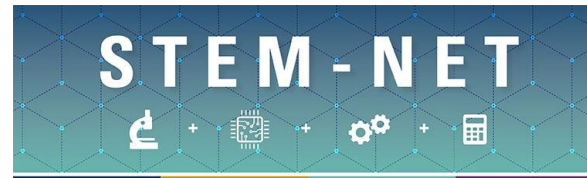


# Diversification in the Professoriate

Moderated by:  
Dr. Frank A. Gomez  
Executive Director, STEM-NET  
Office of the Chancellor



<https://www2.calstate.edu/impact-of-the-csu/research/stem-net>

## Speakers

**Mark H. Leddy, National Science Foundation**

Supporting Institutional Change for STEM Faculty Equity and Diversity

**Donna Garcia, Cal State San Bernardino**

The Diversity and Equity in Promotion, Tenure, and Hiring (DEPTH) ADVANCE Adaptation Initiative at CSUSB

**Ahmed Awad, CSU Channel Islands**

DESAFIAR: Discovery Enabling Systemic Advancement and Faculty Inclusion Across Ranks

**Daniel Almeida, Cal Poly SLO**

Culturally-Informed Strengths-Based Approach to Advance Early Career Faculty Success and Retention

**Lalita Oka, Fresno State**

Kindling Inter-university Network for Diverse (KIND) Engineering Faculty Advancement in the California State University System

