NOTABLE NEWS

DCP NEWSLETTER FOR STUDENTS AND FACULTY

INTEGRATIVE PREVENTION THROUGH DESIGN LAB

The Integrative Prevention through Design Lab is embedded in the Florida Institute of Built Environment Resilience (FIBER). It investigates ways to reduce hazards to human health and well-being through system resilience planning for dynamic built environments. Dr. Lisa Sundahl Platt heads the research team. It currently includes a select group of DCP Graduate Research Assistants with research interests in applying AI, Human Factors, and Systems Science methodologies to investigating safety-critical environments. Presently the lab's research efforts are focused on improving infection prevention through strategic environmental interventions, using socioecological scenario models for healthy infrastructure planning, and using computational design thinking for environmental predesign.

2022 ADMISSIONS DATA

Number of Applications	108
Number of Fall Matriculated	14
Number of Graduates in 2022	13
Active Students in Each Concentration	
Architecture	13
Construction Management	42
Historic Preservation	7
Interior Design	13
Landscape Architecture	2
Urban and Regional Planning	25
No Concentration	4
Total Active PhD Students	106

KE (EDWARD) SUN

Ke, Ph.D. Candidate in Architecture published a Peer-reviewed Article "Between Built and Dreamt: The Contested Urbanscapes of New York City through Walking on the High Line," in Montreal Architectural Review, a prestigious international academic journal for architectural history and theory, operated by McGill University in Canada. Additionally, he presented his paper, "Dressed Body and the Queering of Urban Space" at the 17th Annual International Association for the Study of Environment, Space, and Place (IASESP) at Loyola University in Chicago, Illinois.

UF UNIVERSITY of FLORIDA

(UNVEILING THE IMPACT OF AUTONOMOUS SHUTTLE: AV STUDY IN LAKE NONA, ORLANDO)

YANGHE LIU

The burgeoning development of autonomous vehicle (AV) technology spurs many cities and transit agencies' exploration of integrating AV-based microtransit services into the public transportation system. Currently, in the Lake Nona neighborhood, south Orlando, the investor, Tavistock, and the service provider, BEEP, have deployed the MOVE NONA program, offering free AV shuttle services for the residents and visitors (see image above). To understand the effectiveness of the AV shuttle service and quantify its impact, Yanghe Liu, a second-year Ph.D. student from Dr. Zhong-Ren Peng's iAdapt (International Center for Adaptation Planning Design) center, is developing a novel, comprehensive effectiveness evaluation framework for AV-based microtransit systems, known as the General Framework. The framework contains five critical pillars: Policy and Government, Infrastructure and Technology, Accessibility and Services, Financial Sustainability, and Ridership and Community Impact. Each pillar consists of specific measuring criteria and elements derived from existing literature and ranking systems. Application of the General Framework will allow potential users (e.g., the Florida Department of Transportation (FDOT)) to quantify an AV system's political, economic, technical, and social implications conveniently and scientifically, facilitating future decision-making upon investing or assessing the outcome of a new AV program. To test the framework, Yanghe and the iAdapt team also conducted a case study and community survey in Lake Nona in August 2022, eyeing to publish the report by early 2023. The research project is funded by FDOT.

PRESERVATION INSTITUTE NANTUCKET

This year marks the 50th anniversary of the Historic Preservation Program's Preservation Institute Nantucket. Founded by Professor F. Blair Reeves and Walter Beinecke, Jr., projects on the island originally focused on Historic American Buildings Surveys and various methods of documentation. Today, the program accepts graduate students from all backgrounds and a wide array of universities with an interest in preservation. This summer, students revisited past projects and brought the perspective of 2022. There were 14 students total from University of Florida (Historic Preservation, MURP- campus + online, BSSB 4+1, and Architecture- campus, CityLab Orlando, and Jax lab), University of Arizona, Randolph Macon, and Roger Williams University. This also includes an International Council on Monuments and Sites (ICOMOS) Intern from Serbia. Some of the students created ArcGIS StoryMaps to communicate their research.

SALEH NASEER

Saleh, a PhD. Student in Architecture, presented his work at the 182nd meeting of the Acoustical Society of America in Denver, Colorado. In addition, he won a student travel award from the National Council of Acoustical Consultants (NCAC) at the conference.
Details on the article presented below:
Title: An Overview on the Impact of Nursing Homes' Acoustic Characteristics on the Elderly's Quality of Life
Abstract: The primary motivation for this study is that the acoustical qualities of elderly care facilities as they relate to the quality of life of its occupants are frequently neglected. According to the Centers for Disease Control and Prevention, around 1.5 million senior individuals live in nursing homes in the USA in 2021. Some have a lower quality of life (QoL) due to factors such as health care concerns, social issues, and home environmental issues. This paper intends to study and analyze the recent research on the environmental issues and specifically acoustical issues around these types of facilities and their impacts on the QoL of its occupants. Moreover, with respect to the occupants of these spaces and acoustics, mainly hearing problems as a common issue among the elderly, the acoustical issues will result in unique impacts, e.g., making it difficult to communicate with staff and other elderly. Therefore, improving the acoustical quality of the indoor and outdoor environments can help minimize the negative effects associated with hearing-related physical weaknesses, thus indirectly enhancing the QoL. This study intends to provide a comprehensive overview of this topic by performing comparative analyses of the research methods, results, and discussions of the latest studies conducted in this area of research. The goal is to categorize the most efficient research methods for conducting these types of studies based on their impact on the QoL.

