

Pilot Research Initiative to Enhance and Encourage Cross Disciplinary Scholarly Activities in the Area of Sustainability, Resiliency, Built Environment, and Public Health

**Funded by the Department of Civil, Construction, and Environmental Engineering
&
Sustainable Smart Cities Research Center
Submission Deadline: March 1st, 2022**

Overview: Cities and communities in the United States and around the world are entering a new era of transformation in which residents and their surrounding environments are increasingly connected through rapidly changing technologies. More than half of the world's population now live in urban areas, increasingly in highly dense cities. However, urban settings are a relatively new phenomenon in human history. This transition has transformed the way we live, work, travel, and build infrastructure. By 2050 it is projected that more than two-thirds of the world population will live in urban areas. This transformation offers great promise for improved wellbeing and prosperity but poses significant challenges at the complex intersection of technology and society.

The Sustainable Smart Cities Research Center (SSCRC) is an enabling platform for interdisciplinary collaboration to better understand and transform the impact of urbanization at scientific, economic, and human levels. The goal of this SSCRC solicitation is to accelerate the creation of the scientific and engineering foundations that will enable smart and connected communities to bring about new levels of economic opportunity and growth, safety and security, health and wellness, accessibility and inclusivity, and overall improvements to our quality of life.

The SSCRC in collaboration with the Department of Civil, Construction, and Environmental Engineering (CCEE) are announcing a pilot research initiative to enhance and encourage cross-disciplinary scholarly activities in the area of sustainability, resiliency, built environment, and public health. The goal of this request for proposals is to build on the success of [Live HealthSmart Alabama](#) initiative and foster cross-disciplinary research that integrates health, socio-economic impacts, and infrastructure design for the purpose of developing innovative solutions within emerging sustainable smart cities and communities. Specifically, in line with goals of the center, the aim is to bring together multidisciplinary faculty with diverse expertise within the following topic areas

1. Infrastructure Resiliency (i.e., buildings, highways, bridges, power grids, and water systems);
2. Monitoring the Built Environment and Urban Ecosystems through Smart Local and Remote Sensing;
3. Developing Resilient and Healthy Communities; and
4. Green/Sustainable Transportation to Improve Mobility and Health

This solicitation encourages researchers to work with community stakeholders to identify and define challenges they are facing, enabling those challenges to motivate use-inspired research questions. For this solicitation, community stakeholders may include some or all of the following: residents, neighborhood or community groups, nonprofit or philanthropic organizations, businesses, state organizations, as well as municipal organizations such libraries, museums, educational institutions, public works departments, and health and social services agencies. This program supports integrative research that addresses fundamental technological and social science dimensions of sustainable smart cities and investigates solutions together with communities. Importantly, this program is interested in projects that consider the sustainability of the research outcomes beyond the life of the project, including the scalability

and transferability of the proposed solutions, including development of larger grants to be submitted for extramural funding.

Vision for the Future: The SSCRC has the resources and expertise to be a state leader in this important strategic theme area. The work being performed by the SSCRC, in particular, is unique in the state and is providing a wealth of research opportunities. With the proper allocation of resources and further leveraging of institutional strengths in the School of Engineering, Public Health, and Medicine, the proposed strategic research program will allow us to become a regional and national leader. We believe these themes are, and will continue to be, areas of vital importance to the state and the nation and we expect national funding trends to support significant research in these areas for the next 10 years and beyond.

Who May Submit a Proposal: any full-time tenured/tenure track UAB faculty member(s). Application from junior faculty are preferred and will be given priority. The research team must be cross-disciplinary and is required to have a partner in the CCEE department.

Proposal Submission and Deadline: Submit your full proposal as one PDF file and email it to: rnazari@uab.edu and zechwes@uab.edu. Proposals are due by 5:00PM on March 1, 2022.

Funding Amount: \$25,000 per project.

Project Duration: 1-year

Proposal Preparation Instructions: Proposal must include all of the following components.

Cover Sheet: proposal cover page must include a title, team members, and a 500-word executive summary.

Project Description: project descriptions are limited to 5 pages in length. Proposals exceeding 5 pages in length will be returned without review.

The project description must provide details on an integrative research approach and describe how the community engagement components infuse and support the proposed research. It must include separate sections labeled Integrative Research, Community Engagement, and Plans for Future Proposal Preparation and Submission.

Integrative Research: proposals must include a statement on integrative research and collaboration, which should be the central focus of the Project Description. It must describe the challenges that drive the fundamental, scientific research problems; the technical and social science approach and rationale; and the potential for transferability and scalability.

Community Engagement: proposals must define the community, explain the rationale and breadth of community engagement and integration into the project, and describe how this engagement will be sustained throughout the duration of the award.

Plans for Future Proposal Preparation and Submission: proposals must describe how this pilot research will transform to a full proposal that will be submitted for extramural funding. This section must also identify the target agency(ies) that a future proposal is planned submission and provide a timeline.

Budget, Budget Description, and Schedule (not included in the five pages): proposals must include a 1-pg budget, budget description, and schedule.

Reporting Requirements: Award recipients are expected to publish their research results of at the conclusion of the study.