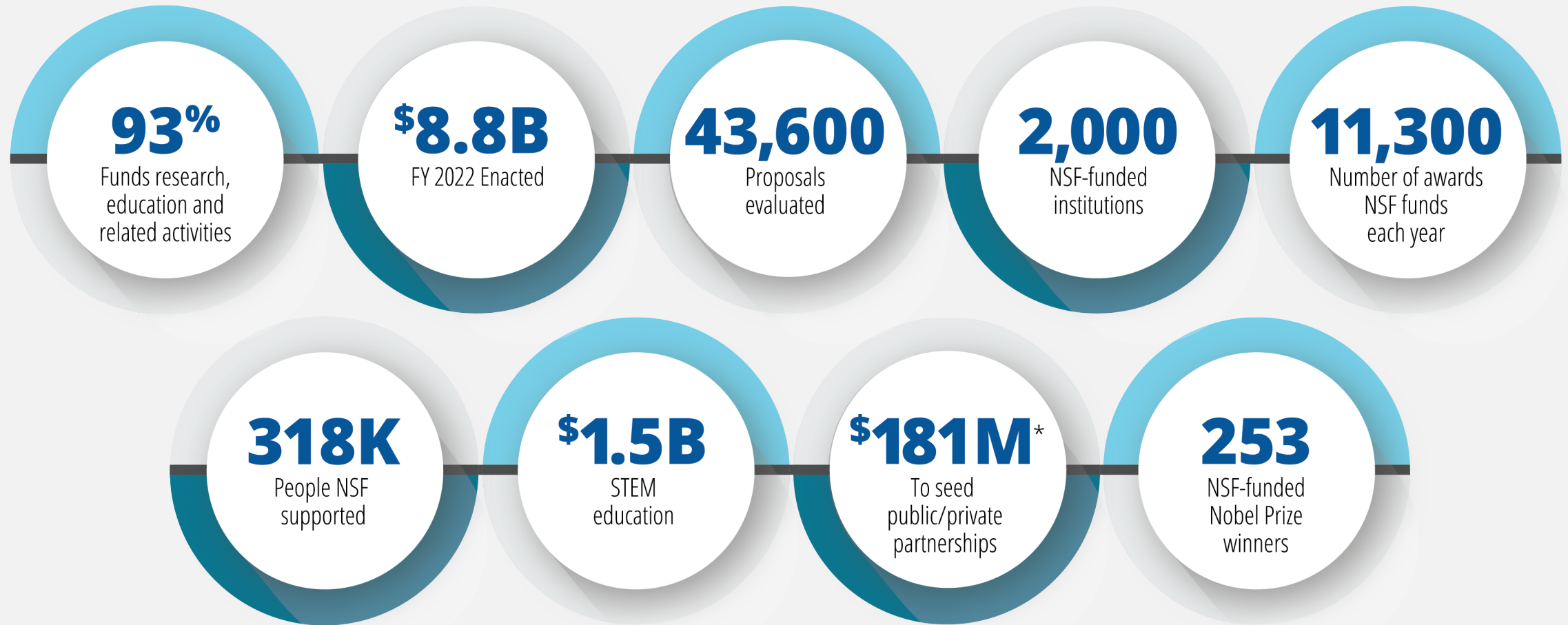
**Allison Mattheis, Cal State LA**

ADVANCEGeo: Transforming Workplace Climate in the Geosciences in Partnership with Professional Societies









*Data represents FY 2021 Actuals unless otherwise indicated.*


*\*Corresponds to NSF investments initiated in FY 2021 and spanning multiple years.*



# Advancing Diversity, Equity, Inclusion and Accessibility in STEM Academic Professions

- 8% of senior faculty with STEM doctorates are members of racial and ethnic groups historically underrepresented in STEM.
- Members of racial and ethnic groups historically underrepresented in STEM hold fewer tenured and tenure-track positions than their non-underrepresented peers.
- While there has been an increase in the diversity of role models in the academy for students, those increases are primarily found in ad-hoc and limited-term instructors.
- There are significant inequities in STEM the hiring, retention and promotion process for postdoctoral researchers and faculty who are members of racial and ethnic groups historically underrepresented in STEM.





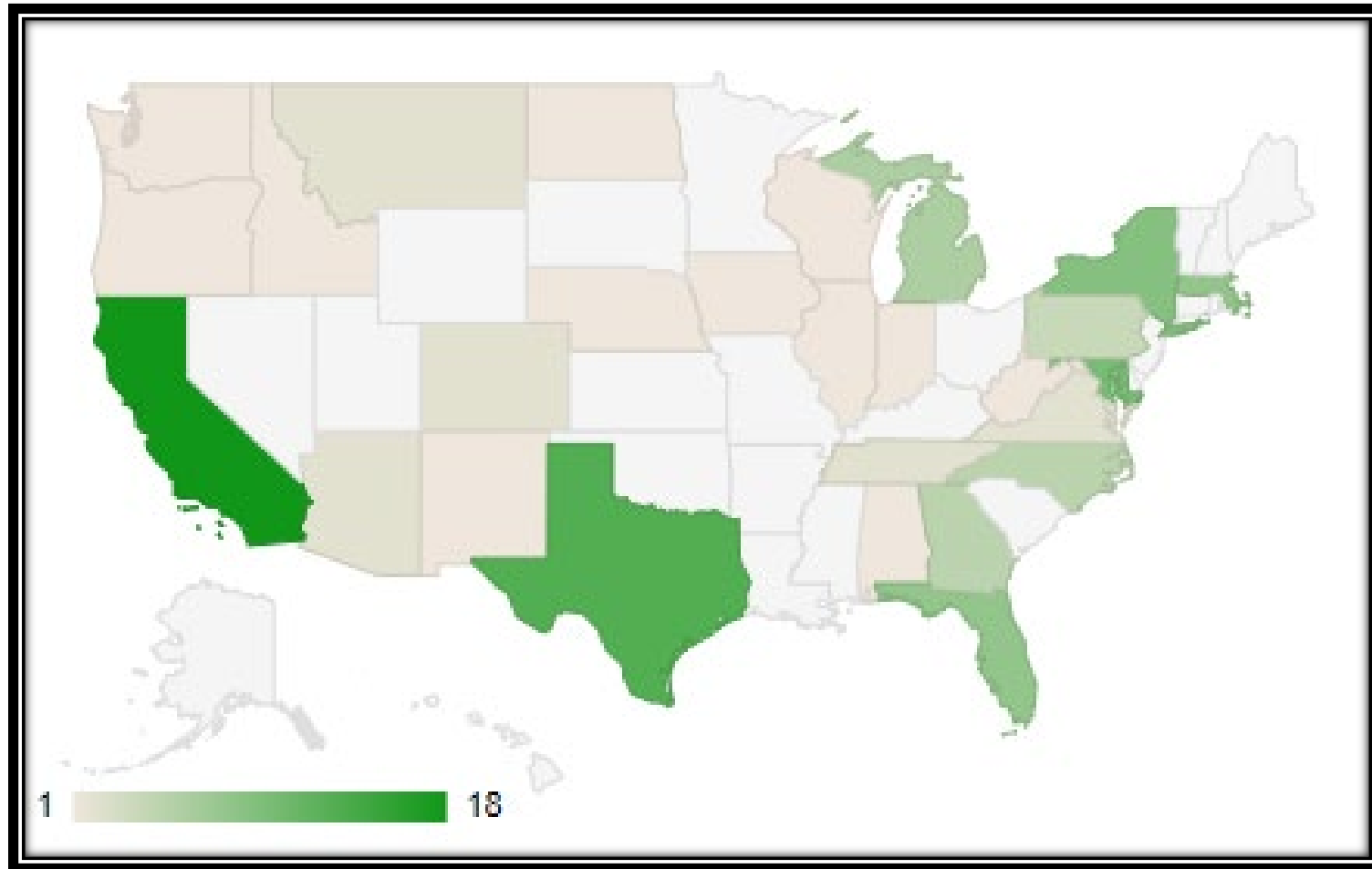
**Alliances for  
Graduate Education  
and the  
Professoriate  
Program (AGEP)**