(Note from Saleh: I would like to thank my advisor, Dr. Hassan Azad, for his guidance and assistance throughout this educational journey, as well as the department of Architecture at The College of Design, Construction, and Planning for its encouragement and support.)

DR. RUONUI (VINCE) WANG

Dr. Wang, UF Ph.D. Graduate from URP, recently joined University of Washington as a full time Assistant Professor in the College of Built Environments. The college announced the new hires as part of a "strategic framework is growing our capacity for collaborative interdisciplinary work with the goal of advancing climate solutions which are at the heart of our vision for a more just and beautiful world." Previously Vince led housing and equity research initiatives for five years at Grounded Solutions Network, a national nonprofit. Visit UW's site for more information.

RITA ELIAS

Rita, a PhD Candidate and Eagle Scholar in Construction Management, published in the International Journal of Construction Education and Research, in collaboration with Dr. R. Raymond Issa and Dr. Wei Wu. The article is entitled: Progress on Building Information Modeling Education and Talent Acquisition

DAGMAR RITTENBACHER

Dagmar Rittenbacher, a native Austrian, is a Ph.D. student with a concentration in Interior Design. Her doctoral research focuses on understanding how the design of healthcare facilities can enhance the physical and psychological well-being of nurses. This work builds upon her Master's thesis research (MID in Interior Design, UF, DCP in 2021), for which she developed a Nurses' Physical Environmental Stress Scale. Not only is Dagmar a busy doctoral student, but since May 2021 she has been working full-time as a design researcher with Gresham Smith, a global design firm, in their Orlando office. As one of a four-person research team, led by alum Dr. Lesa Lorusso (Director of Research and Insights), Dagmar supports interior designers and architects, researching healthcare trends and conducting literature reviews to support design teams. Dagmar's work also includes design thinking workshops with clients to identify challenges, understand core issues, ideate possible design solutions, evaluate ideas, and implement the best ideas into the design process. She advocates for the importance of healthcare design research to improve safety, quality, and experience for patients, family members, and staff in well-designed healthcare facilities.

DR. WEI ZHAI

Beginning Fall 2022, Dr. Zhai, UF Ph.D. Graduate from URP, will join the University of Texas at San Antonio as an Assistant Professor of Urban and Regional Planning. Prior to that, he was an Assistant Professor in the Department of Geography at Hong Kong Baptist University. Under the supervision of Prof. Zhong-ren Peng, He obtained a Ph.D. in Urban and Regional Planning from the University of Florida in 2021. He also obtained a master's degree in computer engineering from the University of Florida in 2020. Dr. Zhai's research interests center on how to make cities more resilient in the face of local and global environmental change, such as climate change and extreme weather events. Specifically, he leverages emerging big data and advanced methods to reexamine disaster resilience before, during, and after extreme weather events. He also studies the quality of planning documents and how plans can be improved to foster transformative actions in the context of climate change. For more information, visit Dr. Zhai's Google Scholar

AMIE EDWARDS

Amie Edwards, Architecture Ph.D. Candidate and FLAS Fellow presented paper, “Asante Palace Architecture: Paradigm Shift from Colonial Historiography to a Multidisciplinary Methodology from an African Perspective” at the Vernacular Architecture Forum Conference in San Antonion, TX. The writing was based on her dissertation research methodology on the 19th century Asante palace of Kumase, Ghana. The conference also allowed her to meet other speakers and scholars and receive feedback on the topic. City and rural tours were also arranged highlighting San Antonio’s rich architectural and landscape history. Additionally, through the support of DCP School of Architecture and The University of Florida Center of African Studies, Amie traveled to Kumasi, Ghana, for field research. This opportunity allowed her to view and document the original site of the 19th century Asante Palace, urban context, traditional temples, and the current Manhyia Palace of the Asantehene. She also presented her research to Kwame Nkrumah University of Science and Technology faculty and students.

