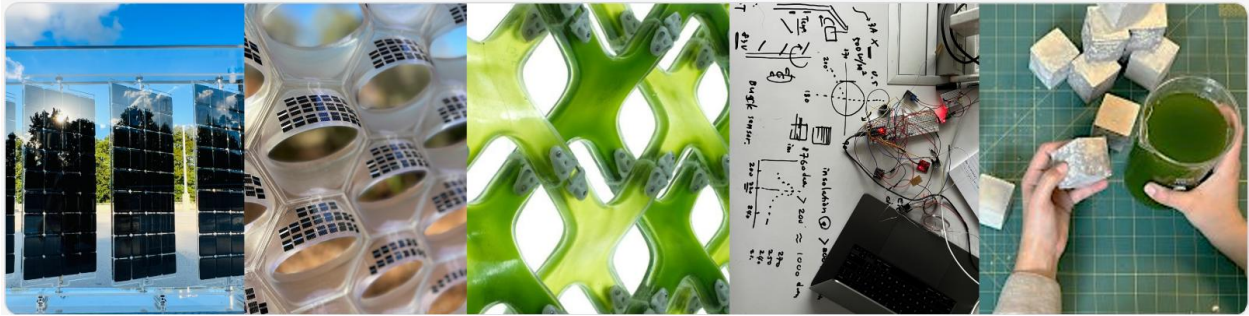


03/18/2025 10am – 2pm. Translational Research Symposium



Transitioning Innovative Research to Commercialization: Carbon-Neutral, Regenerative Communities for Climate Resilience

Anthropogenic human activities have exacerbated climate change and altered weather, natural resources, and public health. Despite the known impact of carbon emissions in the building industry, rapidly growing Southern cities like Charlotte continue converting greenfields to carbon-emitting developments at an unsustainable pace. These developments largely use traditional methods, lacking adaptations for changing climate conditions. Built environments now contribute to approximately 40% of national energy use and emissions, while exacerbating environmental injustices through inequitable urban development. Decarbonizing urban environments is now a global priority. Locally, Charlotte adopted the Strategic Energy Action Plan, while UNC Charlotte committed to carbon reduction.

Net-zero buildings exemplify deep decarbonization and regenerative potentials, offering carbon and cost savings due to their low embodied energy and operational efficiency. Cutting-edge carbon-adaptive technologies, leveraging AI and smart automation, further reduce carbon footprints in construction materials, carbon capture, and electrification throughout building life cycles.

This symposium will initiate a focused dialog addressing this grand challenge by convening a multidisciplinary group and multi level stakeholders around the topic of deep decarbonization research as it applies to the built environment. The symposium, “**Transitioning Innovative Research to Commercialization**,” hosted at SoA’s IDRL, will unite academics, professionals, stakeholders, and communities to explore and implement strategies for transforming innovative research into practical decarbonization solutions toward the carbon-neutral, regenerative built environment.

10:00 AM	Participants arrive (Storrs Salon B)
10:05 – 10:15 AM	Welcome and Introduction (Storrs Salon B)
10:15 – 11:45 PM	<p>Climate Resiliency and Adaptation Donald Green, AIA, Progressive Companies</p> <p>Patent, Intellectual Property (IP) and Artificial Intelligence (AI) Laura Peter, Executive Director, Office of Research Commercialization and Partnerships, UNC Charlotte. David Sartor, J.D., Siemens Energy, Inc.</p> <p>Funding Opportunities Mary Lou Bourne, Senior Regional Innovation Network Director, NC Innovation</p>
11:45 – 12:45 PM	Lunch w/ Interactive Panel Session (IDRL, Storrs 122)
12:45-1:45PM	<p>SoA/IDRL Lightning Talks (IDRL, Storrs 122)</p> <p>Building Integrated Photovoltaic System (BIPV) Dr. Hamideh Hossei, Post-doc Scholar, School of Architecture, UNC Charlotte</p> <p>AI and Architecture Dr. Sabri Gokmen, Assistant Professor, School of Architecture, UNC Charlotte</p> <p>Belmont Trolley – Connecting the Past and Future of Belmont Dr. Shen-Eun Chen, Professor, Civil and Environmental Engineering, UNC Charlotte.</p> <p><i>Student Posters:</i></p> <p>Microalgae Façade and Energy Resiliency Constance Sartor, Master of Arch. and Parham Kheirkhah Sangdeh, INES PhD</p> <p>Micro-housing and Microalgae Concrete Violet Drinkwater, Master of Arch and Indya Barginere, BArts.</p>
1:45 – 2PM	Afternoon wrap up, collaboration, and conclude (IDRL, Storrs 122)

Panelist Info:



Ms. Mary Lou Bourne is the Senior Director Charlotte Regional Innovation Network leading NCI's work in the Charlotte region, anchored by UNC Charlotte. Ms. Bourne has master's degrees in Higher Education Administration and in Integrated Science & Technology. For over 18 years she held senior leadership roles at James Madison University, first as Director of Technology Transfer and then as Director of Technology Innovation & Economic Development. Ms. Bourne also founded and led James Madison Innovations, a 501(c)(3) corporation to manage intellectual property. In those roles, Ms. Bourne supported commercialization efforts for JMU researchers. She also led initiatives to create a regional angel investor network and strengthen the community's entrepreneurial ecosystem.



Donald Green is an Alumnus of UNCC College of Architecture, he is an Architect and Sr Project Manager with Progressive Companies and has made a positive impact on our community and our environment for over 25 years. He is a Sustainability Leader with Progressive Companies and has held leadership positions with numerous organizations, fostering crucial partnerships and coalitions with like-minded people and organizations, advancing the architectural profession as problem-solvers and leaders in an effort to advocate for a sustainable built environment, responsible community growth, and addressing the impacts of climate change.



As Executive Director of the Office of Research and Partnerships, Laura Peter works closely with the Vice Chancellor and Associate Vice Chancellor for Research as well as other leaders across the university to provide visionary and strategic leadership for UNC Charlotte's innovation, corporate research and technology commercialization activities. In this role, she supports and encourages university-wide programs for intellectual property awareness, development, innovation and engagement with business in the region, across the nation and around the globe. Prior to her arrival at UNC Charlotte, Laura served as the Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the United States Patent and Trademark Office (USPTO).



Dave Sartor is a Senior IP Counsel at Siemens Energy, Inc., where has managed a diverse Intellectual Property portfolio since 2007. With a background in electrical engineering and law, he has prosecuted patent applications across various technologies. Previously, he worked as an attorney at the IP boutique firms of Beusse Brownlee and Saliwanchik & Lloyd. Dave holds a JD from the University of Florida and is a Registered Patent Attorney. His engineering experience includes roles at Lockheed Martin designing electronic systems. He also taught patent law at Barry University.

Participants will leave the workshop having:

- A comprehensive understanding of the patenting process, from ideation to patent issuance.
- Good familiarity with different types of patents and how they relate to the processes of research, practice, and innovation.
- A deeper perspective on the legal and ethical issues in AI-generated innovation.
- Enhanced awareness of the IP compliance and best practices for innovations that are utilizing AI.
- A holistic understanding of challenges associated with scaling decarbonizing innovations.
- A better understanding of available funding mechanisms, including non-traditional sources.
- Forged new research collaborations.
- Forged relationships with the intra-department, community, county, and city.
- A jumpstart on proposal writing.