CONFERENCE PROGRAM
OCTOBER 19-21, 2023

INTER SECTIONS

RESEARCH CONFERENCE
MATERIAL ECONOMIES

AIA ACSA

INTERSECTIONS RESEARCH CONFERENCE: MATERIAL ECONOMIES

The American Institute of Architects (AIA) and Association of Collegiate Schools of Architecture (ACSA) conference partnership is dedicated to the intersection of education, research and practice. The 2023 ACSA/AIA Intersections Research Conference seeks to find what roles architects, designers, and researchers can play in the paradigm shifts necessary to practice with radical material responsibility. The conference is hosted by the University of Massachusetts Amherst, Department of Architecture.

RESEARCH SESSIONS

Conference research sessions are composed of peer-reviewed papers and research. The curated sessions allow for scholarly and applied research to mutually demonstrate impact and inform one another.

SPECIAL SESSIONS

Conference special sessions are concurrent sessions, typically a panel of professionals, that provide a forum for issues or a critical discussion of a focused topic.

CONFERENCE SPONSORS

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WELCOME TO AMHERST

MATERIAL ECONOMIES

R. Buckminster Fuller famously re-conceptualized the idea of material economy by asking "How much does your building weigh?" Nearly one hundred years later, our notion of material sustainability and the "weight" of building materials has taken on a more expansive meaning. Our current understanding of materiality suggests serious challenges related to the sustainability, resiliency, and human health impacts of our architectural materials. According to the United Nations Environment Programme's Global Alliance of Buildings and Construction (Global ABC) nearly 50% of the carbon footprint over the next decade for today's projects is the embodied carbon from construction. To meet the climate commitments of the Paris Agreement (COP21), it is these immediate emissions that are most critical. The Living Building Challenge's Red List has raised awareness of the thousands of unregulated toxic chemicals present in our industrial economy, and hiding in our buildings, from our water pipes to our furnishings.

Despite the staggering scale of these problems, the scope of our industry suggests an opportunity to shift the material economy. Architecture 2030 cautions that buildings represent 40% of the world's carbon emissions, and the International Organization for Economic Co-operation and Development finds that buildings comprise nearly 50% of the world's material economy. The AIA's Architecture & Design Materials Pledge, currently signed by more than 200 leading design firms, outlines the enormous opportunity for industry transformation, calling for more consistent metrics and a shift towards greater material transparency and accountability related to human, ecosystem, and climate health, social equity, and circularity. Are calls for greater transparency shifting the market from one that is extractive to one that is cyclical, and from one that is exploitative to one that is equitable? How does an expanded notion of material "weight" impact design? What forms of research are needed to address the most critical barriers in the design and delivery process for architects sourcing materials and assemblies to nurture and sustain ecosystems and strengthen communities?

CO-CHAIRS

Caryn Brause, University of Massachusetts Amherst

Chris Flint Chatto, ZGF Architects

LOCATION

University of Massachusetts Amherst | John W. Olver Design Building

210 Design Building | 551 North Pleasant Street | Amherst, MA 01003

EVENTS

HEMPCRETE WORKSHOP

THURSDAY, OCTOBER 19 | 1:00pm-4:00pm | 3 LU CREDIT $90

Dive into the world of plant-based building materials with Hempstone's introduction to Hempcrete, a bio-composite material created from the woody core of the hemp plant combined with a lime-based binder that can be used for construction and insulation. Trusted around the world as a robust, high-performance sustainable building system, Hempcrete entered the US market a decade ago and is poised to take the natural building industry by storm because it is net carbon storing, non-toxic and flame, water and pest resistant.

CAMPUS SUSTAINABILITY WALKING TOUR

FRIDAY, OCTOBER 20 | 8:00am-9:00am | 1 HSW CREDIT $30

UMass Amherst is a leader in campus sustainability and is on a pathway to carbon neutraliity with initiatives that address advocacy, building, energy, food, landscape, recycling, transportation, and water. The tour will include several of the major capital projects that have transformed the campus core during the last decade including examples of adaptive reuse, sustainability, state-of-the-art new facilities, and major utility and landscape upgrades.

FRIDAY EVENING DINNER

FRIDAY, OCTOBER 20 | 7:30pm $100

Join us for drinks & dinner after the keynote.

CAMPUS BRUTALISM WALKING TOUR

SATURDAY, OCTOBER 21 | 8:00am-9:00am | 1 HSW CREDIT $30

The 27 brutalist buildings at UMass Amherst, built between 1965 and 1975, make up about a quarter of the campus in total square footage. And over the last several years, both UMass Amherst and UMass Dartmouth have increasingly embraced their status as two of the most architecturally significant brutalist campuses in the United States. On this tour, we will see some of the Brutalist buildings that can be found all over campus. Participants will learn about UMassBRUT an award-winning campaign designed to educate and advocate for the conservation, renovation, and reuse of Brutalist architecture throughout the UMass system.

