UNIVERSITY OF MARYLAND
SCHOOL OF ARCHITECTURE,
PLANNING & PRESERVATION

MAPP of the Future: A Research and Creative Practice Symposium

Friday, April 13, 2018
9:00am to 5:00 pm

THANK YOU!

Many great people worked to make this happen. Please extend them your thanks.

Mapp of the Future: Research and Creative Practice Symposium Committee

Madlen Simon, AIA, Co-Chair
Donald Linebaugh, Co- Chair
Lindsey May
Heidi Bulich
Sonia Hirt
Jeremy Wells
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Administrative Assistance
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- Fabian Gomez
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- IT GA Students

Facilities Needs
- Joseph Largess

Lunch and Coffee
- Mary Lee Seaman

MAPP 50th Anniversary Exhibit
- Ronit Eisenbach, RA
- Heather Summers
- Eric Bos

MAPP 50th Anniversary Sales
- Ingrid Farrell
- Dawn Green
- Erica Anderson

Alpha Rho Chi
- Lames Al-Kebsi

AIA Continuing Education Credits
- AIA Potomac Valley
  - Pamela Rich
  - Renee Brooks Catacalos

Symposium Schedule

9:00 – 9:30am

Registration and Coffee — **Lobby**

9:30 – 9:55am

Welcome and School Assembly — **Great Space**

10:00 – 11:55am

Design Pedagogy: Issues & Opportunities (2 AIA LU) — **Room 1101**

Why are Professionals Second Class Citizens in Universities?
Presenter: Ralph Bennett, FAIA

Design Studio as a Bridge Between Academia and Real-World Issues: Summer Studio 2017 Case Study
Presenter: Lindsey May, RA

Contextualizing Contextualism
Presenter: Brian Kelly, AIA

The Right Tool for the Job: On the Necessity for Drawing
Presenter: Julie Gabrelli

Rendering Reality
Presenters: Justin Obringer, AIA
Nicholas Tomaszewski, AIA

Design Thinking Across the Disciplines (2 AIA LU) — **Room 1103**

Moderator: Madlen Simon, Associate Dean for Academic Affairs
Panelists: Madlen Simon, AIA - Design Thinking in an Era of Disruption
Dean Chang - *Ongoing Experiments in Re-Imagining Higher Ed*
Richard Scerbo - *Using Design Thinking to Reimagine the Orchestral Performance Experience*
Pamela Armstrong and J. Gerald Suarez - *Innovation and Design in a Cross-Cultural Setting*
Katherine Worboys Izsak - *Social Campaign Design*

Housing and Community Development (2 AIA LU/HSW) **Room 1105**

Toward Common Ground in the U.S. Fair Housing Debate
Presenter: Casey Dawkins

Greenbelt at 80: Preserving Affordability and the Missing Middle
Presenters: Isabelle Gournay
Mary Corbin Sies

High-Density Parenting: Urban Design and Raising Children in the Densifying North American City
Presenter: Louis Thomas

Public Accountability and Modes of Resistance to Public School Sales and Reuse in Philadelphia
Presenter: Ariel Bierbaum, MCP PhD

12:00 – 12:55

Poster Session 1 & Lunch **Kibel Gallery**

Meet one-on-one with authors and designers to discuss their posters

1:00 – 2:25

Urban Design Panel Session (1.5 AIA LU) **Great Space**

Moderator: Jana VanderGoot
Presenters: Matthew Bell, FAIA
Steven Hurt
Margaret McFarland
Ariel Bierbaum
Jeremy Wells
Matthew Miller

Innovative Campus of the Future (1.5 AIA LU/HSW) **Room 1101**

Presenters: Christopher Rice, AIA
Lisa M. Ferretto, AIA, LEED AP BD+C, WELL AP, GGP
Casey Smith, AIA, LEED AP
Neil Murray, AIA, LEED AP

Engaging the Future at NCSG (1.5 AIA LU) **Room 1103**

Moderator: Frederick Ducca
Presenters: Sevgi Erdogan - *Presto*
Sheri Parks - *Smart Cities*
Uri Avin - *PALS*

Planning for Social Value (1.5 LU/HSW) **Room 1105**

Temporary, Public, Planful: Art, Design and Community Change
Presenter: Ronit Eisenbach, RA

Rhetra Design for Kakenya Center for Excellence, Kenya
Presenters: Tonya Ohnstad
Rachel Dewane
David Dewane

Altruistic Profit: Wardman's early 20th-Century Working Class Housing in Washington, D.C.
Presenter: Sally L. Berk, Assoc. AIA

2:30 – 3:15

Poster Session #2 **Kibel Gallery**

Meet one-on-one with authors and designers to discuss their posters.

2:30 - 4:30

Special Collections Open House **Architecture Library**

The MAPP School Library Special Collections treasures will be on display. See some of our biggest and smallest monographs. The illustrations will amaze you.

3:15 – 3:30

Book Break **Outside Kibel Gallery**

Enjoy coffee and a snack while perusing faculty-authored books and our new *MAPP @50* book.

3:30 – 4:55

Nature, Complexity, and Design (1.5 AIA LU) **Great Space**

The Slat Style and the Balcony Style
Presenter: Andrew Linn

Biomimicry Structure: Natural Origami and Structural Application
Presenter: Ming Hu

Architecture and the Forest Aesthetic: A New Look at Design and Resilient Urbanism
Presenter: Jana VanderGoot

Chaos, Architecture, and Creativity
Presenter: Carl Bovill

Heritage and Community (1.5 AIA LU) **Room 1101**

Tradition, Community, and Grungy Secret-ness: The Story of Phase One (as told by the people who were there)
Presenter: Ty Ginter

Ruins and Wrinkles: Revaluing Age Through Architecture in Winston-Salem's Former R.J. Reynolds Tobacco District
Presenter: Lucy Moore, AIA

What Historic Preservation Employers Want
Presenter: Jeremy Wells

Revitalization of Communities in Historic Cairo Based
Presenter: Rei Harada

Designing for Impact Panel Session (1.5 AIA LU/HSW) **Room 1103**

Moderator: Joseph Kunkel
Panelists: Sierra Bainbridge, Sr.
Omar Hakeem
Nathaniel Corum

Sustainability and Resiliency (1.5AIA LU/HSW) **Room 1105**

The International Solar Decathlon: The Future of MAPP's Compelling Legacy
Presenter: Garth Rockcastle, FAIA

Building Park Resilience: A Case Study of Patapsco Valley State Park
Presenters: Zeinab Yahyazadeh Jasour
Allison Coffey Reilly

Waterfront Regeneration: Mediating Boundaries of Abandonment Along the Hudson River
Presenter: Allison Palmadesso, Assoc. AIA, LEED GA

5:00 – 6:00

Opening Reception **Great Space**

Celebrate the opening of the *MAPP @50: Past, Present, & Future* Exhibition.

Celebrate MAPP's 50th Anniversary with our Commemorative Souvenirs

This year marks the 50th anniversary of the School of Architecture, Planning and Preservation at the University of Maryland. Treasure these memories with our items shown above, including our new 50th Anniversary commemorative book, *MAPP@50*!

Stop by the MAPP 50th Aniversary merchandise sales table outside the Kibel Gallery!

Dance the night away at our upcoming

BEAUX ARTS BALL!

Friday, April 20
Event takes place at MilkBoy ArtHouse, College Park, MD

Time: 8:00pm to Midnight
Student Pre-sale: $25 | Student Regular Sale: $35
Faculty/Alumni/Professional Regular Sale: $50

To Register Visit: Beaux Arts Ball MAPP 50

Poster Session 1

Presenter	Poster Title
Garth Rockcastle	Adaptive Reuse: Curricular Implications
Madlen Simon	Applause Café
Omid Barr	Assessment of the Food Environment: Are There Disparities in Access to Healthy Food?
Ming Hu's Students	Biomimicry Structures
Lucy Kavi	Development of Environmental Benefits Districts in Prince Georges County, MD
Lindsey May's Students	Design Studio as Bridge: Summer Studio 2017: Popups
Peyton Jackson	How Can Pop-Ups Reintroduce a Block's Original Stepped Roofline?
Erik Lima	How Can We Mediate Hieght Differences in D.C.?
Andrew Koenings	How Could Mixed-use Zoning be the Key to Future Pop-Ups in D.C.?
Celena Yancy	Does Gender Influence Design Decisions?
Katie Boyle, Ty Ginter, Emma Schrantz, Jacqueline Drayer	Gaston Office Building Reuse
Sacsheen Scott, Daniel Green, Adan Ramos, Nathan Robbins and Lauren Gilmartin	HUD Affordable Housing Design and Planning Competition
Heidi Bulich	Scholarship in Practice: People, Planet and Profit: Building Sustainable Places 5 Step Process
Marccus Hendrick's Students	The Sustainable City: Exploring Opportunities and Challenges
Victoria Yepez	A Bee in DC: Pollinator Decline in Urban Areas
Made Naje	Disaster Response: Japan
Amory Tetteh	Eliminating Food Deserts in the Nation's Capital Using Urban Agriculture
Madlen Simon and Ming Hu	Value By Design: Systematic Design Decision Making in the Architectural Design Process

