultural infrastructure to foster equity, connection, and long-term vitality.

// Nwakpuda (third from left), **Bezboruah** (fifth from left) and students meet with civic leaders in Arlington to discuss inclusive engagement in the downtown cultural district.

// Levitt Pavilion stands as the heart of Arlington's cultural district, showcasing how free, accessible programming can unite diverse communities and foster civic engagement.

GARDEN OF EDEN

A Community-Led Vision for Environmental Justice and Cultural Resilience in Fort Worth

The Garden of Eden, designated as Fort Worth's first African-American cultural district in 2005, was established around 1860 by formerly enslaved people from Tennessee and Kentucky. Historically, the community thrived with agriculture and strong ties to the Trinity River. Today, only about 20 descendants of the original 54 households remain. The area now faces significant environmental and infrastructural challenges, including industrial encroachment, proximity to a landfill, concerns about contamination from unregulated gravel pits, frequent flooding, noise pollution, and limited access to city utilities. Despite these issues, residents—led by the Sanders Family and the Garden of Eden Neighborhood Association—remain deeply committed to preserving their heritage and revitalizing their neighborhood.

To support their vision, an interdisciplinary team from CAPPA partnered with the community. Faculty and students from landscape architecture, sustainable urban design, and architecture programs collaborated across three courses (LARC 5664, UDES 3551, ARCH 5592) to develop a community-based comprehensive plan. The plan was guided by an extensive analysis of the area's environmental, social, and cultural conditions and will prioritize community input throughout the process.

The goal is to integrate sustainable green infrastructure with culturally sensitive design strategies to address the community's flooding risk, environmental health concerns, pedestrian safety, and housing needs. The project also supports community goals of population growth and connection to essential city services. By envisioning an alternative future rooted in equity, resilience, and cultural pride, the initiative aims to restore the vibrancy of the original Garden of Eden.

This effort represents a meaningful partnership between the university and a historically underrepresented community. It offers an innovative, interdisciplinary model for addressing environmental justice through design, planning, and policy. Students acquired valuable experience by tackling real-world social and ecological issues. At the same time, the community benefited from a strategic framework designed to enhance their long-term sustainability and foster self-determination. Ultimately, the research aspires to not only honor the Garden of Eden's legacy but also build a foundation for a resilient and thriving future.

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Cultural Heritage + Resilience

/01 CAPPA students and **Dr. Jiwoon Im** visit 'Garden of Eden' site in Fort Worth.

/02 Students share design ideas with local community stakeholders

/03 Prof. Dennis Chiessa speaks during final reviews for 'Garden of Eden' project.

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A Banner Year of Impact

How the Institute of Urban Studies Shaped Texas Communities in 2024

In 2024, the Institute of Urban Studies (IUS) at UTA marked a milestone year, one defined by innovation, collaboration, and community transformation across the state. From pioneering food delivery by uncrewed vehicles to revitalizing flood-damaged neighborhoods, IUS demonstrated the power of applied research and student engagement in shaping resilient, inclusive communities.

One of the year's most forward-looking projects involved a partnership with the Department of Energy, the City of Arlington, and other regional stakeholders to pilot uncrewed aerial and ground vehicle delivery of food parcels to vulnerable residents. The Institute led community outreach and evaluation, gauging public sentiment and satisfaction with this novel approach to food access.

In Collinsville, a small town on the edge of Dallas's suburban expansion, IUS worked hand-in-hand with residents and officials to craft a comprehensive land use plan. The Institute's unwavering commitment was to manage growth while preserving the town's unique character and values, ensuring the community's identity remains intact.

Meanwhile, in the Prestonwood Lake area, where a breached dam had erased a beloved community lake, IUS facilitated a grassroots planning process to restore the natural creek ecosystem. The resulting plan promises not only environmental renewal but also enhanced public spaces and wildlife habitat.

The Institute also deepened its long-standing partnership with the City of Arlington through the Arlington Urban Design Center. Students from CAPPA programs contributed hands-on design and planning services, gaining invaluable experience while supporting local development.

As IUS anticipates 2025 and the years beyond, its 2024 achievements stand as a testament to the transformative potential of community-centered urban research and education.

Aerial Food Access

//IUS's 2024 Pilot Project showcases innovative aerial delivery methods to improve food access for vulnerable communities.

Catalyzing a Thriving Nonprofit Community

A Story of Collaboration, Discovery, and Growth in Arlington, Texas

In early 2023, the Department of Public Affairs and Planning initiated a project to enhance its understanding of and support for Arlington's nonprofit sector. Commissioned by the Arlington Tomorrow Foundation and partners, the study explored the strengths and challenges of local nonprofits.

Over 17 months, **Drs. Emily Nwakpuda** and **Karabi Bezboruah** worked with nonprofit leaders to assess needs across nine key areas, including staffing, finances, and programming. A citywide survey gathered responses from 176 organizations, offering a broad view of the sector.