LIVING BUILDINGS BUS TOUR

SATURDAY, OCTOBER 21 | 2:00pm-5:00pm | 2 HSW CREDIT $60

The Hitchcock Center for the Environment is home to the 23rd Certified Living Building in the world and the 4th in Massachusetts. This net zero energy building harvests and recycles its own water, uses composting toilets, and was constructed with responsibly sourced, nontoxic materials. Designed by designLAB Architects, it is a powerful teaching tool that supports a new approach to achieving environmental literacy in the 21st century. The R.W. Kern Center is the 17th certified Living Building in the world, an embodiment of Hampshire's sustainability values in practice. Designed by Bruner/Cott Architects, it generates its own electricity, collects and treats its own water, and is built with local, non-toxic, and low-carbon materials. We will bus to Hampshire College and tour both the Hitchcock Center and the R.W. Kern Center with the project architects.

ALL EVENTS HAVE LIMITED SPACE

Purchase tickets, for yourself and guests at the Registration Desk.

OCTOBER 19, 2023

THURSDAY

REGISTRATION IN COMMONS | 12:00PM-7:00PM

PRE-CONFERENCE EVENTS

1:00-4:00pm
ROOM 221
3 LU CREDIT

WORKSHOP

HEMPCRETE WORKSHOP

Organizers: Tom Rossmassler, HempStone, LLC

Dive into the world of plant-based building materials with Hempstone's introduction to Hempcrete, a bio-composite material created from the woody core of the hemp plant combined with a lime-based binder that can be used for construction and insulation. Trusted around the world as a robust, high-performance sustainable building system, Hempcrete entered the US market a decade ago and is poised to take the natural building industry by storm because it is net carbon storing, non-toxic and flame, water and pest resistant.

TICKETED EVENT

CONFERENCE

5:00-6:30pm
COMMONS
1 HSW CREDIT

Plenary

OPENING KEYNOTE: Mae-ling Lokko

Remarks: **Emily Grandstaff-Rice**, AIA President & **Lee Shoemaker**, MBMA

MAE-LING LOKKO is an Assistant Professor at Yale University's School of Architecture and Yale's Center for Ecosystems in Architecture (Yale CEA). She is an architectural scientist, designer and educator from Ghana and the Philippines whose work focuses on the upcycling of agrowaste and biopolymer materials. Her research integrates a broad range of technical, environmental, social and cultural criteria to evolve contemporary material-value systems and accelerate business models for upcycling between the Global North and South. Lokko is the founder of Willow Technologies, Ltd. focused on the research, design and development of biobased building materials. Lokko was the Director for the Building Sciences Program and Assistant Professor at Rensselaer's School of Architecture from 2018-2021. Lokko's recent projects have been exhibited globally including the Museum of Modern Art, New York; Stedelijk Museum, Netherlands; Museum of the Future, Dubai; Z33 House for Contemporary Art, Design and Architecture, Belgium; Somerset House; London and Triennale Milano, Italy. Lokko holds a Ph.D. and Masters of Science in Architectural Science from the Center of Architecture, Science and Ecology, Rensselaer Polytechnic Institute and B.A from Tufts University.

6:30pm
COMMONS

NETWORKING RECEPTION

Co-sponsored by **AIA WESTERN MASSACHUSETTS**

FRIDAY

OCTOBER 20, 2023

REGISTRATION IN COMMONS | 7:30AM-6:00PM

8:00-9:00am
UMASS HOTEL
1 HSW CREDIT

Walking Tour

CAMPUS SUSTAINABILITY TOUR

Organizer: Ludmilla Pavlova-Gillham & Ray Kinoshita Mann, UMass Amherst

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TICKETED EVENT

9:00-10:30am
ROOM 170
1.5 HSW CREDIT

Research Session

EXPANDING LIFE CYCLE ASSESSMENT

Moderator: Corey Griffin, Pennsylvania State University

The Missing Piece: Embodied Carbon and Health in Interiors, a Case Study
Melanie Silver & Olivia Humphrey, Payette

Navigating the Intersection of Embodied Carbon & Material Health: How to Optimize Both When Specifying Insulation
Kimberly Seigel, Perkins and Will & Teresa McGrath, Healthy Building Network

Light on Waste: Evaluating the Embodied Impacts of LED Lighting
Sara Duffy, LUMA Lighting Design