AGEP Goal: To increase the number of African American, Hispanic American, Native American Indian, Alaska Native, Native Hawaiian and Native Pacific Islander faculty in STEM





# NSF Alliances for Graduate Education and the Professoriate (AGEP) Active Awards





# AGEP Catalyst Alliance (ACA)

## Institutional Transformation Alliance (ITA)

### ACA

- Up to \$400,000
- 2-year collaboration
- 3-4 IHEs
- Every March/August
- Organizational data
- Pilot strategies
- Develop 5-year plan
- Project description: 15-page limit

### ITA Preliminary

- At least one IHE already received an ACA award
- Same 3-4 IHEs as full ITA proposal
- Describe the ITA full proposal
- Every February
- Project description: 8-page limit

### ITA Full

- Up to \$4.4 Million
- 5-year collaboration
- Must be invited to submit after preliminary
- Same 3-4 IHEs as preliminary proposal
- Every August
- Systemic and institutional equity strategies
- Affect permanent policy changes
- Project description: 20-page limit



- Similar institutions submit a collaborative project
- Includes change agents with leadership expertise
- Targets systemic & institutional change to advance AGEP populations toward tenure & promotion in STEM
  - Organizational self-assessments
  - Change initiatives to promote equity
  - Build on piloted strategies
  - 5-year equity strategy plan
  - Permanent policy and practice changes
  - Intersectionality integration

# AGEP Alliances Solicitation NSF 21-576



# Intersectional Language in AGEP Solicitation (AGEP Alliances Solicitation NSF 21-576)

## Solicitation Language

- The AGEP focus on intersectional perspectives is important for identifying equity issues and solutions for AGEP populations.
- Intersectional approaches are considered throughout project design.
- Proposers should recognize that gender, race, and ethnicity do not exist in isolation or from other categories of social identity such as disability, sexual orientation, economic background, first-generation status, faculty appointment type, and additional identity variables.

## Additional Solicitation Specific Review Criterion

How well does the proposal use an intersectional lens and perspective to address systemic and institutional changes in practices and policies that advance AGEP populations?





# Diversity, Equity, Inclusion and Access that Focus on One Identity Need to be Intentional to Ensure No One is Left Behind



- Breaking the “Bronze Barrier”
- The first statue featuring women in New York City’s Central Park.
- The demand to include Sojourner Truth on a statue with other prominent leaders in the nationwide fight for the women’s right to vote.