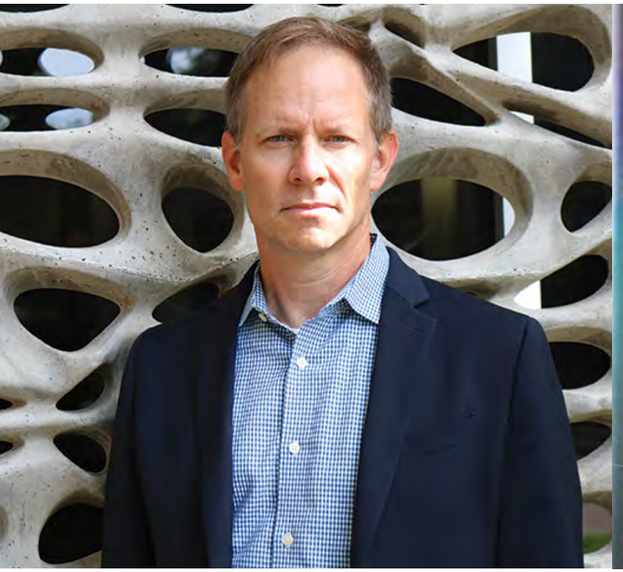
In June 2024, UTA hosted Arlington's first Community Day for nonprofits. Seventy-one organizations attended, sharing ideas and learning from the research. Four groups received $1,000 awards to support their work.

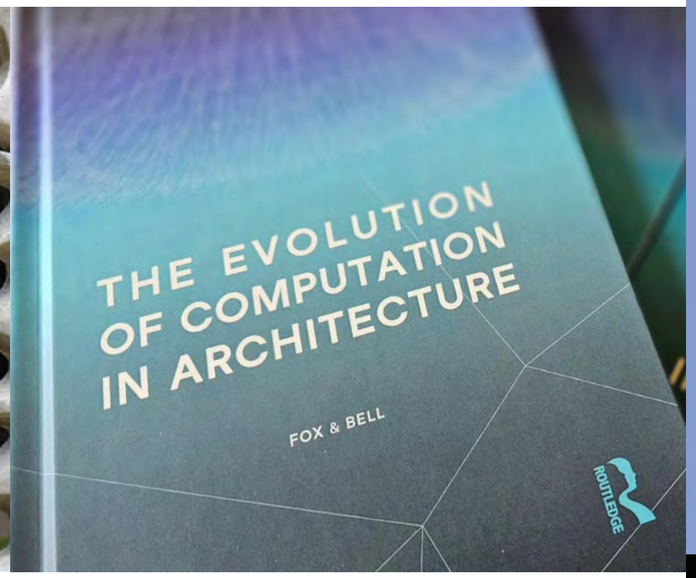
Behind the scenes, the researchers built a public database of over 3,500 nonprofit organizations in and around Arlington. This tool, available at nparlington-research.uta.edu, helps users explore the city's nonprofit landscape.

Although the project concluded in fall 2024, its impact endures. In January 2025, the Arlington Tomorrow Foundation launched a free "Impact Learning Series" to help nonprofits grow and thrive, ensuring the momentum continues.

Fieldwork in Action

//Bezboruah (bottom left) & **Nwakpuda** (bottom right) meet with local nonprofit leaders.





Tracing Code

The Evolution of Digital Design in Architecture

Brad Bell, Assoc. Professor and former Director of the School of Architecture (pictured above), brings his deep expertise in digital design and pedagogy to the forefront in *The Evolution of Computation in Architecture*. Co-authored with Michael Fox and featuring contributions from leading voices like Mario Carpo, Jenny Sabin, and Branko Kolarevic, this volume offers a sweeping exploration of how computation has reshaped architectural practice over the past fifty years.

Organized into six thematic eras—Pioneering, Translation, Appropriation, Experimentation, Legitimacy, and Paradigms—the book maps the evolution of computational thinking and its integration into architectural workflows. It highlights key figures, projects, and technologies that have shaped the field, while also reflecting on the cultural and academic shifts that enabled computation to move from the margins to the mainstream.

Fox and Bell's narrative is both historical and forward-looking, offering insights into how architects have appropriated and adapted digital tools to expand the boundaries of design. The book is richly illustrated and grounded in research, making it an essential resource for students, educators, and practitioners interested in the intersection of architecture and technology.

As computation continues to redefine how we conceive, fabricate, and inhabit space, this book serves as both a retrospective and a roadmap—inviting readers to consider not just where we've been, but where we're headed. For the CAPPA community, it underscores the importance of interdisciplinary research and innovation in shaping the future of the built environment.