Poster Session 2

Presenter	Poster Title
Katie Sipos	Colvin Capstone: Bladensburg Redevelopment Phase I: Feasibility Studies for 6 Sites
Joseph McKenley	Crafting Conversations: Architecture as a Means and a Venue for Exploring Contemporary, Post-Colonial Jamaican Identities
Jiahui Wu, Lingzi Hong and Vanessa Frias-Martinez,	Cycling Safety Maps: a Data-Driven Approach to Cycling Safety
Haley Mullen and Wengiel Gugssa	Development of an Environmental Justice Plan for Prince Georges County, MD
Ming Hu	Energy Retrofit Strategies and Related Impact on Indoor Quality
Ronit Eisenbach, RA	LightScape Garden
Ronit Eisenbach, RA	Making Place
Medessa Burian	Municipal Online Stormwater Training Center (MOST)
Madlen Simon	A New Vision for Midtown
Kevin Garzon, Kelly Marie Haley, Sofie Rhoads, Tim Shook	PointPassage: Fostering Toronto's Future MAPP Submission to the ULI Competition 2018
Jennifer Chorosevic	Public Dyeworks: The Eco-Industry and Hydrology of the Chicago River's South Branch
Kirsten Lee Crase	Shaping the Future of the Past: Cross-Disciplinary Research, Institutional Collaboration, and Integrative Historical Perspectives in the Potomac Gorge Project
Brittany Williams, AIA and Amy Gardner, FAIA	Site and Home: The Landscape of Sustainability
Mike Hunninghake	Sustainable Maryland
Christopher Rice	Sustainable Resiliency: Master Planning for a Coastal Campus
Rosemary Ezeugoh	The Use of Citizen Science to Assess Spatial and Temporal Variation in Air Pollution Near a Concrete Block Plant, Industrial Traffic, and Commuter Traffic in Bladensburg, Maryland
Lucy Kavi	The Use of Photovoice to Assess Environmental Justice Issues in Buzzard Point
Ronit Eisenbach, RA	WaterLines: RiverBank

Abstracts- Sessions

Altruistic Profit: Wardman's Early 20th-Century Working Class Housing in Washington, D.C.
Sally L. Berk, Assoc. AIA

Harry Wardman (1869-1938), the most prolific residential developer in the history of Washington, D.C., was born in the textile town of Bradford, England where his entire family were mill hands. Despite innate ambition, he was unable to rise above the working class in his stratified native city. Seeking better opportunities, he left England for the United States.

Wardman arrived in Washington in 1895 to find a critical lack of adequate housing for lower-income residents. Many lived in boarding houses or in housing that lacked running water. Wardman's early projects brought a significant change to this conundrum. In 1901, he was hired by the Washington Sanitary Improvement Company, a philanthropic organization, to build three dozen row-house flats. A year later, he constructed similar houses on his own account, having realized that there was more profit to be made in acting as both builder and developer.

This project of two dozen houses was his largest to date and inaugurated him as the dominant rowhouse developer in the city. Employing mass production techniques that he had witnessed as a child working in textile mills, he was able to use time and materials more efficiently than had his predecessors. But it's likely that he brought more than production skills with him from England including a probable awareness of housing reform that had begun there a half-century earlier. These two early influences, together with his experience working for the Washington Sanitary Improvement Company, resulted in housing that offered more conveniences than had previously been available to lower-middle income residents.

Architecture and the Forest Aesthetic: A New Look at Design and Resilient Urbanism
Jana VanderGoot

Despite population trends toward urbanization, the forest continues to have a strong appeal to the human imagination, and the human preference for forest over many other types of terrain is well documented. This brief talk will touch on general themes from my book, *Architecture and the Forest Aesthetic: A New Look at Design and Resilient Urbanism*, which calls for an architecture and urbanism that allows the forest to be a prominent consideration in the language of design, thus recognizing the forest is essential rather than just incidental to human well-being.

The body of the talk will be focused on a brief selection of case studies that offer ingenious ways in which the forest aesthetic has already been expressed in design and urbanism. Projects featured will include the Chilotan building craft of Southern Chile, the yaki sugi of Japan, Bosco Verticale in Milan, Italy and the woodlot neighborhoods of Detroit, Michigan, USA. Each case study will be framed by projections about the future and offer specific design tactics to inspire further use of the forest aesthetic in design language and design outcomes.

Biomimicry Structure: Natural Origami and Structural Application
Ming Hu

Origami is the name for the ancient art of paper folding, the original Japanese words: "oru" means fold and "kami" means paper. For centuries origami has been practiced in the Far East as art and crafts, and in the twentieth century it also gained attention in the western world, intially as a teaching tool and later as an inspiration for science and engineering. In Bauhaus, Joseph Albers employed paper folding methods so that students could discover the relationship between materiality, geometry and structure (Buri, Weinand, 2008). Alber believed in the process of making origami form students could use intuitive approaches to discover the universe or folded forms, eventually leaded to scientific discovery. In past couple decades, origami has been used as a promising technique for a variety of fields such as spatial structures and aerospace engineering. In addition, in architecture, the origami pattern - folded plate structure has been applied to many long-span roofs. Origami continues to amaze scientists with its presence in nature. Many beetles have wings that are bigger than their bodies. Their wings unfold in origami patterns. Leaf buds are folded in intricate ways that resemble origami art, too. Origami is all around us and can be a source of inspiration for children and adults alike.

Building Park Resilience: A Case Study of Patapsco Valley State Park
Alison Coffey Reilly and Zeinab Yahyazadeh Jasour

Parks provide recreational and green spaces that contribute to healthy environments. Like other types of critical soft infrastructure (e.g., agro-systems), parks are particularly vulnerable to extreme climatic events (e.g., heavy rainfall events) and to climate change. In this work, we develop a climate resilience assessment framework for regional parks and apply it to the Patapsco Valley State Park. The framework leverages both familiar resilience concepts and Spatial-SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analyses to develop a comprehensive approach to identifying spatial vulnerabilities and next steps for building resilience capacity. The Patapsco Valley State Park, one of the oldest parks in Maryland, is well-known for its walking trail and attractive sceneries. It's proximity to population centers (i.e., Washington, DC and Baltimore, MD) makes it particularly popular and heavily used. It is prone to significant flash rain events; in 2015, 6" of rain resulted in massive flooding. The Glen Artney region of the park is facing infrastructure and resource management challenges that come along with these events. By using observed data, subject matter experts, and Geographic Information Systems (GIS), the current research aims to provide park managers and other stakeholders with practical and scientific approaches to assess the system's resilience and indicate vulnerabilities and corresponding potential mitigation strategies.

Chaos, Architecture, and Creativity
Carl Bovill

Chaos is defined in *Merriam-Webster's Collegiate Dictionary* as "A state of things in which change is supreme: the confused unorganized state of primordial matter before the creation of order: the inherent unpredictability in the behavior of a natural system (as the atmosphere, boiling water or the beating heart): a state of utter confusion." (Mish and Morse 2001, 191)

Chaos happens when a relatively predictable future flow of events is disrupted by unpredictability. This, as the definition suggests, is generally considered problematic. Mathematics over the last 50 years has studied

unpredictability in nonlinear dynamic systems, and how order can spring out of chaos in complex dissipative systems. The mathematics of chaos theory can provide a background understanding for how to think about unpredictability and change. The mathematics of dissipative systems can provide insight into how to organize complex design problems.

Chaos theory demonstrates that much of the natural world is not predictable into the future. This is a good thing. We are not frozen in an unchanging future. An unpredictable future creates a designable future. The Feigenbaum Diagram demonstrates how dynamic systems cascade from order to chaos and it demonstrates that in the chaotic region ordered regions pop out of the chaos. In a similar way architectural styles pop into existence and then dissipate back into explorations of new design approaches. Architects divide their design problems into well-chosen interacting chunks in order to solve complex design problems, reinforcing the validity of Stuart Kaufmann's research that properly chosen interacting patches can create evolutionary design changes by keeping a complex system on the border between chaos and order.

Contextualizing Contextualism
Brian Kelly, AIA

In architecture, the term Contextualism is often associated with the theories of Colin Rowe and his urban design studio at Cornell University. The term was introduced into the studio vocabulary in the 1960's by Stuart Cohen and Steven Hurtt's thesis "Le Corbusier: The Architecture of City Planning" and shared with a broader academic and professional audience by Tom Schumacher in his 1971 *Casabella* article, "Contextualism: Urban Ideals + Deformations." Contextualism necessitated the development of ways to deal with the Utopian overtones of Modern, specifically Corbusian, urbanism. This paper posits that in the 1960's students in the Rowe studio (and Rowe himself) were working through the implications of Corbusian urbanism attempting to find some form of rapprochement with the traditional city. The working process of the early years was one in which the modes of Le Corbusier's Ville Contemporaine or Ville Radieuse were taken as a starting point and efforts were made to tame or domesticate this Utopian model to work in traditional contexts, implicitly valuing the Corbusian model before the traditional city. Schumacher's 1971 article signaled a change in direction for the studio, which over time abandoned Corbusian urbanism as its starting point and concentrated more on the existing character of the traditional city into which interventions could be made to elevate the circumstantial to the ideal. The shift in focus from the city of modern architecture to that of the traditional city required the studio to reassess its own methodologies and tools.