<https://www.nytimes.com/2020/08/06/arts/design/suffragist-19th-amendment-central-park.html>





## The *AGEP Catalyst Alliance (ACA)*



- ▶ Design and implement one or more organizational self-assessment(s) to collect and analyze data identifying inequities affecting AGEP populations;
  - ▶ Pilot equity strategies as appropriate; and
  - ▶ Develop a five-year equity strategic plan for the AGEP populations.
- ▶ A facilitator or planning grant to generate the foundational work necessary to initiate an AGEP Institutional Transformation Alliance (ITA) preliminary proposal.

Title: Collaborative Research: AGEP ACA to Engage Leaders to Improve Diversity among STEM Faculty

NSF Award IDs: 2149204, 2149214 & 2149256

[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=2149204&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2149204&HistoricalAwards=false)



# NSF Alliances for Graduate Education and the Professoriate (AGEP) Program Team



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# **The Diversity and Equity in Promotion, Tenure, and Hiring (DEPTH) ADVANCE Adaptation Initiative at CSUSB**

*Donna Garcia – Cal State San Bernardino*

*Cari Goetz*

*Karen Kolehmainen*

*Beth Steffel*

*Shari McMahan*

**Donna Garcia**, Professor

Cal State San Bernardino, Department of Psychology

[dmgarcia@csusb.edu](mailto:dmgarcia@csusb.edu)

### Project Overview

- Funding:
  - NSF ADVANCE, Adaptations grant (\$995,876.00)
  - Chancellor Office Diversifying the Faculty (\$125,000) and Faculty Retention (\$28,000) Grants
- Institutional context:
  1. There were clear gender and racial/ethnic disparities in STEM representation.
  2. Women STEM faculty reported less positive experiences within their department, during hiring and the promotion/tenure (PT) processes relative to their male and non-STEM counterparts
  3. CSUSB lacked objective and standardized processes needed to avoid biases in recruitment, hiring, and PT
  4. Faculty DEI data tracking systems (e.g., recruitment pool demographics and exit data) were outdated or insufficient

## Project Overview

- Overall Goal:
  - Broaden faculty representation and improve the experiences of women and URM faculty, with a focus on STEM departments
- Primary Objectives:
  1. Track faculty DEI challenges and progress
  2. Increase faculty DEI in recruitment and hiring
  3. Promote DEI in promotion and tenure and increase faculty retention



## Activities

- Strategies and Tactics
- **Objective 1: Track faculty DEI challenges and progress.**
  - Application number and demographics
  - Equity of compensation packages
  - Demographics of tenure-line hires
  - Faculty evaluation committee survey
  - Search committee composition

## Activities

- Strategies and Tactics
- **Objective 2: Increase faculty DEI in recruitment and hiring**
  - DEPTH consultant (diversity advocate) training
  - Best practices in faculty hiring toolkit/checklists
  - Search committee training/consultation
  - Prospective faculty survey
  - Faculty hiring committee survey
  - Policy changes
  - Handouts for finalists
  - Faculty Affairs and Development website and forms revisions (increased inclusiveness)

## Activities

- Strategies and Tactics
- **Objective 3: Promote DEI in promotion and tenure and increase faculty retention.**
  - Faculty learning communities
  - Faculty focus groups
  - Faculty evaluation committee survey
  - Faculty survey
  - Faculty exit interviews/dean and chair surveys
  - Policy change

