

#### **OVERVIEW**

The LEVERAGE design and development launch pilot, led by an alliance of the seven largest national diversity-serving engineering professional organizations, will design, develop and test strategies that will inform how best to strengthen engineering education to increase the number of historically underrepresented faculty in engineering. This pilot will support the alliance's longer-term objective to construct a fully integrated system for faculty transition stages to double the number of historically 2025. underrepresented engineering faculty by Partner organizations include:

- American Indian Science and Engineering Society (AISES)
- MAES, Latinos in Science and Engineering (MAES)
- National Society of Black Engineers (NSBE)
- Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS)
- Society of Hispanic Professional Engineers (SHPE)
- Society of Women Engineers (SWE)

Collectively, these organizations have 300 years of experience supporting and celebrating women and the historically underrepresented in pursuing engineering careers.

## GOALS

To strengthen and extend the collaborative infrastructure between the seven leading diversity professional organizations in engineering.

To design, implement, and evaluate the efficacy of engaging diverse faculty, post-docs, and graduate students **full circles of support** for their success along academic career pathways.

To scale professional development opportunities for earlycareer faculty, post-docs, and graduate students to support their success and persistence in academic careers.



# **LEVERAGE: Extending the ASSIST Collaborative to Illuminate Engineering Faculty Pathways** Anna Park, J.D., Sarah Echohawk, Antonia Franco, Ed.D., and Karl Reid, Ed.D.



### **LEVERAGE'S FOCUS**

In 2014, AISES was funded by NSF (DBI #1444853) for Lighting the Pathways to Faculty Careers for Natives in STEM to create full circles of support for students pursuing academic career pathways.

In the fall of 2015, NSF's Broadening Participation in Engineering program funded the seven organizations collaborative to pursue a common goal of supporting diverse engineering faculty success through *ASSIST*: Strengthening Engineering Faculty through Diversity-Serving Professional Organization Engagement (EEC #1548322, EEC #1548197, EEC #1548200, EEC #1548319, and EEC #1548214).

**LEVERAGE** adapts the **AISES' PATHWAYS** model to strengthen and expand the collaborative work with **ASSIST** to create full circles of support and opportunities for year-round engagement of diverse individuals along their academic career toward tenured engineering faculty.





## **THE COLLECTIVE IMPACT**

The LEVERAGE partner organizations are professional affinity groups that support the professional development, persistence and success along the academic career pathways of underrepresented individuals, allowing their careers to be set within their cultural context. The LEVERAGE programs developed will provide mechanisms for creating discipline and/or research specific affinity group affiliations.

The activities planned for the LEVERAGE design and development pilot, are created to have a direct impact on participant productivity and well-being.

**Participant Incentive** - Activities designed with intrinsic merit **Conference Attendance** - Discipline-focused Summer Institute **Conference Content** - Engage Subject Matter Experts to help develop cultural relevant content **Mentoring** - Utilizes MentorNet for virtual mentoring Building Virtual Community - Create Virtual Learning Groups designed to impact faculty productivity **Participant Collaboration -** Virtual Collaboration Center



Dr. Mica Estrada, Department of Social and Behavioral Sciences, University of California – San Francisco, is the independent, external evaluator. Dr. Estrada currently serves as the external evaluator for AISES' PATHWAYS project.

The systematic and theory-based evaluation will provide two layers of results to assess the impact of program involvement before, during and after participation. The first layer of evaluation will focus on **summative outcomes,** to determine if the program activities result in the intended outcomes for the participants. The second layer, process analyses, will examine "why" the measured outcomes are occurring for program participants.

The primary goal is to diversify the engineering professorate. The ultimate measurable outcome will be increases in number for diverse engineering faculty. In addition, there is an expectation of a corresponding increase in the diversity of NSF CAREER Award recipients, as well as an increase in the diversity of NSF Engineering Directorate review panelists.





### **MEASURING & REPORTING SUCCESS**