Design Thinking Across the Disciplines
Moderator: Madlen Simon
Panelists: Madlen Simon, AIA - *Design Thinking in an Era of Disruption*
Dean Chang - *Ongoing Experiments in Re-Imagining Higher Ed*
Richard Scerbo - *Using Design Thinking to Reimagine the Orchestral Performance Experience*
Pamela Armstrong and J. Gerald Suarez - *Innovation and Design in a Cross-Cultural Setting*
Katherine Worboys Izsak - *Social Campaign Design*

A group of faculty that meets together at the University of Maryland's Academy for Innovation and Entrepreneurship will present a session on the applications of design thinking in their various disciplines. This session brings together faculty from the R.H. Smith School of Business, College of Agriculture

and Natural Resources, The Clarice, the Academy for Innovation &Entrepreneurship, Terrorism Studies, Gemstone Program, Undergraduate Studies, Department of Microbiology, Department of Anthropology and the School of Architecture, Planning, and Preservation.

The session revolves around the five-step design thinking process that begins with empathy, defines the problem, idaeates, prototypes, and tests, iteratively. In addition to exposing the wide range of possible applications for design thinking, the session will emphasize the broadly applicable power of the design process that Architecture students learn in our School.

Design Studio as a Bridge Between Academia and Real-World Issues: Summer Studio 2017 Case Study
Lindsey May, RA

Using Summer Studio 2017 as a case study, the objective of this individual presentation is to demonstrate the robustness and fecundity of studio topics that engage our core academic disciplines - Architecture, Planning, and Preservation - through sensitive, contemporary issues. Here, residential architecture, RF-4 Zoning, and the debate around vertical additions to rowhouses stand as placeholders for any issue that involves real stakeholders, professionals, and the way cities are shaped.

Summer Studio used the recently amended and controversial DC Zoning changes as the launching point for an investigation through research and design. A crucial facet of the course structure was active engagement in the real people and places at the center of these issues through interviews, site visits, surveys, research pamphlet distribution, public presentation, and exhibition.

While, studying acutely local issues prepares students for conversations with local professionals across disciplines, at the same time, students are plugging into national and global conversations, as many of the issues our region faces are, in fact, global urban phenomena.

This grafting of academia and practice via the examination of interdisciplinary topics in design studio is fertile ground for student learning and the future of creative practice. Moreover, the School of Architecture, Planning, and Preservation is uniquely situated as a multidisciplinary school in a region of active growth and planning to take on this model and act as the conduit for a heightened the level of engagement and conversation between both parties on both sides of the University gate.

Designing for Impact Panel Session
Moderator: Joseph Kunkel
Panelists: Sierra Bainbridge, Sr., Omar Hakeem, Nathaniel Corum

At a time of increasing awareness of the power of design to influence social change the practice of architecture is being challenged by those working in the non-profit sector focused on leveraging design to positively impact our most at risk populations. This session will highlight the work of three different non-profit architecture and planning firms which all are focused on unconventional approaches to practice. The panelists will explore how the work of these firms is shaping the physical and social character within the communities in which they work, while improving economic and social viability. The work presented will highlight how design is leveraged to realize the capacity for building healthy communities that sustain

culture, nature and spirit in a manner which brings good design to all. The conversation will question conventional models of architectural practice and pose new models which respond directly to the needs and well-being of society and the common good.

Engaging the Future at NCSG
Moderator: Fred Ducca
Presenters: Sevgi Erdogan, *PRESTO*; Sheri Parks, *Smart Cities*; Uri Avin, *PALS*

This session presents ongoing work at the National Center for Smart Growth. This includes a future scenario exercise for the Baltimore-Washington region using advanced computer models, public engagement work on smart cities interventions in West Baltimore, and work across the state by the Partnership for Action Learning in Sustainability.

Greenbelt at 80: Preserving Affordability and the Missing Middle
Isabelle Gournay, Mary Corbin Sies

We analyze the de facto preservation of the lesser-known but most affordable housing in Greenbelt, MD: the 306 efficiency and one-bedroom garden apartments (1937) and the 1000 small wood-frame "defense homes" (1941). These units were public housing administered by the Resettlement and Farm Security Administrations. The Federal government sold Greenbelt's housing in 1952: the better-studied brick and block row houses went to a citizens' housing cooperative, Greenbelt Homes Incorporated (GHI), as did the defense houses and two apartment buildings. Several private companies purchased the other apartment buildings. Both defense homes and apartments are relatively intact. After analyzing how this living legacy of public housing has been sustained so far, we discuss the conflicting contemporary demands of these units' preservation: how to 1) maintain affordability, 2) sustain and improve their livability for contemporary households, and 3) preserve their internationally significant historic fabric and unusual ethos in a volatile environment. Both sets of units face the challenges of exiguity and aging, a double hurdle that historically significant social housing faces universally, no matter how resilient its surroundings. Heralding the living legacy of former public housing that continues to serve as "Missing Middle" typologies for lower middle-class residents, we examine these examples (historically significant public housing managed by a citizens' cooperative and by for-profit apartment companies) to assess how managers and residents have contributed. Our presentation relies on archival research, fieldwork analyzing units, historical and real estate research, blogs and interviews with GHI and apartment company managers and long-term and short-term residents.

High-Density Parenting: Urban Design and Raising Children in the Densifying North American City
Louis Thomas

Recent academic and popular writing has declared a North American urban renaissance, with titles such as *Triumph of the City* and the *End of the Suburbs*. Generally new urbanites are presented as the childless educated young or retired empty nesters eager to reap the economic, social, and cultural benefits of city living. On the ground, this has manifested itself in re-densification: urban neighborhoods full of new units in mid-to-high rise mixed-use apartment and condominium buildings; a stark change after a roughly half-century of general urban-core population loss. This has been promoted by policy makers, who adopt placemaking strategies to

further revitalize and incentivize private development in these areas. Largely missing from this discussion are children and, more importantly, the parents from all classes choosing to live in the city.

The research primarily consists of a comparative case study between two mid-sized densifying North American cities: Vancouver, BC and Washington, DC. In 1992 Vancouver adopted the High- Density Housing for Families with Children Guidelines, an explicit policy promoting families in high-density central neighborhoods, whereas DC had comparatively weak policies on the matter. This presentation posits that contrary to the prevailing narrative of the revitalized center city serving the childless, many urban parents view dense close-in neighborhoods as desired places to raise a family. As more North American cities revive and densify, planners will struggle to balance social and economic forces.

Reconceptualizing urban design and policy's role in shaping high-density center cities as ideal family neighborhoods can play an increasing role in this urban age.

Innovative Campus of the Future
Moderator: Neil Murray, AIA LEED AP
Presenters: Christopher Rice, AIA; Casey Smith, AIA LEED AP
Lisa M. Ferreto, AIA LEED AP BD+C, WELL AP, GGP

Emerging social, economic, environmental, and technological trends require educational campuses to continue to adapt and enhance experiences for the campus community. A strategic planning process addresses pressures and market conditions and helps create vibrant, sustainable, and inclusive communities. Recognition of students' demands for increased amenities and non-traditional learning environments require colleges and universities to identify underperforming spaces on their campuses and plan for transformation into hubs of student activity. Today's college students are also more focused on sustainable issues surrounding our communities and climates than ever before, requiring campuses to address their level of commitment with long-term goals.

The development of a Strategic Plan sets the tone for future growth as well as academic and student programs, while the Campus Master Plan, a physical manifestation of the Strategic Plan, establishes the long-range vision for campus development. The Plan creates a flexible framework establishing future building sites, outdoor spaces, organizes circulation and infrastructure corridors, while supporting the increased demands of campus sustainability, resiliency, and well-being.

Extending from the Strategic and Campus Master Plans, institutions are finding they must adapt both indoor and outdoor spaces to meet economic and environmental demands, emerging technologies and demographics. By repurposing facilities to be more sustainable and agile, new spaces are flexible and multi-functional in design and operation, with the ability to be physically reconfigured as needed to meet institutional requirements. This micro level of implementation provides education opportunities, engages the campus community, and connects them to the strategies and tactics shaping the campus' growth.

The International Solar Decathlon: The Future of MAPP's Compelling Legacy
Garth Rockcastle, FAIA

We (UMD) have enjoyed the almost 20-year international history of DOE's Solar Decathlon Competition, placing either first or second, in our past three efforts. Yet, these successes have yet to influence in any effective way, how the curricular, financial and interdisciplinary challenges can be met without: a) "jerry rigging" our curricular offerings, b) incurring significant financial deficits, and c) support any of these critical interdisciplinary opportunities with university vision and support (despite such aspirations being central in the University's Strategic Vision of its future). I would like to advance on our shared table, a vision of how all three of these might be a more central part of our promising future for Solar Decathlon participation and other similar design/build/verify initiatives.

