



## NSF Convergence Accelerator's 2022 Cohort Phase 1 Award

### Project Title

MidAtlantic Food Resiliency Network -  
Securing the Future of Food through a  
Multi-Mindset Approach

### Awardee

University of Maryland, College Park

### Award/Contract #

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R&D

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### Principal Investigator

Stephanie Lansing  
[slansing@umd.edu](mailto:slansing@umd.edu)

### Co-Principal Investigators

Vanessa Frias-Martinez, Cheng Gong,  
Oliver Schlake, and Hee-Jung Song

### NSF Funded Program

NSF's Convergence Accelerator

### NSF Program Director

Michael Reksulak  
Track J: Food & Nutrition Security  
Convergence Accelerator  
Directorate of Technology, Innovation  
and Partnerships  
[mreksula@nsf.gov](mailto:mreksula@nsf.gov)

### PROJECT ABSTRACT

The Mid-Atlantic Food Resiliency Network (MFRN) will develop a food system convergence research hub to address the complex and interconnected challenges of nutritional and food security. During phase 1, the focus will be in Prince George's County, MD and then expand throughout the Mid-Atlantic region in phase 2.

MFRN will address the grave need of reducing hunger, food waste, barriers to food access, and food deserts; all while strengthening food resiliency, empowering future food-literate leaders, and engaging and advocating for food equity among underserved communities that are negatively impacted by the current food system.

The MFRN offers a unique convergence model to merge ideas, approaches, and technologies from a wide field of knowledge, including Univ. of Maryland collaborators from the areas of agriculture, business, engineering, information studies, and dining services, along with the Prince George's County Food Equity Council (PGCFEC). The MFRN will develop user-inspired and novel data-driven tools, models, and an early warning system (EWS) that reduces food deserts, food waste, and barriers to food access.

This project will: 1) characterize via surveys, focus groups, and a digital toolkit: food acquisition and consumption behaviors of food insecure populations and identify food distribution barriers for urban growers; 2) develop sensing technology to determine food freshness and degradation; 3) design an intervention that address food discard behaviors; 4) characterize food waste for reuse and model how to most effectively repurpose food waste into meals, energy, and/or fertilizer; 5) develop a food resiliency EWS with peripheral vision support; and 6) prepare an innovative curriculum to prepare future leaders for addressing food security. This translational research will advance a food system that is accessible, climate-safe, just, and responsive to changing, interconnected rural and urban communities across the Mid-Atlantic.