9:00-10:30am
ROOM 221
1.5 HSW CREDIT

Research Session

BIOGENIC INNOVATION

Moderator: Munkaila Musah, UMass Amherst

Bio-Matter: Building with Synthetic Biology
Alfredo Andia, Florida International University

Buildings As Carbon Sinks: Hemp Lime And Other Biogenic Materials
Kaja Kuehl, City College of New York

Building with Algae and Shellfish: Embracing Impermanence with Biomaterial Interiors
Ryan Roark, Illinois Institute of Technology

Incremental House
Jeremy Ficca, Carnegie Mellon University

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#2023MaterialEconomies

@ACSANATIONAL @AIANATIONAL

9:00-10:30am
ROOM 225
1.5 HSW CREDIT

Research Session

ADAPTIVE REUSE

Moderator: Pari Riahi, UMass Amherst

Assessing Carbon Impacts of Brutalist Concrete Buildings: Case Study of the Lincoln Campus Center
Ludmilla Pavlova-Gillham, Sergio Brena & Joel Freitas, UMass Amherst
Helena Currie, Simpson Gumpertz & Heger Inc.USA
Lori Ferriss, Goody Clancy

Assessment of Materials Management Methods in Higher Education Building Lifecycle Decisions
Natalie Hunt, Anna Alswager, Kyle Young , Sierra Hinze & Evan Wacker, University of Minnesota

Deep 'Climate' Retrofit: Assessing Life-Cycle Thinking of Emission Calculators in Construction
Peter Osborne, McGill University
Daniel Chung & Shoaib Amiri, University of Toronto
Michael Jemtrud, Sarrah Kayed & JiaLin Yue, McGill University

BoardWalk: Design and Construction Methods for Recirculating Salvaged Building Materials
Dillon Pranger & Christopher Battaglia, Cornell University

10:30-11:00am
COMMONS

COFFEE BREAK

11:00-12:30pm
ROOM 170
1.5 HSW CREDIT

Research Session

LIFE CYCLE OF HEALTH

Moderator: Melanie Silver, Payette

Building Synthetic Inequity: Understanding the Cost of Building With Tyvek
Benjamin Akhavan, Columbia University
Lyndon Johnston, New Jersey Institute of Technology

Stepping off the Sidelines: Political Challenges to the Material Status Quo of Public Schools
Dorrie Brooks, Jones Whitsett Architects
Erika Eitland, Perkins and Will

Process of Evaluating Building Materials Compliant with the Environmental Product Declaration and Health Product Declaration of a New Medical Pavilion
Dagmar Rittenbacher & Maria Sanchez, Gresham Smith

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11:00-12:30pm
ROOM 221
1.5 HSW CREDIT

Research Session

MATERIAL INNOVATIONS

Moderator: Naomi Darling, Mount Holyoke College / UMass Amherst

A Material Dilemma: To Breathe or Not to Breathe
Mary Hardin, University of Arizona

Architectural Ceramic Assemblies Workshop – ACAW 2022
David Kubik and Will Russell, BKSK Architects

CANCORK Facade System: The Case of Conjunction of the Biotic and the Abiotic
Lochana Sainath Deshpande & Julio Diarte, University of North Carolina at *Charlotte*

Myco-Based Materials for Architectural Application – An Interdisciplinary Approach
Michael Carroll, Kennesaw State University

11:00-12:30pm
ROOM 225
1.5 HSW CREDIT

Research Session

CIRCULARITY

Moderator: Hellen Awino, UMass Amherst

Investigating Circular Concrete Formwork Though Recyclable 3D Printed Formwork of Two Dissimilar Materials
Erin Hunt, Texas Tech University

Odds and Mods: A Research and Pedagogy Platform for Scaling Material Circularity in Architecture
Caitlin Mueller & Sheila Kennedy, Massachusetts Institute of Technology

Visualizing Value in Circular Building
Carmen Trudell, California Polytechnic State University

Ancestral Solutions to Modern Problems—Converting Waste into Building Materials
Connie Bank, SACRED

11:00-12:30pm
ROOM 365
1.5 HSW CREDIT

Special Focus Session

WHOLE BUILDING LIFE CYCLE ASSESSMENT: BENCHMARKS, PROCESSES, AND TOOLS FOR DECISION-MAKING

Organizers: Patricia Kio, Fitchburg State University
Andrzej Zarzycki, New Jersey Institute of Technology
Dan Stine, Lake | Flato Architects

This session features presentations of original research published in Technology | Architecture + Design (TAD) in the subject areas of Material Construction and Envirmental Design that investigate benchmarks, processes, and tools that affect embodied carbon, its metrics, and standards in conjunction with design tools. The presentations also demonstrate quantitative studies developed to confirm the potential environmental effects of the circular economy within the built environment leading to consistent methods for characterizing these effects. Presentations include research methods and innovative techniques from academic case studies and tools in practice that consider embodied, operational, and demolition energies' impact on the built environment.