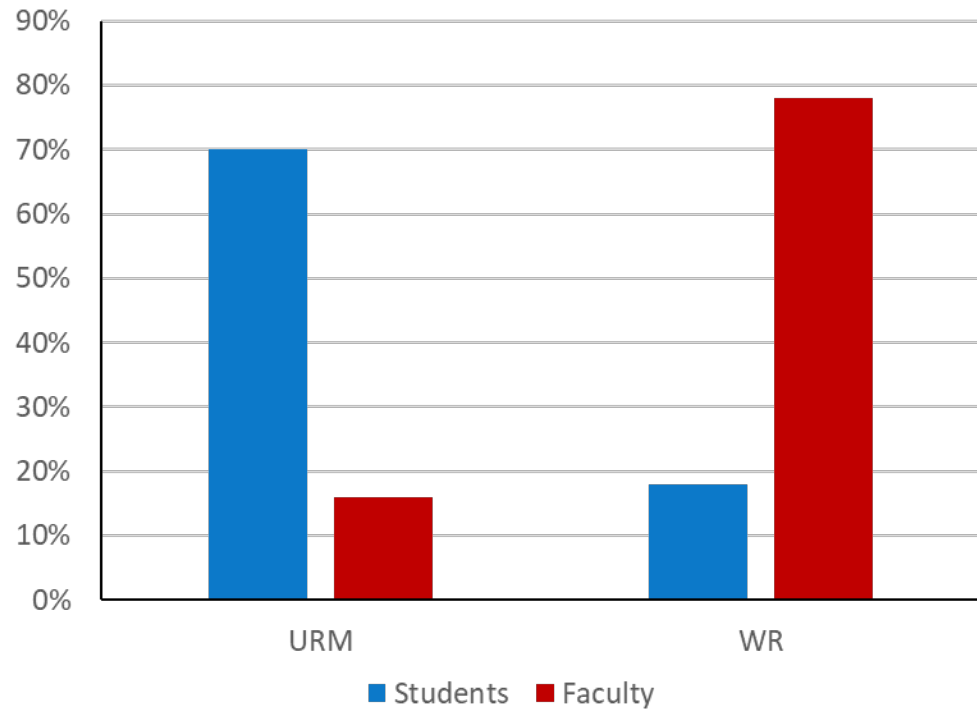
## Results

Activities	Specific Goals	Progress
Application number and demographics	Increase the average number of <b>applications</b> at CSUSB from <b>27</b> (baseline: 2017-2018) <b>per search to 50</b>	Year 1: <b>53</b> ; Year 2: <b>29*</b> Year 3: <b>32*</b> ; Year 4: <b>55</b>
	Achieve correspondence between applicant pools and national demographics of PhDs within those fields	Years 1, 2, 3, 4 ✓ <i>Institutionalized by FAD</i>
Equity of compensation packages	Identify and reduce gender and ethnic disparities	Baseline; Years 1, 2, 3, & <b>4</b> No pattern of disparities <i>Institutionalized by AA</i>
Demographics of tenure-line hires	Increase the percentage of <b>STEM women assistant professors from 29% to 40% by Year 4</b>	Year 4: <b>39%</b> <i>Institutionalized by FAD</i>
	Move towards reducing demographic gap between faculty and students	