Public Accountability and Modes of Resistance to Public School Sales and Reuse in Philadelphia
Ariel Birnbaum, MCP, PhD

In 2013, the School District of Philadelphia (SDP) closed 24 of its 242 traditional public schools. This decision displaced thousands of students, changed the physical and social fabric of neighborhoods, and transformed access to opportunity for families across the city. Parents, students, and neighbors came out in fierce opposition to SDP's closure process. Although many expressed concerns about the impact on neighborhoods, after the initial hearings and closures, news media quieted, and the path to public input on sales and reuse remained elusive. This paper seeks to untangle the complicated web of public, quasi-public, non-profit, and private actors responsible for selling and repurposing schools. It highlights the ways that this web serves to obfuscate points of intervention and protest for parents, students, and others. Specifically, the paper addresses three questions: What are the implicit and explicit lines of accountability in school sales and reuse processes? How do perceived lines of accountability influence modes of resistance? What do these modes of resistance reveal about urban and educational politics and power? The findings are based on a study of Philadelphia's public school closures, sales, and reuse conducted between March 2014 and August 2015, including seven months of on-site ethnographic fieldwork. I analyzed school and city documents; conducted participant observation at public meetings; and interviewed over 100 Philadelphia residents, city and school district staff, private developers, and non-profit professionals. Drawing on theories of power and justice in the context of participatory place-based planning (Fainstein, 2010; Sandercock, 1998; Young, 1990), it highlights the challenges of achieving emancipatory public engagement (Healey, 2003; Miraftab, 2009), particularly within the context of cross-sector processes.

Rendering Reality
Justin Obringer, AIA and Nicholas Tomaszewski, AIA

Rendering Reality eliminates the line between designer and technical staff in exchange for a holistic approach that prioritizes the detail as the driver of aesthetic quality, technical performance, client satisfaction, and user engagement. Although emphasis is often placed on conceptual thinking and spatial manipulation, 90% of architecture is the development, coordination, and refinement of building documents to usher a greater vision. Design excellence is not achievable solely through broad strokes, but is the result of deliberate execution of the diagram to the finest scale. This co-lead presentation documents and explores the integral process of designing-to-the-detail in both professional practice and the classroom. Obringer and

Tomaszewski rely on their experiences as Design Collective architects and Morgan State adjunct professors as the basis for their analysis, pedagogy, and design process. Charging architects as both designers and master-builders, detail-infused design leads to high-performance buildings, fewer issues during construction, repeat clients, and refined architecture. In a service-oriented profession and a product-driven world, it is more critical than ever that architects leverage their expertise and creativity, to produce robust documents for their clients and captivating experiences for end-users. Comprehensive design and an integral process assure concepts become reality; and inspirational ideas become magical experiences.

Revitalization of Communities in Historic Cairo
Rei Harada

How to live with heritage is a very challenging issue in a country like Egypt which, while often represented by the Pyramids, has a rich and diverse history. This presentation examines a project in the old city of Cairo (Historic Cairo) in Egypt to revitalize the community and promote community awareness towards historical resources. Historic Cairo has been a capital and incubated culture and urban life styles surrounded by monuments constructed since the 10th century. Historic Cairo has been a World Heritage site since 1979, and has received conservation work by the Egyptian government and other countries. However, there are ongoing issues such as tourism without connection with the local daily lives of the inhabitants, and an increasing urban population while the wealthy classes have left from Historic Cairo to newly planned suburban areas.
Furthermore, since the Egyptian Revolution in 2011, illegal tall buildings were constructed or historical houses were demolished. In this project, our ambition is that historical monuments and traditional habitats should become the identity of the inhabitants and communities. At the same time, heritage should be used and have functions in keeping with modern developments, and inherited by the next generation. For this purpose, although we have not preserved physical objects, we have worked with locals, and organized more than 20 workshops in the last two years to reach to communities and multiple stakeholders. Through those workshops, we collect their voices and give them opportunities to express their opinions to Egyptian policy makers.

Rhetra Design for Kakenya Center for Excellence, Kenya
Tonya Ohnstad, Rachel Dewane, David Dewane

Rhetra has completed the masterplan and design for Kakenya's Center for Excellence, a campus of 500 Maasai girls, teachers and staff grades pre-K through 12. Sited outside the village of Enoosean, a rural site on a beautiful hill overlooking a valley with a two-acre farm along the southern perimeter. The plan comprises approximately 30 two-story, modular buildings for living, learning, and gathering.
Rhetra completed visionary documents used to facilitate a 5-million-dollar capital campaign, completed a CSEB training on site, and is currently working on the foundation for the first six classroom and dormitory buildings. The goal of the project is a completely self-sustaining campus with solar, rainwater collection, sustainable sanitation, construction materials and agriculture.

Rhetra aims to effect sustainable and cultural change in the building process and perception thereof in the Maasai region in Kenya. We believe the girls and women of the area are central to this process, not only as occupants, teachers and students of the school but eventually as professional builders, architects, teachers, doctors and community participants. We are starting with one campus, making efficient, long lasting,

sustainable and beautiful spaces for these girls to live and learn. We have established partnerships that enable a self-sustained construction and infrastructure as well as responding to traditional community structure with a forward view.

We hope that by demonstrating careful production and clean assembly of CSEB we can make an improved building product following high standards of safety, that will, in turn, give the region the expertise to build better quality and longer lasting buildings.

The Right Tool for the Job: On the Necessity for Drawing
Julie Gabrielli

As studio professors, we can help our students choose drawing methods with sensitivity to the experience of working with them, as well as to the effect they have on the end result. Drawing by hand connects and synthesizes as it facilitates a sensual relationship between the idea, the form, and the techniques of building. Designing with hand drawings has an organic quality similar to that of a seed sprouting or a flower's bud blooming. It opens up from a kernel of an idea, gathering vitality and possibility. Moving a pencil around on paper is a humbling, questioning stance, full of wonder and curiosity. Anything can happen. The pencil in hand is a kind of antenna; the architect is a receiver. Computer drawings dazzle with their magical ability to generate and animate 3-D models. But they can have a distancing effect not only on the experience of designing, but on the buildings and the places we build and inhabit. Rudolf Steiner noted that challenging the hyper-materialism of technology helps the developing soul become strong enough to navigate the demands of modern life. He advocated for a dynamic balance of the material and the spiritual, of technology and craft, science and art. It is not a question of one or the other; our task as humans is to live in the in-between world of both/and. Where better but the architecture design studio to put this theory to the test?

Ruins and Wrinkles: Revaluing Age through Architecture in Winston-Salem's Former R.J. Reynolds Tobacco District
Lucy Moore, AIA

With this project, I argue that architecture which selectively intervenes in the aging landscape and provides opportunities for regeneration and mentorship can challenge our societal divisions. I test this hypothesis in the context of an adaptive reuse, multi-generational, urban landscape in the former R.J. Reynolds Tobacco District in Winston-Salem, North Carolina.

My investigations began with extensive historical research. Through census records, archival maps, photographs, newspapers, and county documents I mapped the evolution of the city spatially and chronologically. I then drew on architecture, landscape, and historic preservation theory and practice to develop a regenerative urban plan that would look both within and beyond the district to create opportunities for reconnection.

R.J. Reynolds transformed a small factory into the largest tobacco company in the world. In doing so, it turned a sleepy North Carolina crossroads into a thriving industrial hub. But as Reynolds grew, the factory district became the physical fault line that divided the city. Racially segregated housing policy and practices forced African American residents east of the tobacco district while affluent white neighborhoods spread

to the west. Local, state, and federal governments amplified this physical separation when they constructed highways through African American communities bordering the district to the south and east.
When Reynolds moved its factories out of the city, they left in their wake a vacant industrial gash. However, that gash could be the site of reconnection and regeneration. In its place, I propose a multi-generational, mixed-use neighborhood; a model for holistic design that builds on the history of the site to create a thoughtful, community oriented landscape.

The Slat Style and the Balcony Style
Andrew Linn

Presenting work by bld Architecture, Arquitectonica, and other contemporary architects, an argument is made for the existence of two coherent contemporary styles, the Slat Style and the Balcony Style.

The Slat Style will be described using AIA Award-winning residential projects, contemporary international projects, and examples of built work by the bld. Characterized by vertical and horizontal rainscreens with an emphasis on horizontal masses and natural materials, the Slat Style has been adapted by cultures around the world. Contextualized within the histories of the Stick Style, the Shingle Style, Modernism and Postmodernism, the Slat Style is a framework that recognizes coherence in residential architecture today.

The Balcony Style will be described using tower projects designed and built in Miami, including work from the catalog of Miami-based Arquitectonica, as well as other contemporary buildings in Chicago and New York City. Similar to but distinct from the popular Pixel Style, the Balcony Style is characterized by environmentally-responsive stacked horizontal slabs that emphasize verticality and create the illusion of motion. Contextualized within the history of Miami's built environment, the Balcony Style is a powerful movement in tower design that is defining the skyline of America's urban playground.

Temporary, Public, Planful: Art, Design, and Community Change
Ronit Eisenbach, RA

Site-specific, ephemeral public art and design, created with a range of stakeholders, can spark imagination and stimulate public discourse in communities facing change. In this context, temporary works share the condition of change. Their "in-between-ness" allows a simultaneous experience of pasts, presents, and potential futures. These works can peel away illusions of permanence to reveal points of friction and possibility in which the built environment, and the nature of the community that inhabits it, can be reimagined. Undertaking a creative process that engages a diverse range of individuals can forge relationships and empower people. This is especially critical with in-flux sites, when communities face significant challenges associated with the transformation of place.

Using examples from my practice, StudioRED, I will illustrate how ephemeral, participatory, and community-engaged art and design can build bridges across difference. It will explore strategies for creating situations that produce potent moments of shared experience and increase inclusivity through making. Examples include storytelling and site-based performances that capture local voices; pop-up public spaces that foster community while testing ideas for permanent public space; and installations in underused spaces that generate buzz and transform the community's image and narrative.