12:30-2:30pm
COMMONS

NETWORKING & MENTORING LUNCH *(on your own)*

Grab a bite and join us in the Commons for mentoring and networking. This is a relaxed unprogrammed time to meet with other attendees, established researchers, practitioners and faculty.

See page 16 for dining options.

2:30-4:00pm
ROOM 170
1.5 HSW CREDIT

Research Session

DECARBONIZATION

Moderator: Dan Stine, Lake | Flato Architects

Design Methodologies for Decarbonization
David Costanza, Cornell University

Early Incorporation of Embodied Carbon Information for Total Building Decarbonization
Andrea Love, Payette
Daniel Sesil, LERA Consulting Structural Engineers

Carbon Reduction and Housing Affordability: A Case Study of a Typical House in Northern New Jersey
Kaveh Samiei & Maurie Cohen, New Jersey Institute of Technology

Optimizing for Embodied and Operational Carbon Impacts: A Case-Study of a University-Based Design-Build Project
Robert Williams, Diana Picciotto, Amiraslan Darvish, Carl Fiocchi, & Kent Hicks, UMass Amherst
Naomi Darling, Mount Holyoke College / UMass Amherst

2:30-4:00pm
ROOM 365
1.5 HSW CREDIT

Research Session

COMMUNITY KNOWLEDGE

Moderator: Carey Clouse, UMass Amherst

Performative Materials: Integrating Land-Based Learning into the Architectural Curriculum, Research+Practice
Shannon Bassett, Laurentian University

Earth Construction: A Volitional Technology for Building in the US Gulf South
Robert Holton, Louisiana State University

Reciprocity as Form
Brian Price, California College of the Arts

A New Coffee Drying House Typology in Guatemala
Jonathan Stitelman, Washington University in St. Louis

2:30-4:00pm
ROOM 225
1.5 HSW CREDIT

Research Session

BIOGENIC OPTIMIZATION

Moderator: Peggi Clouston, UMass Amherst

Dowel-Laminated-Puncheons: a High-Performance, Low-Waste Mass Timber Assembly
Emanuel Jannasch, Mark MacKinnon, Myranda Reay & Brendan Roworth, Dalhousie University
Ben Goldsmith, Pye Richards Temprano and Young Architects

Depicting Wood: Mass Timber Diffusion Models
James Tate & Benjamin Ennemoser, Texas A&M University

Re-inventing Light Frame Construction
Jonathan Knowles, Rhode Island School of Design

Early, Parametric Design Tool for Mass Timber Structures and Embodied Carbon Optimization
Corey Griffin, Samantha Leonard & Nathan Brown, Pennsylvania State University

2:30-4:00pm
ROOM 221
1.5 HSW CREDIT

Special focus Session

USING NEIGHBORHOOD DATA TO START DESIGN CONVERSATIONS ALIGNING CLIMATE, HEALTH, & EQUITY PRIORITIES

Organizers: Adele Houghton, Biositu, LLC
Caroline Shannon, Gensler

The body of evidence linking building design and operations to environmental, health, and social challenges is both vast and fragmented. New databases are continually coming online with the promise of depicting a wide array of environmental exposures, social injustices, health disparities across populations, and vulnerabilities to climate change. Green and healthy building regulations and best practice guides offer a toolbox of design and operations strategies that could be used to respond to the exposures and vulnerabilities made visible through these dashboards. But, they currently do not help users tailor their project to the environmental exposures and population health needs specific to the site and surrounding neighborhood.

This hands-on workshop will introduce participants to a two-step, validated prioritization process that combines neighborhood data with participatory community engagement to bring design teams, community groups, and local government into alignment around a common vision for a proposed real estate project. We will jointly develop a Health Situation Analysis (HSA) of an active project in Northampton, MA and use that data to simulate a participatory community engagement process designed to support stakeholders in co-creating a common vision for the project that generates new value for all participants.