(Alamo San Antonio TX)

(Streets in Adum area by 19th century Asante Palace original site)

(Armed Forces Museum in the Adum area)

(Illustration of Non-local Traffic Restriction Policy in Shanghai, China)

KAIFA LU

Second-year Ph.D. student Kaifa Lu, under the guidance of his advisor Dr. Zhong-Ren Peng, has published paper "Assessing the effects of non-local traffic restriction policy on urban air quality" at *Transport Policy*. Traffic restriction policy is common practice across the globe to alleviate urban road congestion and air pollution, particularly in China. However, effects of TRP for non-local vehicles and elevated expressways on local and regional air quality are understudied. This study helps fill this knowledge gap. Using pollutant data by ground-based monitoring stations and field measurements, comparative research design and regression discontinuity analysis were performed to assess the effects of the non-local TRP on pollutant-specific local and regional air pollution. The authors concluded that traffic restriction significantly decreased the local and regional concentration levels of primary gaseous pollutants (e.g., NOX and CO), which also brought an increase of ozone level due to the reduced effect of NOX titration. However, the non-local TRP only exhibited limited impacts on mitigating regional particulate pollution.

By comparing environmental impacts of different TRP, the authors concluded that the non-local TRP in Shanghai was less effective in alleviating air pollution than the license plate number based TRP in Beijing and the congestion charging policy in London but presents better air quality improvements than the TRP in Mexico City. It was further concluded and recommended that raising the extent of traffic restriction policy (e.g., restricted time periods, road segments and vehicle types) and developing public transportation systems (e.g., increasing accessibility, service level, transit network density) could further enhance the TRP's potentials to improve air quality.

HALEH MEHDIPOUR

Haleh, a Ph.D. student in Construction Management, recently presented a section of her research at the "Prioritizing Justice in Neighborhood Revitalization" session located at the Natural Hazard Center in Boulder, CO. Additionally, Haleh has had the opportunity to share her research findings about Bridging the Affordable and Sustainable Housing in one of the Researcher Meeting sessions in the same workshop.

Another wonderful accomplishment she has achieved is having recently been elected for the position of vice president of UF's Organization for Graduate Student Advancement and Professional Development (OGAP). OGAP's flagship events are Graduate Student Research Day and the 3-Minute Thesis ™ competition

Gators

Dissertation Topics of 2022 Graduating Class:

Cost Certainty and Timing of Cost Certainty in the Construction Projects of Public Universities
-Dr. Khalid Abolkhair, Advisor: Dr. Bryan Franz

Older Adults' Discretionary Activities, Travel, and Self Reported Wellbeing: Exploring Their Relationship with Multiscale Built Environment
-Dr. Xueyin Bai, Advisor: Dr. Ruth Steiner

Narratives of the Future and Social Equity in Post-Katrina East Biloxi Mississippi
-Dr. Mark Davison, Advisor: Dr. Kristin Larsen

The Impact of the Built Environment at Trip Origin and Destination on Individual Mode Choice: an Empirical Study of Portland, Oregon
-Dr. Jia Fang, Advisor: Dr. Ilir Bejleri

Evaluating Modal Mismatch through Lens of Equity in the San Francisco Bay Area
-Dr. Mengjie Han, Advisor: Dr. Ruth Steiner

Machine Learning Based Prediction of Urban Building Energy Consumption Owing to Climate Change
-Dr. Haekyung Im, Advisor: Dr. Ravi Srinivasan

Preserving Historic Interiors: Fashioning History and Taste in New York City and Shanghai
-Dr. Chunyao Liu, Advisor: Dr. Erin Cunningham

Investigation of Digital Twin-Based Healthcare Facilities Management
-Dr. Obinna Madubuike, Advisor: Dean Chimay Anumba

Socioeconomic, Cultural, Gender and Age-Related Disparities/Inequalities in Health Contributing Increase in Overweight and Obesity Rate and Decrease in Physical Activity (PA): A Case Study of Karachi, Pakistan
-Dr. Afsheen Sadaf, Advisor: Dr. Chris Silver

Spoken Dialogue System for Information Extraction from Building Information Models Using Artificial Intelligence
-Dr. Ning Wang, Advisor: Dr. Ray Issa

Assessing the Impact of Immersive Storytelling in Attracting Female Students to Construction Education Using Social Cognitive Career Theory
-Dr. Jing Wen, Advisor: Dr. Masoud Gheisari

An Antidote to Sprawl? : Evaluating Impacts of Rail Transit on Urban Structure. A Case Study of Portland Metropolitan Area, Oregon
-Dr. Xinyuan Yang, Advisor: Dr. Ruth Steiner

Planning, Citizenship and Refugee Resettlement: A Case Study of Jacksonville, Florida
-Dr. Seyeon Park, Advisor: Dr. Chris Silver

Thanks for reading! Do you have news to share? Email e.carter@dcp.ufl.edu with your achievements and you can be featured in our next newsletter.

UF College of Design, Construction and Planning