//Sustainability

//Photo Credit: Victor Garcia

DESIGNING ACROSS BORDERS

Alpinestudio's Global Vision

As part of CAPPA's Study Abroad, Study Away (SASA) program, Alpinestudio, led by **Dr. Oswald Jenewein**, is redefining how students engage with architecture, climate, and cross-cultural collaboration. This innovative program, developed through a long-standing partnership between UTA and the University of Innsbruck in Austria, has evolved into a semester-long academic experience that unites students and faculty from both institutions.

Each spring, 15 students from UTA and 15 from Innsbruck come together in a shared curriculum that includes a design studio and two seminar courses. Working in mixed teams, they address real-world challenges related to climate resilience and urban ecology—often in collaboration with local governments and communities.

As part of Alpinestudio, students collaborated on Co-creating the Alpine Super Block, a visionary urban design project. The initiative reimagined five city blocks in Innsbruck as pedestrian-friendly, climate-resilient spaces.Inspired by Barcelona's superblock model, the project emphasized green corridors, biodiversity, and community well-being—demonstrating how international, interdisciplinary design can shape more sustainable urban futures.

Beyond the classroom, students participate in immersive experiences like the Alpine Bootcamp and the Building Futures lecture series, supported by the U.S. Embassy in Vienna. These components deepen their understanding of environmental risk and foster dialogue between academia and the public.

As CAPPA expands its global footprint, Alpinestudio stands as a model for international, interdisciplinary education—where thoughtful design and meaningful collaboration shape more sustainable futures.

Cross-Cultural Design Collaboration

/01 Students explore the Alpine conditions atop Innsbruck at 7,657 ft

/02 Dr. Oswald Jenewein at the Final Review of "Co-creating the Alpine Superblock"

/03 Alpine Bootcamp: Students exploring Alpine conditions & vernacular architecture at the Austrian-Italian Border

/04 Program Participants in Innsbruck

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Advancing Urban Resilience & Design

The Center for Metropolitan Density (CfMD), housed within CAPPA, continues to lead innovative research and community-focused design in response to the challenges of urban growth. Founded in 2011, CfMD promotes sustainable, equitable, and economically viable urban development through interdisciplinary research, education, and outreach.

Recent highlights include CfMD's leadership in a national pilot study conducted in collaboration with the U.S. EPA's Office of Wastewater Management. Led by **Dr. Taner R. Özdil**, the project explored green infrastructure (GI) solutions for stormwater management and climate adaptation. UTA was one of only two institutions nationwide to be selected. The resulting GI Report, now publicly available, informed UTA's 2024 campus master planning and earned a Texas ASLA Professional Honor Award in Research.

CfMD also facilitated visionary graduate design studios in collaboration with regional partners. Projects included reimagining Dallas' Akard Plaza, envisioning a Market Street Hub in the Southwestern Medical District, and proposing a new future for Arlington's Lincoln Square. These studios engaged students, faculty, and community stakeholders in real-world urban design challenges.

Looking ahead, CfMD is revisiting the legacy of Vision North Texas—an award-winning regional planning initiative launched two decades ago. As the 15th anniversary of the North Texas 2050 report approaches, CfMD is convening former partners to assess progress and chart a new course for the region's future.

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/01 Downtown Dallas, TX
/02 CAPPA students share design work centered on urban planning and green infrastructure.

EMPOWERING INNOVATION

At CAPPA, much of our most impactful research is made possible through grant funding. These resources empower faculty and students to pursue innovative, community-focused work that might not otherwise be feasible. Two key internal funding opportunities—the Geisel Grants for Community Impact and the CAPPA Dean's Interdisciplinary Research Grant—play a vital role in supporting this mission

GEISEL GRANTS FOR COMMUNITY IMPACT

Funded by the Paul Geisel Endowment, these grants support CAPPA faculty–student teams engaged in community-driven projects across Texas and the Southwest. Each award ranges from $3,000 to $5,000 or more, with a focus on areas such as affordable housing, energy efficiency, climate-responsive design, smart-growth strategies, and civic engagement. Launched in 2022, recipients are recognized as Geisel Fellows. In addition to research funding, Dr. Geisel also supports student scholarships and internships.

CAPPA DEAN'S INTERDISCIPLINARY RESEARCH GRANT

This grant encourages collaborative, cross-disciplinary research among CAPPA faculty and partners from other colleges or external organizations. The goal is to foster innovative solutions to complex urban and environmental challenges. Projects often integrate diverse fields such as architecture, planning, public policy, engineering, and health, and are expected to lead to scholarly publications, external funding, or community impact.

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GIVE BACK. BUILD FORWARD.

Your journey at CAPPA and UTA helped shape who you are today—now it's your chance to shape the future. By giving back, you empower the next generation of architects, landscape architects, interior designers, planners, and public leaders to dream bigger, design smarter, and lead boldly.

Whether it's a one-time gift or ongoing support, your contribution fuels scholarships, innovative research, and transformative experiences that keep CAPPA at the forefront of excellence.

Let's build a legacy ***together***.