Community-engaged art and design help people affirm what is essential to one's sense of place and collectively reflect upon what it means to "hold one's place" in anticipation of a changing future. These issues and design strategies were tested in Montgomery County as the Purple Line construction and redevelopment advances, but they can also assist and engage other communities facing change.

Tradition, Community, and Grungy Secret-ness: The Story of Phase One (as told by the people who were there)
Ty Ginter

This presentation tells the story of Phase One, the longest continually operating lesbian bar in the United States (until its closure in February 2016). The work highlights key points from a larger D.C.-based project on lesbian spaces/places, including how issues of generational divides, perceived societal acceptance, and the adverse effects of gentrification affect LGBTQ spaces like Phase One. Through interviews and guided spatial analysis diagramming, this project aims to understand Phase One's history, identifies its position in the Washington D.C. LGBTQ community, and discovers how the layout/use of the bar changed over time. This presentation also lays to rest how and why the bar ultimately closed.

Despite a growing archive of gay male history, very little is recorded on lesbian spaces. Even less information is available that allows hxstorians to understand the layout, materiality, and staff/patron utilization of LGBTQ locations. Without this material, LGBTQ spaces, and indeed lesbian spaces, can disappear without a trace into hxstory. This research works to change that, and aims to make LGBTQ hxstory less of an exercise in imaginative storytelling and more of an experience in graphic interpretation.

Toward Common Ground in the U.S. Fair Housing Debate
Casey J. Dawkins

Urban scholars and policy advocates are engaged in a lively and often contentious debate over the appropriate interpretation of the U.S. Fair Housing Act (FHA) and its relationship to broader housing policy objectives. Pro-integration fair housing advocates argue that legislators and administrators have failed to act more aggressively to implement the integration goals implied by the FHA, whereas place-based community development advocates argue that the emphasis on integration detracts from the more important goals of reinvesting in low-income communities and promoting housing stability. Although many call for a middle-ground housing policy approach that combines elements of both the integrationist view and the community development view, it is not clear what such a view entails or how to reconcile conflicting normative principles.

This paper examines the philosophical underpinnings of each side of the fair housing debate. I argue that different positions in the debate reflect different conceptions of the social meaning of housing, and these differences give rise to disparate views of how housing should be distributed. I examine several different conceptions of housing's social meaning and argue that the community development–integrationist divide is best understood not as a duality but as reflecting four distinct normative perspectives. Despite the differences among positions, there is room for a middle-ground view of fair and affordable housing policy that acknowledges the socially constituted nature of the self and the importance of individual autonomy and choice.

Urban Design Panel Session
Moderator: Jana VanderGoot
Panelists: Matthew Bell FAIA, Steven Hurt, Margaret McFarland, Ariel Bierbaum, Jeremy Wells, Matthew Miller

MAPP has a rich history of expertise in the area of urban design. Over the years, the curriculum has benefited from a cadre of individuals with extensive professional practice experience. More recently, MAPP has had discussions of bringing different disciplines of the school together through a Master of Urban Design degree program. This panel discussion asks people who have been involved in some of the most celebrated urban design accomplishments to make projections about the type of research, creative work, and impact that MAPP might have in the area of urban design in the future.

Waterfront Regeneration: Mediating Boundaries of Abandonment Along the Hudson River
Allison Palmadesso, Assoc. AIA, LEED GA

The edge between city and water has become a divide. In many instances, this divide has been thickened by abandoned industry, and waterfront regeneration has become formulaic. This proposal calls for waterfront design that relies on specificity of place, reclaims industrial landscapes, and transforms the water/city divide into a connective threshold.

The place is the abandoned Glenwood Power Plant, the City of Yonkers, and the Hudson River Waterfront. This project aims to integrate building with landscape – providing new infrastructure that cleans the Hudson River water and supports urban agriculture. The re-purposed power plant provides recreational and training opportunities for the surrounding community, as well as retail and commercial components to attract the region at large. Industrial flows that occurred throughout the original building, site, and city are reinterpreted into new "flows" for people, water, and place.

This presentation will include an overview of my historical analysis, ethnographic research, and design proposal from my Master of Architecture Thesis. It will also provide an update of the Yonkers waterfront as it stands today (3 years later), and how lessons learned from this undertaking apply in my professional practice today.

What Do Historic Preservation Employers Want?
Jeremy Wells

This paper explores the specific skills and abilities employers in the historic preservation field require of job applicants and ascertains the degree to which curricula in historic preservation degree programs support these requirements. Historic preservation practice can be broadly grouped into four areas: 1) work dictated by compliance requirements (i.e., what is required by law); 2) work in construction management, architectural design, and materials conservation; 3) work that focuses on the objective interpretation of the history of places; and 4) work that advocates for saving/protecting historic buildings and places.

To address the questions posed in this study, the author conducted a content analysis based on a census of one year of historic preservation job announcements, grouped into these four areas of practice. The results indicate that about 75% of job postings were in the area of regulatory compliance with work in the architectural design and materials conservation area representing less than 6% of the job postings. In terms of specific skills and abilities, employers want applicants to have skills in project management, the ability to work with diverse peoples, conflict resolution, fundraising, and volunteer management; nearly one-quarter of the job postings wanted applicants to be able to understand and apply the Endangered Species Act and Clean Water Act. These skills and abilities are not typically part of preservation curricula.

Lastly, skills and abilities normally associated with historic preservation and often taught in degree programs, such as familiarity with traditional trades/crafts, condition assessments, ability to create architectural sketches and measured drawings, and materials conservation, were represented in less than 3% of the job postings.

Why are Professionals Second Class Citizens in Universities?
Ralph Bennett, Professor Emeritus, FAIA, LEED AP (BD&C)

Universities generally, Maryland specifically, demonstrate in many ways the qualified membership granted faculty in 'professional' programs. For architects, this is an issue because 1) scholarship and research, while important, are not central to the qualifications sought in architecture faculty, especially in design, 2) this makes an uneven playing field for funding as the history of the Architecture program shows, 3) restrictions and lack of value for professional activity restrict the activities of junior faculty at risk of tenure denial, 4) tenure is, for practice active faculty, demonstrably more difficult to achieve in some professional programs including engineering, music performance and architecture, 5) special status is designated in ways that differentiate professionals from academics - 'Professor of the Practice' (no Professors of Research or Scholarship?), 6) the majority presence of practicing professionals as adjunct faculty in professional programs, and 7) the recent re-definition of non-tenure track faculty as 'Professional' at College Park. This paper will attempt to illustrate the qualified condition of faculty in professional programs, especially architecture, and propose remediation.

Abstracts- Posters

Adaptive Reuse: Curricular Implications
Garth Rockcastle

Over the past 15 years, I have enjoyed a dynamic relationship to UMD and the regional professional community, much of which has been focused (teaching, exhibition, lecturing, tangible agency, and professional practice) on the many aspects and implications surrounding the important emergence of the adaptive reuse of neglected or deteriorating environments. At the same time, according to several national and international assessments some form of adaptive reuse is an integral part of MOST commissioned work (reflected in all MAPP disciplines). Yet, with the exception of occasional coursework, little has changed in our curricular and interdisciplinary structures to support, promote or lead the profound implications of this glacial shift in the way we approach the teaching of our disciplines: design, planning, preservation or real estate development. I would like to put on our shared table, a challenge and an outline of how we might approach achieving this.

Applause Café
Madlen Simon

An architectural design studio investigated space and place-making strategies in a project for The Clarice. In dialogue with administrative staff, we recognized the opportunity to go beyond a refresh of the existing café to a complete redesign to acknowledge the changing role of the restaurant in a performing arts center, from support function to performance of food and drink. Located at the hub of the building, Applause Café had the potential to play a key role in the building's drama. The underlying architectural problem was a seating area cut off from food service area by a stair. Our large-scale challenge was to unify Applause Café with a prominent new role in the performance venue.

Our team design thinking process began with empathy exercises interacting with users and immersing ourselves in the design space. Enlightened with insights about user experience, students proposed a schematic design for the café, prototyping at model scale, mixing hand and digital processes. Once initial decisions had been made, the team explored the environment at the scale of furnishings. Studio moved to the Prop Shop in The Clarice, prototyping at full scale using the CNC router for quick, multiple, low-cost iterations that we tested on ourselves, the clients, and eventually users in an onsite mockup.

Currently under construction, the Applause Café project provides an ongoing opportunity for a team of Architecture students to understand how their expertise can engage them in building at human scale while thinking about landscape scale to create interior spaces that transform existing buildings to reveal new uses.

Assessment of the Food Environment: Are There Disparities in Access to Healthy Food Infrastructure in Prince Georges County, MD
Omid Barr

The purpose of this project is to assess and compare the available food resources within Bladensburg, Greenbelt, and Hyattsville. We examined the quality of the food, the availability of healthy food, and how accessible these food sources were for community members- especially the quality and availability of supermarkets. We also examined the demographics of each neighborhood to assess disparities in assess to food infrastructure including high quality foods across race/ethnicity, and socioeconomic status. Previous research has shown that many populations of color and low-income groups have differential access to healthy food infrastructure compared to their more affluent, White populations. Additionally, gas stations, fast food restaurants, and carry-out stores comprise a large portion of food retail stores in low-income neighborhoods. These establishments serve food high in fat, salt, and sugar which may influence the higher than average rates of diet-related chronic disease in Prince George's County. After completing the food scoring process and analyzing the results of 10 stores from each city, we found that the average scores for each community were 13.9, 14.3, and 16.94 for Bladensburg, Greenbelt, and Hyattsville, respectively. The overall average scores for convenience stores, small groceries, and supermarkets were 6.34, 16.97, and 23.65, respectively. The results indicate there is a clear need for healthier food options in Bladensburg, Greenbelt, and Hyattsville as the physical health of the residents may be negatively impacted by limited access to healthy food resources.