4:00-4:30pm
COMMONS

COFFEE BREAK

4:30-6:00pm
ROOM 170
1.5 HSW CREDIT

Research Session

BIOGENIC ECONOMIES

Moderator: Alex Schreyer, UMass Amherst

Improving Mass Timber Circularity through Modular Furniture Designs
Cory Olsen & Linda Zimmer, University of Oregon

Sweden's Timber Empire
Toms Kokins & James Benedict Brown, Umea School of Architecture

From Forest to Frame: Building a Southern Yellow Pine (SYP) Regional Mass Timber Economy in Georgia
Catherine Malmberg, University of Minnesota
Ryan Lobello, Handel Architects
Leif Johnson, StructureCraft

The Carbon Colony: Dispossession of Indigenous Populations and Timber Resources in the US Southeast
David Kennedy, University of Arkansas

4:30-6:00pm
ROOM 221
1.5 HSW CREDIT

Research Session

SOCIAL EQUITY

Moderator: Erika Zekos, UMass Amherst

Justice as a Material Quality
Isaac Cohen, Auburn University

Material Reuse for Whom?
Brent Sturlaugson, Morgan State University

What About the Materials' Social Impact? The Development of a S-LCA Framework for Building Materials
Zina Berrada & Lola Ben-Alon, Columbia University

Villages of Agricultural E-Commerce in Zhejiang: Rural linkages & Constructions for an Urban Future
Sufeng Xiao, Harvard University

4:30-6:00pm
ROOM 225
1.5 HSW CREDIT

Research Session

SALVAGE AND REUSE

Moderator: Chris Flint Chatto, ZGF

Brook Hill Bothy: Ecological Sistering for a Multispecies Commons
Christian Nakarado, Wesleyan University
Cynthia Deng, Escuela de Arquitectura, Arte y Diseño
Elif Erez, Studio Gang Architects

Waste Wood and Cement Composite Sculpture: An Analysis of Embodied Carbon and Compressive Strength
Alex Timmer, University of Wisconsin-Milwaukee

Built to Remember: A Case Study in Localized Re-Use Demonstrating Circularity Through Design Build Pedagogy
Julia Lindgren, University of Texas at Arlington

Urban Mining in the Rust Belt: Lessons from Pittsburgh's Deconstruction Pilot Project
Joshua Lee & Tannaz Afshar, Carnegie Mellon University

6:00-6:30pm

BREAK

Walk to UMass Hotel (1 Campus Center Way) for this evening's keynote.

6:30-7:30pm
UMASS HOTEL
1 HSW CREDIT

Plenary

KEYNOTE: Chandra D. Robinson

Remarks: **Mo Zell**, ACSA President

CHANDRA D. ROBINSON is a Principal at LEVER Architecture, a practice recognized for design excellence and innovative work with mass timber construction. Based in Portland, Oregon and Los Angeles, the 38-person firm collaborates with communities and institutions to design buildings that elevate human experience and foreground equity.

Chandra recently completed a LEED Platinum campus for equity-based foundation Meyer Memorial Trust and is currently working on several civic and educational projects including the Portland Museum of Art (Portland, Maine), Portland State University's new School of Art and Design, and two libraries for Multnomah County Library, among others.

She is passionate about creating beautiful spaces that are accessible for everyone and enjoys working closely with clients to create designs that are expressive of their values. In addition to her civic design work, Chandra is Vice Chair of the Portland Design Commission; a Founding Board Member and Treasurer of the National Organization for Minority Architects (NOMA) Portland chapter; and on the advisory board of Hip Hop Architecture Camp.

7:30pm
UMASS HOTEL

RECEPTION & DINNER

TICKETED EVENT

SATURDAY

REGISTRATION IN COMMONS | 7:30AM-12:30PM

8:00-9:00am
UMASS HOTEL
1 LU CREDIT

Walking Tour

CAMPUS BRUTALISM TOUR

Organizer: Ludmilla Pavlova-Gillham, UMass Amherst

The 27 brutalist buildings at UMass Amherst, built between 1965 and 1975, make up about a quarter of the campus in total square footage. And over the last several years, both UMass Amherst and UMass Dartmouth have increasingly embraced their status as two of the most architecturally significant brutalist campuses in the United States. On this tour, we will see some of the Brutalist buildings that can be found all over campus. Participants will learn about UMassBRUT an award-winning campaign designed to educate and advocate for the conservation, renovation, and reuse of Brutalist architecture throughout the UMass system.

