## Goal:
To perform a meta-synthesis of the informal STEM education field

## Project Type:
Synthesis

## Project start/end date:
2021-2023

### Strategies:
- Systematic review of the science education literature with the aim of evaluating how and to what extent informal learning experiences impact participants’ awareness, interest, and engagement in STEM careers across demographic groups.
- Identification of program design principles, technology-based innovations, and best practices that can be adopted by STEM practitioners to maximize impact and broaden participation of females and members of historically marginalized racial and ethnic groups.

### Achievements:
- Developed validated rubrics to assess study design and evidence of impact (Habig 2020).
- As of August 2021, 686 studies extracted during systematic review.
- Proposal submitted to NARST 2022.

### Insights:
- Two emerging patterns: (1) long-term participation in informal science programs and (2) research-based apprenticeships associated with sustained engagement in STEM trajectories.

### Reconsiderations:
- Inclusion and exclusion criteria for studies.
- Advisory board recommended limiting inclusion to more recent articles with a focus on historically marginalized groups.
- Recruitment and training of graduate students.