Biomimicry Structure Student Posters
Ming Hu's Students

These posters originated from sutdent investigations of Biomimicry Structures in Assistant Professor Ming Hu's Biomimcry Structures course Spring 2018. A student judged in class competition determined participants in the poster exhibtiion. More information on the course is provided in the Session Abstracts Section of this program under "Biomimicry Structures: Natural Origami and Structural Applications."

Colvin Capstone: Bladensburg Redevelopment
Katie Sipos

For the Fall 2017 Master of Real Estate Development Capstone course, six students collaborated on a master planned redevelopment for the town of Bladensburg, Maryland. The area of study was the commercial core of Bladensburg along Annapolis Road. The first several weeks of the project were dedicated to analyzing the needs of the local community through site visits and meetings with citizens and the Mayor of Bladensburg. Students then selected an individual site within the master planned area for an in depth study.

Each student performed a feasibility analysis, which included a detailed market study and financial analysis, to propose a new development for his or her site. The students continually worked together to ensure that their proposed uses were compatible with one another and mutually beneficial for the community. Students also had the opportunity to work with local architects to create a design for their site to support their final presentation.

Crafting Conversations: Architecture as a Means and a Venue for Exploring Contemporary, Postcolonial Jamaican Identities
Joseph McKenley

This poster explores the relationships between postcolonialism, the formulation of identities, architecture, fine art and folk art, making and craft-making. It delves into postcolonial discourse to understand what post colonialism is, how it is defined, and what it means in the Jamaican context. It explores how identities are defined and what factors are considered in the creation or unearthing of identities. It explores what role making and craft-making have in creating and/or expositing identities as well as the relation between making and craft-making with architecture. Ultimately, the research leads to the question: in what ways can architecture manifest cultural identity and how can architecture illustrate a Jamaican, contemporary, postcolonial identity?

Cycling Safety Maps: A Data-Driven Approach to Cycling Safety
Vanessa Frias-Martinez, Jiahul Wu, Lingzi Hong

Cycling communities have been related to lower obesity rates and lower stress levels. Nevertheless, one of the main obstacles to increase ridership in cities is the lack of information regarding perceived cycling safety at the street level. City planners have typically used extensive road network and traffic information to approximate cycling safety levels. However, this approach requires the deployment of expensive sensors thus making it hard for many cities to get access to accurate cycling safety maps. In this poster, we present an evaluation of several methods to predict urban cycling safety at the street level, exclusively using public information from open and crowdsourced datasets. We also present an open-source, crowdsourced platform developed to help cities gather ground truth cycling safety labels so as to train their own local models to achieve the highest safety prediction accuracies. We evaluate the proposed approach in the city of Washington D.C. and achieve F1 scores of 66%, 69% and 85% when five, four or three different cycling safety levels are considered. Overall, our project demonstrates a novel way to answer cycling safety questions using a combination of large-scale, open and crowdsourced data together with the power of machine learning techniques.

Design Studio as A Bridge Between Academia and Real-World Issues: Summer Studio 2017 Case Study
Andrew Koenings (Undergraduate Architecture), Eric Lima (Undergraduate Architecture), Brian Houstle (Undergraduate Architecture), Peyton Jackson (Graduate Architecture Student), Chan Park, School of Architecture and the Colvin Institute of Real Estate Development

Using Summer Studio 2017 as a case study, the objective of these posters will demonstrate the robustness and fecundity of studio topics that engage our core academic disciplines - Architecture, Planning, and Preservation - through sensitive, contemporary issues. Here, residential architecture, RF-4 Zoning, and the debate around vertical additions to rowhouses stand as placeholders for any issue that involves real stakeholders, professionals, and the way cities are shaped. Summer Studio used the recently amended and controversial DC Zoning changes as the launching point for an investigation through research and design. A crucial facet of the course structure was active engagement in the real people and places at the center of these issues through interviews, site visits, surveys, research pamphlet distribution, public presentation, and exhibition.

Studying acutely local issues prepares students for conversations with local professionals across disciplines; at the same time, students are plugging into national and global conversations, as many of the issues our region faces are, in fact, global urban phenomena. This grafting of academia and practice via the examination of interdisciplinary topics in design studio is fertile ground for student learning and the future of creative practice. Moreover, the School of Architecture, Planning, and Preservation is uniquely situated as a multidisciplinary school in a region of active growth and planning to take on this model and act as the conduit for a heightened the level of engagement and conversation between both parties on both sides of the University gate.

Development of an Environmental Benefits Districts in Prince Georges County, MD: An Approach to Address Environmental Injustice and Revitalize Underserved Urban Neighborhoods
Lucy Kavi

Many disenfranchised communities have a disproportionate burden of environmental hazards, a high concentration of psychosocial stressors, and inequities in planning, zoning, and development. Environmental Benefits Districts (EBDs) may be a solution to the problem of environmental injustice because of the focus on equitable, positive development. Although the EBD construct is relatively new, this project developed metrics in order to guide placement of EBDs and estimate the social, health, economic and environmental impacts of EBD implementation. Case studies of zoning and planning inequities in the county, accounting of health disparities using the MD Environmental Public Health Tracking Program, and case studies of Sheriff Road and Brandywine, MD were also used as resources. Additionally, gaps in existing programs including brownfield redevelopment efforts, economic and health Enterprise Zones, and the Transforming Neighborhoods Initiative were also reviewed. This framework defines an EBD construct for Prince George's County, MD that leverages environmental justice research and the equitable development framework. This framework was shared with municipal and community-based organizations throughout the county with the objective of empowering local residents to be more engaged in decision making around zoning, planning, and implementing a vision for making their communities greener, healthier, and more equitable.

Development of an Environmental Justice Plan for Prince Georges County, MD
Haley Mullen and Wengiel Gugssa

Environmental justice issues have been overlooked in the Prince Georges County. We have developed a plan to help address this gap. The Prince George's County Environmental Justice Plan 2025 (EJ Plan 2025), supports implementation of Prince George's County Plan 2035. This plan is focused on making Prince George's County, "a competitive force in the regional economy, a leader in sustainable growth, a community of strong neighborhoods and municipalities, and a place where residents are healthy and engaged." However, the Prince George's County Plan 2035 does not include policies related to local environmental justice issues. The EPA says environmental justice is achieved "when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work." However, this is not happening in the County. EJ Plan 2025 raises awareness about environmental justice issues in the county, and fosters enhanced coordination across county agencies to address environmental hazards in the social and physical environment. EJ Plan 2025 offers strategies and recommendations on the integration of environmental

justice principles into all practices and policies. This plan describes five environmental justice priorities for Prince George's County: lead, water quality, air quality, food security, and equitable development/ zoning. Furthermore, the plan outlines strategies to engage the community and other stakeholders while identifying overarching themes that would undergird actions that should be taken to address each of the five environmental justice priorities.

Does Gender Influence Design Decisions?
Celena Yancy, Undergraduate Architecture Student

The aim of this project was to determine if gender plays a role in how people perceive design. A survey was produced in order to determine if gender plays a role in design decision making. People were asked to provide information about themselves, including: age, gender, race, where they live (rural, suburban, or urban), and where they would prefer to live (rural, suburban, or urban).

People were also asked how important five different factors were when looking for a home, which included size, natural lighting, proximity to public spaces, open floor plan, and safety. These five factors are broad but often discussed in designing spaces for people to live in.

People rated the importance of each factor based on whether they 'strongly agree', 'agree', 'neutral', 'disagree', or 'strongly disagree'. Thirty-eight people completed the survey of which twenty-four were women and fourteen were men. For overall rating of the five factors 49% of women and 30% of men answered strongly agreed throughout the survey, 39% of women and 40% of men agreed, 10% of women and 26% of men were neutral, 2% of women and 4% of men disagreed, and 0% of women and men strongly agreed.

Based on the data collected, women have a stronger opinion on open floor plan, safe neighborhoods, and natural light. Overall trends show that men have a greater tendency to be neutral mainly for open floor plans, proximity to public spaces, and size of home.

Energy Retrofit Strategies
Ming Hu

The average age of a school building in the U. S. is 42 years, which is the expected serviceable lifespan of the building. K-12 schools in the United States represent approximately 8% of the energy use and 10% of the floor area in service buildings nationwide. The aim of this research project is to make a set of recommendations for future renovations and provide information to help public school boards make long-term, environmentally friendly and energy-conscious facility management plans. A case study was undertaken to demonstrate the new framework. Through site measurement, survey, indoor environment comfort analysis, and energy retrofit simulation, this case study helps provide insights into practical building retrofit strategies for K–12 buildings in the State of Maryland. Another important goal of this case study is to identify the major indoor environment quality issues based on a variety of environmental indicators, and the improvement strategies are proposed.