TICKETED EVENT

9:00-10:30am
ROOM 170
1.5 HSW CREDIT

Research Session

COMMUNITY SOLUTIONS

Moderator: Jonathan Stitelman, Washington University in St. Louis

Unkapani Upcycle: Cultivating Grassroots Enterprise and Urbanism in Istanbul
Jeffrey Balmer & Peter Wong, University of North Carolina Charlotte
Demet Mutman, Özyeğin University
Bengü Uluengin, Bahçeşehir University

Infill House Prototype: Rebuilding Post-earthquake Kathmandu, Nepal
Joshua Bolchover & Kent Mundle, The University of Hong Kong

Earthen Ecologies: Creating Micro-Climates as a Community Education Tool within a Semi-arid Landscape
Peter Raab, Terah Maher & Erin Hunt, Texas Tech University

Biofiltration Pods: Integrating Regenerative Technologies into Urban Ecologies
Avantika Velho, Katia Zolotovsky , Manini Banerjee & Varun Mehta, Rhode Island School of Design

9:00-10:30am
ROOM 221
1.5 HSW CREDIT

Research Session

MATERIAL THEORIES

Moderator: Eldra-Dominique Walker, UMass Amherst

Agential Realism in Architecture: Exploring Matter and Meaning
Sandy Litchfield, UMass Amherst

Resilient Futures: Disrupting Material Cycles in Concrete Production
Zaneta Hong & Leighton Beaman, Cornell University

Symbiotic Material Economies: A Case for Post-Human Capital Infrastructures
Sasson Rafailov, University of Virginia

9:00-10:30am
ROOM 225
1.5 HSW CREDIT

Research Session

MATERIAL TECHNOLOGIES

Moderator: Jordan Kanter, UMass Amherst

Hot.PET: Thermoforming Architectural Elements from Recycled Plastic Bottles
Justin Diles, The Ohio State University

Material tectonics: the exploration of integrating eco-resilient materials with the robotic 3D printing systems
Ehsan Baharlou, University of Virginia

CTRL+P: On Additive Manufacturing Hybrids
Kelly Bair, University of Illinois at Chicago

9:00-10:30am
ROOM 162
1.5 HSW CREDIT

Special Focus Session

TIMBER PEDAGOGY

Moderator: Reed Kelterborn, Softwood Lumber Board

Winners of the 2023 Timber Education Prize. These innovative courses will be taught at architecture schools across North America in the coming years. These courses seek to recognize effective and innovative curricula that create a stimulating and evidence-based environment for learning about timber. The use of wood as a building material can achieve multiple design, construction, and performance objectives. Therefore, these courses equip students with the knowledge and design skills to achieve green building goals in a range of project types.

UDBS AR Home Lab: Street Legal
John Folan & Candice Adams, University of Arkansas

It Takes a Village: Modular Mass Timber and New Housing Imaginaries
De Peter Yi, University of Cincinnati

Mass Timber Architecture: Material, Structure, and Detail
Tyler Sprague, University of Washington

Circ-Lam Small-Scale Mass-Timber and The Circular Economy
Jason Griffiths, University of Nebraska Lincoln

10:30-11:00am
COMMONS

COFFEE BREAK

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11:00-12:30pm
ROOM 170
1.5 HSW CREDIT

Research Session

CASE STUDIES IN MATERIALITY

Moderator: Ariane Laxo, HGA

Bricolage Sustainability: Building Understanding Through Indigenous Constructs
Scott Shall, Lawrence Technological University

A Better DADU: Design & Construction of a High-Performance Cost-Effective Detached Accessory Dwelling Unit
David Drake, Omar Al-Hassawi & Taiji Miyasaka, Washington State University

Rethinking Material Reuse: A Case Study on Lab Retrofit
Lakshmi Sahithi Datla & Endian Xu, Payette

Project Refuge
Marc Neveu, Arizona State University
Elizabeth Golden, University of Washington

11:00-12:30pm
ROOM 225
1.5 HSW CREDIT

Research Session

INNOVATIONS IN TIMBER RE-USE

Moderator: Tom Chung, Leers Weinzapfel Associates

Digital DLT: Computationally Designed Dowel Laminated Timber from Reclaimed Wood
Chris Humphrey, University of Michigan

Shelter from Salvage: Building for the Circular Economy
Nancy Cheng, University of Oregon

Prototyping Secondary Lumber Networks: Feasibility of Locally Salvaged Waste Wood for Reuse in Mass Timber
Madelyn Gulon, University of Minnesota

12:30-2:00pm
COMMONS

LUNCH *(on your own)*

2:00-5:00pm
OLVER DESIGN SCHOOL
2 HSW CREDIT

Bus Tour

LIVING BUILDINGS TOUR

Organizer: Caryn Brause, UMass Amherst
Naomi Darling, Mount Holyoke College / UMass Amherst

The Hitchcock Center for the Environment is home to the 23rd Certified Living Building in the world and the 4th in Massachusetts. This net zero energy building harvests and recycles its own water, uses composting toilets, and was constructed with responsibly sourced, nontoxic materials. Designed by designLAB Architects, it is a powerful teaching tool that supports a new approach to achieving environmental literacy in the 21st century. The R.W. Kern Center is the 17th certified Living Building in the world, an embodiment of Hampshire's sustainability values in practice. Designed by Bruner/Cott Architects, it generates its own electricity, collects and treats its own water, and is built with local, non-toxic, and low-carbon materials. We will bus to Hampshire College and tour both the Hitchcock Center and the R.W. Kern Center with the project architects.