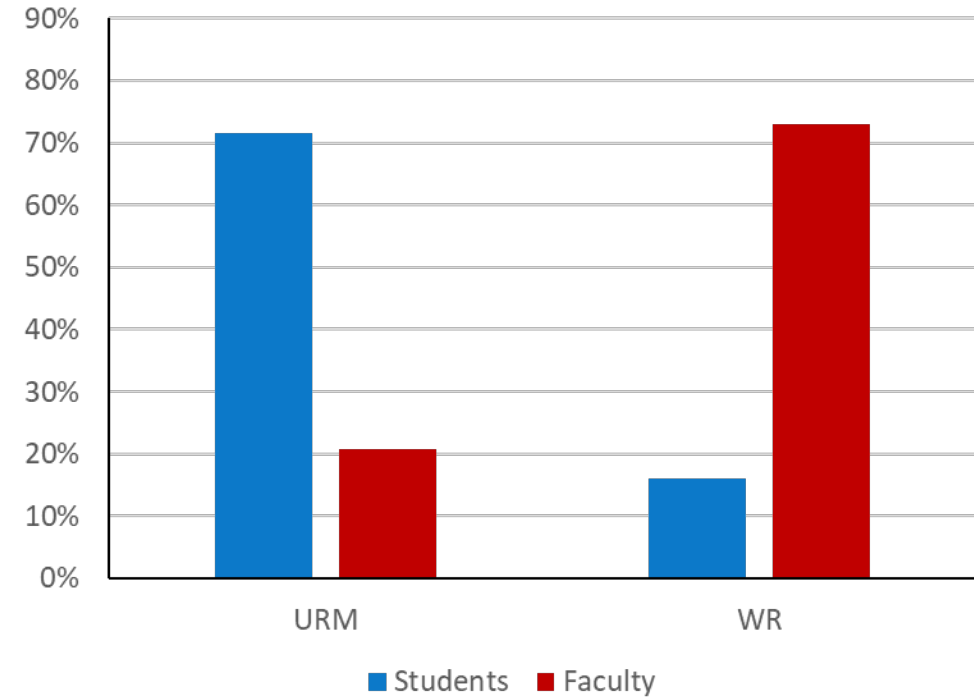


## Results

2017-2018



2021-2022



**WR = Asian and White**

**URM = Black/African American, Hispanic/Latino/a, American Indian, Alaskan Native, Hawaiian/Pacific Islander**

## Results

Activities	Specific Goals	Progress
<u>Prospective faculty survey</u> <u>Handouts for finalists</u>	Improve prospective faculty experiences	Years 1, 2, 3, & 4 Improvement each Year Institutionalized by FAD
<u>Faculty Surveys</u> <u>Search committee survey</u>	Establish baseline; identify areas of need; assess progress; summative evaluation	2016-2017 results shared with FAD, and Senate; informed search committee trainings/consultations <b>2021-2022</b>
Search committee composition	Representative of faculty body	Baseline; Years, 1, 2, 3, & 4 Reduce gap between committee composition and faculty Institutionalized by FAD

**Results**

<b>Composition of Faculty Search Committees</b>				
<b>Gender</b>	<b>URM/WR</b>	<b>2020-2021 Faculty Demographics</b>	<b>2021-2022 Search Committee Composition</b>	<b>2018-2019 Search Committee Composition</b>
<b>Women</b>	<b>URM</b>	9.9%	11.4%	7.0%
	<b>WR</b>	4.4%	44.6%	30.8%
<b>Men</b>	<b>URM</b>	9.9%	10.3%	5.6%
	<b>WR</b>	39.3%	30.3%	57.0%

**WR = Asian and White**

**URM = Black/African American, Hispanic/Latino/a, American Indian, Alaskan Native, Hawaiian/Pacific Islander**

## Results

Activities	Specific Goals	Progress
DEPTH consultant (diversity advocate) training	Prepare DEPTH consultants to serve as a resource for hiring	Intense training 2018-2019 Utilization as DAs
	Deliver Prejudice Habit Breaking Workshops and best practice consultations to <b>40% of faculty</b>	Year 1: N = 39; <b>9% of faculty</b> ; 8 workshops Year 3: N = 78; <b>17% of faculty</b> ; 17 searches; 93% attendance in consultations
Best practices in faculty <a href="#">hiring toolkit</a> and checklists	Increase use of best practices	<a href="#">DEI statement evaluation criteria</a> Years 3 & 4: <b>100% created rubrics</b> Search & advertisement plan involvement
	Create and disseminate best practices in faculty hiring toolkit	Year 2: <a href="#">Guide</a> & <a href="#">resources</a> completed FAD now uses in hiring training sessions <b>Checklists in progress</b>



## Results

Activities	Specific Goals	Progress
Promotion and tenure tracking	Identify gender/ethnic disparities in RPT decisions and salary increases Increase STEM URM women assistant professors from <b>2.5% to 6%</b> Increase the representation of STEM women at the rank of full professor from <b>28% to 40%</b>	Decrease in pattern of disparities <b>Waiting for Year 4 data</b> <b>Year 4: 10%</b>  <b>Year 3: 41%</b>
<a href="#">Exit interviews and dean/chair surveys</a>	Identify preventable reasons for faculty departures and gauge awareness of reasons	Year 3 Report in folder Year 4 exit interviews & dean/chair surveys – FAD
<a href="#">Faculty Learning Communities</a> (ISSUES-X DEPTH collaboration)	Creation of department faculty evaluation criteria grounded in best practices Create a repository of information for best practices in faculty evaluation Increase use of best practices in applying guidelines/criteria and writing reports	1 primary facilitators; 4 cofacilitators Regular training/planning meetings 6 department FLCs from CNS 4 learning 6 working meetings (90 min) Selected readings Created or revised department RPT guidelines based on best practices