Gaston Office Building Reuse
Katie Boyle, Ty Ginter, Emma Schrantz, Jacqueline Drayer

In the next five years, millions of tourists are expected to visit the newly created Birmingham Civil Rights National Monument. Within this Monument, the Gaston Office Building acts as a cultural and aesthetic anchor. This iconic, yet vacant, mid-century modern building has the potential to become a cornerstone of this area's revitalization. In alignment with the site's historical and architectural significance, three reuse strategies and operating structures are proposed based on different operating, legal, and financing structures. This project represents the intersection of research efforts in Historic Building Information Modeling, sustainable preservation and African-American representation in Birmingham's architectural and civil history. The purpose of this proposal is to encourage the continuation of A. G. and Minnie Gaston's legacies of entrepreneurship, education, community development, and achievement. Our team explores the transition of the field of preservation into one which reflects the inclusive, diverse identity of America, by celebrating the life of an African-American couple who built a legacy of entrepreneurial success in the era of Jim Crow oppression.

LightScape Garden
Ronit Eisenbach, RA

The *LightScape Garden* is an outdoor educational and community space for the 1,500-resident Carroll Avenue Quebec Terrace apartment community in Long Branch, Maryland. The project grew from a 2010 master plan developed by Arts on the Block. The plan goals were to improve neighborhood vibrancy, safety, and quality-of-life. A lack of adequate lighting and gathering spaces were among residents' top concerns. The plan proposed a multi-pronged effort to address these issues, first through temporary and then permanent art and design projects. The final design of a gathering space outside the YMCA community center features sculptural seating that defines a daytime passive play area and illuminates the gathering space at night. Benches surrounding the garden encourage relaxation, reflection, and conversation. A rain garden and conservation plantings will mitigate storm water runoff. Innovative Library Lanterns "planted" in the garden will encourage literacy, provide reading material, and offer pockets of light during the evening. Commissioned by Arts on the Block and undertaken with grants from Montgomery County, the State of Maryland, the Trawick Foundation, a University of Maryland Tier 1 Research Grant, and with contributions from property owners, the project will become a local landmark and a catalyst for ongoing community investment, education about the natural environment, and watershed restoration. It is already a model for how art, design, and placemaking can build community, sparking the engagement critical to local empowerment. *LightScape Garden* will dramatically transform the space in front of the YMCA center, prototype a strategy for affirming community identity, and improve safety, while solidifying relationships developed in the process.

Making Place
Ronit Eisenbach, RA

In Long Branch, the new light-rail line is creating tensions. Although new investment is desirable, residents and businesses fear that new development will displace them.

Making Place is an on-going multi-year, multi-disciplinary Creative Placemaking effort of community partners, university colleagues, and students that demonstrates how ephemeral art and design can transform and activate place, by creating shared experiences and stimulating public dialogue. Making Place contributed three events—*Out of Site, Body/Space/Place,* and *Placeholders*.

Out of Site guided art and architecture students in using public art and design to engage the community in imagining interconnected delightful public spaces. After analyzing the physical and cultural environment and talking with community members, students designed and installed ten temporary, site-specific sculptures at the Long Branch Library and along Flower Avenue. The work was celebrated at the first "Long Branch SuperBlock Party."

Body/Space/Place was a site-based dance studio in which students explored the intersection of movement and environment, and the ever-changing nature of place, derived from their physical and cultural observations in Long Branch.

Placeholders, a site-specific installation by Architect Ronit Eisenbach & Dance Artist Sharon Mansur, explored what it means to seek, shape, and preserve "place" in the face of transition. The work embraced a spirit of flux through its movement, sound, and architectural layers transforming experience along Flower Avenue. Strategically located and timed, these works offered opportunities for "play" and created "spaces of rehearsal" to explore new ways of being in and making the public realm. They contributed to the conversation about the present and future of this community.

A New Vision for Midtown
Madlen Simon, Margaret McFarland, Tim Pula, Lili Mundroff,
Ed Cahan, Laura Burns, Jingjing Liu, Oluwatomi Thomas

The City of College Park and the University of Maryland have entered into a partnership to engage synergies between campus and community to create a vibrant urban environment based upon principles of smart growth. The current focus is College Park's Midtown District, encompassing Baltimore Avenue from the intersection of University Boulevard to the main campus gate. Formerly known as Route 1, Baltimore Avenue is shedding its image as a placeless automotive corridor lined with fast food, service stations, and auto dealerships and becoming an attractive location for higher density development as the University's zone of influence expands. The College Park City-University Partnership commissioned this master planning study as a guide for developers interested in initiating new projects within the Midtown District. The multi- disciplinary design team was asked to envision a healthy, walkable district fulfilling the partnership's mandate to tie together University and surrounding communities with sustainable mixed development. We developed a program through community and stakeholder engagement and market research. Key concepts that emerged from the team's dialogues with stakeholders and community members were: an authentic sense place, connectivity, and healthy community.

The design team discovered an authentic sense of place in the history of the Lakeland community and the ecology of the Paint Branch, with the natural beauty of its native plants and animals. The proposed Paint Branch Promenade transforms the river from barrier to social connector, linking residential neighborhoods and providing access to nature and healthy outdoor recreation linked to a regional trail network. The pattern of development along Baltimore Boulevard rotates 90 degrees, with pedestrian mews and plazas connecting neighborhood streets to the river. Innovation Drive crosses the river, connecting northern campus to Midtown District. An existing diagonal path from Campus Drive leads pedestrians to a new market square at Lakeland Hub. With retail opening onto pedestrian realm, residential and office uses above, and garage below, compact mixed-use buildings connect University and surrounding communities, providing "third places" for convivial social interactions.

Municipal Online Stormwater Training Center (MOST)
Medessa Burian

The Municipal Online Stormwater Training (MOST) Center is a partnership between the Environmental Finance Center at the University of Maryland (EFC) and the Low Impact Development Center. MOST offers a comprehensive training program to help municipalities within the Chesapeake Bay Watershed access and implement innovative stormwater management techniques to improve water quality in the Bay.

"Point Passage" ULI Competition 2018 Student Posters
Kelly Marie Haley, Sofie Rhoads, Kevin Garzon, Tim Shook

Point Passage is a dynamic mixed-use community at the doorstep of the largest planned real estate development in Canada. Situated on the eastern bank of the Don River, it links Toronto's traditional downtown to a powerful new economic, cultural and transportation hub. Thoughtful planning that unlocks the site's natural beauty and harnesses its strategic location will help create Toronto's next great neighborhood. Just steps from the next major North American commercial corridor in one of the world's great financial cities, Point Passage will be a place to call home.

Public Dyeworks: The Eco-Industry and Hydrology of the Chicago River's South Branch
Jennifer Chorosevic

This project seeks to redefine our relationship to the natural landscape by challenging our perceptions of what industry is. There is a lack of connection between people and nature, so much so that English dictionaries define nature in contrast to humans. Industry and the hidden nature of mass production have alienated people from the natural processes and systems that once connected us to the landscape. Urban environments are one example where the constructed landscape of the city lies in stark contrast to the natural landscape that preceded it. The city of Chicago is one such city, where canals, railroads, and highways replaced dirt roads and sluggish rivers; silos, lumberyards, and stock yards commoditized the natural assets of the prairies and woodlands surrounding Chicago. We are beginning to recognize that industry, and the negative connotations that are now associated with it, has removed us from feeling connected to nature within the city. Yet deep down we have an innate desire to seek out moments of

connection to the natural landscape. This poster seeks to explore the relationship between nature and the city of Chicago by analyzing the natural and industrial history of the site with contemporary aspirations to balance human needs with the health of larger ecosystems. Through the program of an eco- industrial textile facility, this work demonstrates how architecture can serve as a primary means to reconnecting people, industry, and nature by revealing and celebrating human activities as an integral part of natural cycles and systems.

Scholarship in Practice – People, Planet and Profit: Building Sustainable Places 5 Step Process
Heidi Bulich

How many times has a student told you that he/she wants to "change the world"? Perhaps more importantly, how many times are students given a chance to actually do this? People, Planet and Profit: Building Sustainable Places, a Scholarship in Practice class gives students this chance. Scholarship in Practice classes ask students to complete authentic work while giving, receiving and responding to feedback throughout the semester. Students are encouraged to create, innovate and take risks while at the same time, cope with strict deadlines and manage critical reviews – skills that are necessary in the workforce.

Each student selects a special public place to improve and develops a plan over the semester that fosters placemaking, builds community and makes it more sustainable. Students create a blog where they post 2 "place" videos, marketing materials, photographs and a field report. Each student must address and submit solutions to practical considerations such as: getting community buy-in; approvals; financing and long-term maintenance. This 5-step process is evaluated and critiqued at each step.

This poster explains the 5-step process and provides screenshots of selected student work. While none of these students have any special skills, I am continually impressed by the quality of their work. This is often their first exposure to the subject-matter, but that does not mean they aren't creative and perceptive. While it is a lot of work – students love the project. Each semester a majority of the students find the project an essential component of the class and agree that it should be assigned to future students.

Shaping the Future of the Past: Cross-Disciplinary Research, Institutional Collaboration, and Integrative Historical Perspectives in the Potomac Gorge Project
Kirsten Lee Crase

One of several ongoing partnerships between Historic Preservation and the National Capital Region, the Potomac Gorge Project centers on a uniquely biodiverse stretch of the Potomac River between Great Falls and Georgetown, an area which also boasts a very rich historical legacy of ongoing human activity. This collaborative cultural and environmental history project is currently being carried out by the Historic Preservation program, in concert with cultural and natural resource specialists in the National Capital Region division of the National Park Service.