TICKETED EVENT

WIFI

Complimentary UMass Wireless Network is available throughout campus

Wireless Guest Account Access
Login instructions for the wireless network are below.

- In the WiFi settings on your phone/computer/tablet select the UMASS network
- Open up a web browser (IT suggests using Safari or Firefox)
- Manually type in the address bar: http://www.umass.edu
- Either a page telling you that this site is unsecure will present itself OR the UMass wireless login page will appear
- If it is a page telling you the website is unsecure, click “More Details” or “Advanced” at the bottom and click on the link to visit the page anyway
- You should then be on the UMass wireless network login page
- Enter the credentials below
  Guest ID: **07115973**
  Password: **42584937**

IT recommends that you save the guest ID and password in your browser to shorten the process for future logins. The UMass home page should load and from this point you can type in any search query/website name you wish to visit.

AIA MATERIALS PLEDGE

The **Architecture & Design Materials Pledge** was developed to inspire a shift in how we evaluate the products and finishes that we specify on a daily basis. Participants commit to five overarching statements that will lead to more intentional product specification across their portfolios over time.

From improving indoor air quality to reducing construction waste, the materials architects and designers specify matter. Our choices represent an enormous opportunity to improve the health of the planet and the people who live on it.

Follow us on social media to stay informed.

#2023MaterialEconomies

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CONTINUING EDUCATION CREDIT LU & HSW CREDIT (CES)

Earn AIA, Continuing Education Credit (Learning Units, LU) for sessions you attend. Additionally, eligible session will include Health, Safety & Welfare (HSW) Credit, as listed. Claim your continuing education credits by simply completing an onine form, linked above and included in conference daily notifications. Please include your AIA number to receive credit or request an attendee certificate.

Deadline to Complete: November 6, 2023

DINING OPTIONS

In addition to the Campus's award winning Dining Services, there are many options located in Amherst (town) Center.

babyBerk Food Truck @ Olver Design School
babyBerk Food Truck will be parked behind the Olver Design Building
Friday | *12:30 - 2:00pm*

Campus Dining Options:
Post & Bean Cafe: located in the Olver Design Building
Monday - Friday | 8:00am - 3:00pm

Carney Cafe: Located in the Isenberg School of Business (the BIG building)
Monday - Friday | 8:00am - 3:00pm

Blue Wall: Located on the 2nd floor of the Campus Center, beneath the Hotel
Monday - Friday | 11:00am - 9:00pm

Franklin Dining Commons: Located 260 Stockbridge Rd. behind the Design Building
Monday - Sunday | 7:00am - 9:00pm

FLOORPLAN

Third Floor

Second Floor

First Floor

UMASS

SELF-GUIDED TOURS

Green Building Walking Tour

An interactive GIS map that provides resources for a self-guided tour of campus green buildings. Select a building to view a description of each project and additional information, including a project website, photos, LEED scorecards, and links to related media coverage.

Brutalist Buildings Walking Tour

This GIS map showcases campus Brutalist Buildings. A side panel displays a photograph of each building and a short description including the architect, contractor, and engineer. For current events and more information related to our Brutalist Buildings visit our Campus Planning Brut Webpage and our UMass Amherst + Dartmouth collaborative UMassBRUT Webpage.