Several historical vignettes are presented to highlight the research on the mutually shaping effects of the natural environment "actors" and human cultural landscape "actors" in the Potomac Gorge. An example is the interplay between the region's unusual hydrogeology (straddling the fall zone boundary between two geophysical provinces), fishing practices that have occurred over the course of millennia as a result of that

hydrogeology, overfishing and harmful infrastructure development in the nineteenth and twentieth centuries, and more recent efforts to protect and conserve fishways. The poster will also present a brief overview of the various stages of this collaborative project, the multifaceted contributors involved, and the larger goal not just of highlighting the Potomac Gorge's unique history but also of providing a replicable model for the National Park Service to integrate cultural and natural histories and resources.

Site and Home: The Landscape of Sustainability
Brittany Williams and Amy Gardner

Outside of national green building standards and their certification systems, there are few national code requirements for sustainable measures for single family home site strategies. Some state level requirements, such as Maryland's controversial "rain tax" that incentivizes pervious surfaces, encourage or require some sustainable site strategies, but expansive and integrated site strategies are not required through building codes.
Gardner Architects focuses on building craft and the integration of both passive and active sustainable strategies at the residential scale. In many projects, this includes the integration of the house into the site. The strategies vary depending on the existing site conditions and the strategies deployed. Through three projects, this poster will highlight the diversity of solutions that demonstrate the landscape of sustainability of the home, the site, and the synergy between the two.

The first project, a new home located on the Lewes Rehoboth canal, connects the house, site, canal and protected wetlands through a house form that maximizes views to the canal. The design, elevated on driven piles, minimizes the footprint and the site includes low impact, on-site stormwater management and low maintenance, native plantings. The second project sits on the edge of a conservation area and is connected to the site through rain gardens, a geothermal system and passive solar strategies. The final project utilized the existing structure to maintain the wooded neighborhood fabric and scale. The building site relationship allowed preservation of trees on site and a very literal integration of site and house through a deck built around an existing tree.

The Sustainable City: Exploring Opportunities and Challenges
Assistant Professor Marccus Hendricks, MCP PhD
Victoria Yepez, Undergraduate Student- *A Bee in DC: Pollinator Decline in Urban Areas*
Made Naje, Undergraduate Student - *Disaster Response: Japan*
Amory Tetteh, Undergraduate Student - *Eliminating Food Deserts in the Nation's Capital Using Urban Agriculture*

This undergraduate student poster is one of a series of posters from Professor Marcuss ' Sustaiinability course in the Fall of 2017. These posters provide a broad introduction to the concept of sustainability, particularly as it relates to the opportunities and challenges of making cities more sustainable. More specifically, the various posters explore, through an interdisciplinary approach (i.e. urban planning, environmental studies, sociology, public health, etc.), a number of issues related to making cities more sustainable in terms of environmental protection, economic opportunity, and social justice. The work also explores the promise and limitations of urban planning as a discipline in mitigating and adapting to emerging global environmental issues, such as climate change and the strengths, weaknesses, threats, and opportunities of existing city plans in moving towards reaching our sustainability goals.

Sustainable Maryland
Mike Hunninghake

Sustainable Maryland Certified (SMC) is an initiative of the Environmental Finance Center at the University of Maryland (EFC) designed to support Maryland's 157 municipalities as they look for cost-effective and strategic ways to protect their natural assets and revitalize their communities.

Sustainable Resiliency
Christopher Rice

Sustainability is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Resilience is defined as "an ability to recover from or adjust easily to misfortune or change."
Modern college campuses consist of series of complex interrelated systems which need to be understood in order to achieve resilience and sustainability. All institutions must recognize the interdependencies of campus operations which will absorb future shocks to social, economic, technological, and infrastructure components. Through careful and thoughtful planning, these two ideals can and should be integrated. This presentation focuses on how a creative campus master plan established a sustainable framework to not only protect a small college from natural disasters but also created a pattern for growth based on its historic natural vegetative environs. Located along the western cost of central Florida, Eckerd College when founded in 1959 was on the cutting edge of planning, technology and ecology as the first campus in America to be entirely powered by electricity. Today, nearly 60 years later, the campus has taken another bold new step with a campus master plan that creates both sustainable and resilient solutions which identifies strategies for physical growth, and protects Eckerd's infrastructure while enhancing its unique coastal resources from the devastating impacts of Mother Nature's ever-increasing hurricanes and tropical storms.

The Use of Citizen Science to Assess Spatial and Temporal Variation in Air Pollution Near a Concrete Block Plant, Industrial Traffic, and Commuter Traffic in Bladensburg, Maryland
Rosemary Ezeugoh

Environmental justice research has shown that many low-income communities of color are differentially burdened by industrial hazards including incinerators, chemical plants, coal-fired power plants, and other locally unwanted land uses (LULUs). Additionally, these communities may have a concentration of traffic which can increase exposure to toxic pollutants such as particulate matter and volatile organic compounds (VOCs). These are concerns for residents who live in Bladensburg near the Ernest Maier concrete block plant. Ernest Maier has requested a special exception from the zoning office to add a concrete batching plant to their current location. Many residents are concerned that this will increase pollution levels and increase health issues such as asthma and heart disease. Currently, there is limited scientific information about the spatial and temporal variation of PM and VOCs near the proposed concrete batch plant in an area with heavy commuter and industrial traffic. Through the use of citizen science, we will train residents and students to collect real-time data on particulate matter and VOCs. This approach will provide baseline data about air quality before the new facility is built and empower the community to be more informed and thus more engaged in decision making processes. We will discuss the results of this work in the poster presentation.

The Use of Photovoice to Assess Environmental Justice Issues in Buzzard Point: A Community Fighting Against Gentrification and Environmental Racism
Lucy Kavi

Buzzard Point in Washington, DC, is a low-income African-American neighborhood dealing with environmental injustice due to commercial and industrial developments. It is the home to the new DC United Soccer Stadium whose construction is not only leading to gentrification pressures but potentially exposing residents to hazardous chemicals such as arsenic, lead, diesel particulates, and volatile organic compounds (VOCs). The community is already dealing with poor air quality due to other industrial hazards and traffic and health disparities including disparities in asthma compared to the rest of Washington, DC. A student research team sought to understand environmental justice issues in this community by using Photovoice. Photovoice is a community-engaged research method, giving residents a voice in identifying the health hazards in their communities. The method highlighted in this poster was modified for a classroom project, but still yielded important themes of abandonment and hopelessness. These findings mirror other works with Photovoice, which have been used in both urban and rural settings to identify cumulative impacts from environmental health hazards and pathogenic infrastructure. This Photovoice project serves as a first step in empowering residents, bringing attention to lawmakers of their plight, and initiating a dialogue on the reforms the city can adopt to improve physical and environmental health in the community through the implementation of the equitable development framework.

Value by Design: Systematic Design Decision Making in the Architectural Design Process
Madlen Simon and Ming Hu

A number of systematic approaches have been proposed to organize, guide, and facilitate the architectural design process. The main objective is to discover a logical and rigorous path to a design that is acceptable to the architect, satisfies the client, and serves the needs of users. All approaches focus heavily on decision making, which is integral to the process, and an important element of nearly all design phases. In fact, the center of all architectural design approaches is decision making. However, architects and engineers typically do not consciously integrate decision analysis (modeling real-life choices involving uncertainties) into their design processes. Systematic design decision making in architectural design process has been unclear, hard to understand, and therefore difficult to teach in architecture school. This poster provides a foundational platform to understand how architects and related design professions make decisions and to identify strengths and weaknesses in the process.

The authors survey design decision making in architecture and related design professions, setting forth normative practices and identifying important proposals for innovative methods to navigate the complex constraints of design problems. The poster compares decision making strategies in the various disciplinary design processes. The authors conclude by analyzing strengths and weaknesses of systematic decision making methods in the context of architectural design.

WaterLines: RiverBank
Ronit Eisenbach, RA

What kinds of "architectures" can join diverse stakeholders to surface issues and advance change before a project gets underway? An architecture of process allows different talents, opinions, and understandings to create space for possibility, forge relationships, and empower voices; critical on "sites-in-flux," when communities face significant challenges.

The presentation discusses how ephemeral, community-engaged work directs change by building bridges across difference. It will explore the inclusivity of shared making and the creation of shared experiences. It will examine how removing illusory permanence reveals points of friction and opportunity where the built environment, and its community, can be reimagined.

Site-specific public art and design created with a range of stakeholders can catalyze a community by sparking imagination and stimulating public discourse. Temporary works share the condition of change; their impermanence opens possibilities where permanent projects might falter. Their "in-between-ness" allows for a simultaneous experience of pasts, presents, and potential futures.

The poster presents *WaterLines: RiverBank,* a multi-disciplinary, yearlong work that fused art, science, and history, exploring interdependency between the Chester River and historic Chestertown as the town grapples with rising seas, ecological degradation, economic inequity, and social fissures.

WaterLines' events and co-creation sparked relationships across communities, breaking through a history of racial segregation, by sharing knowledge and creation. It was an immersive transformation of a formally-designed bank building into a "world of rippling light and sublimely meditative sound" that questioned the town's relationship to natural systems and prompted discussion: What do we value enough to protect at all costs?

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