Historic Campus Walking Tour

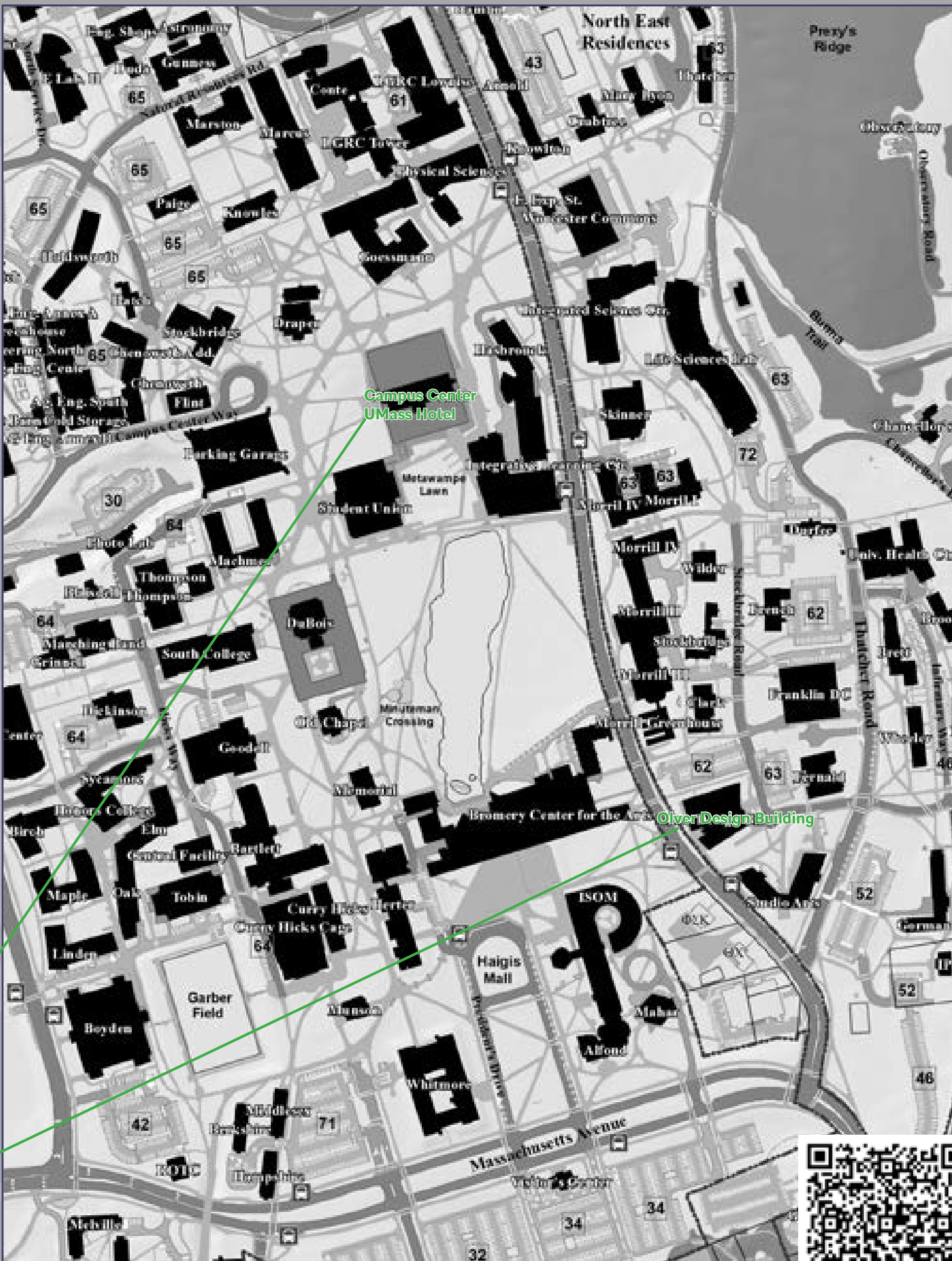
The Historic Campus of UMass Amherst walks the reader through UMass Amherst's unique origins as Massachusetts Agricultural College. The interactive StoryMap brings you back in time for a closer look at the campus' historic buildings and natural landmarks.

CONFERENCE VENUES

UMass Hotel
1 Campus Center Way

John W. Olver Design Building
551 N Pleasant St

AMHERST



Campus Center
UMass Hotel
Olver Design Building
North East Residences
Prexy's Ridge
Metawampe Lawn
Minuteman Crossing
Haigis Mall
Garber Field
Student Union
DuBois
South College
Old Chapel
Goodell
Boyden
Whitmore
ISOM
Alfond
Skinner
Franklin DC
Massachusetts Avenue
Thatcher Road

SCHEDULE AT-A-GLANCE

THURSDAY, OCT. 19, 2023

1:00pm Hempcrete Workshop (Ticketed Event)
5:00pm Keynote: **MAE-LING LOKKO**
6:30pm Reception

FRIDAY, OCTOBER 20, 2023

8:00am Campus Sustainability Walking Tour (Ticketed Event)
9:00am Sessions
11:00am Sessions
12:30pm Networking & Mentoring Lunch *(on your own)*
2:30pm Sessions
4:30pm Sessions
6:30pm Keynote: **CHANDRA D. ROBINSON**
7:30pm Reception & Dinner (Ticketed Event)

SATURDAY, OCTOBER 21, 2023

8:00am Campus Brutalism Walking Tour (Ticketed Event)
9:00am Sessions
11:00am Sessions
12:30pm Lunch *(on your own)*
2:00pm Living Buildings Tour (Ticketed Event)

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