### Results

Reasons for leaving CSUSB for another position	Exiting Faculty Member Interview	College Dean/ Dept Chair
Dissatisfaction with work-life balance	40%	10%
Dissatisfaction with campus or departmental culture	33%	20%
Received a better job offer from another academic institution	27%	70%
Personal & family reasons (i.e., geographic relocation)	27%	20%
Dissatisfaction with teaching load	27%	30%
Dissatisfaction with pay	20%	10%
Experiences of inequity	20%	10%
Lack of support for personal academic goals	13%	10%
Dissatisfaction with research resources (time, support, PhD students)	7%	30%
Needing a spousal accommodation	7%	20%
Leaving academia	0%	10%

### Results

- Focus group (7 participants; at least 1 from each of the 6 departments)
  - Sample comments
    - Addressed concerns on faculty minds
    - Appreciated time and space
    - Wanted seat at table to participate in process
    - Useful to share guidelines with other department groups for feedback
    - Positive reception when sharing guideline drafts with department
    - Departments appreciated coworkers taking the time
    - Needed more time to develop guidelines
- Survey
  - Analyses in process

### Lessons Learned

- Stakeholder support *and* collaboration are essential
  - Directly interface with Administration and Faculty Senate
  - Be transparent, give voice, respect time, incorporate input when feasible
- Important to back up suggested best practices with “best” evidence
- Simplify practice changes and processes



## **Next Steps/Long-Term Plans**

- Institutionalization of initiatives
- Focus on retention issues

## Summary

- Sustained DEI progress is possible
- Continual assessment and adjustment
- Faculty learning communities is a useful and effective approach
- Focus on practice, policy, and process rather than individual change



## Questions?

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## **DESAFIAR: Discovery Enabling Systemic Advancement and Faculty Inclusion Across Ranks**

*Dr. Ahmed Awad – Cal State University Channel Islands*

*Collaborators:* Dr. Selenne Banuelos (Co-PI), Provost Mitch Avila (PI),  
Dr. Cynthia Wyels (Internal Evaluator),  
Dr. Lindsey O'Connor and Dr. Melissa Soenke (Faculty Associates)

**Ahmed Awad**, Associate Professor

CSU Channel Islands, Department of Chemistry

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Central Mall/Bell Tower



Broome Library



Aerial view of Main Campus

**Ahmed Awad**, Associate Professor  
CSU Channel Islands, Department of Chemistry  
ahmed.awad@csuci.edu



### Project Overview

- CSU Channel Islands is committed to improving representation and equity among its STEM faculty.
- While our student body is 65% female and 57% students are from Historically Underserved Groups (HUGs), only 43% of our STEM faculty are women; 38% of faculty in the natural and physical sciences are women, three disciplines have no women amongst tenure-track faculty, and only 18.5% of our STEM faculty are HUGs.
- CSUCI will identify systemic factors leading to under-representation in STEM faculty and to conduct discovery regarding the nature of STEM faculty experiences, with a goal of enhancing equity.
- Activities proposed enable significant learning towards changing systemic factors that create inequities in the STEM academic profession, and to ensure equitable experiences for current and newly hired faculty.

### Activities

**A) Gather Data** to conduct evidence-based organizational self-assessment using an equity lens.

- We focus on (quantitative data) faculty hiring; Retention, Tenure and Promotion (RTP); and (qualitative data) investigating teaching and service loads.
  - Implement robust data tracking around each stage of faculty recruitment and hiring practices and analyze this data to better understand inequities in STEM faculty recruitment and hiring process.
  - RTP data will be disaggregated by gender, race/ethnicity, disability status, and STEM discipline.
  - Explore perceptions and realities of equity and transparency in faculty teaching and service loads.

**B) Review Policies and Practices** to develop and implement analytical tools that will uncover shortcomings that allow implicit bias and unintentional consequences to impact outcomes.

- identify changes that eliminate systemic conditions contributing to inequities in STEM faculty experiences.

**C) Develop a 5-Year Plan** to enhance faculty equity in STEM.

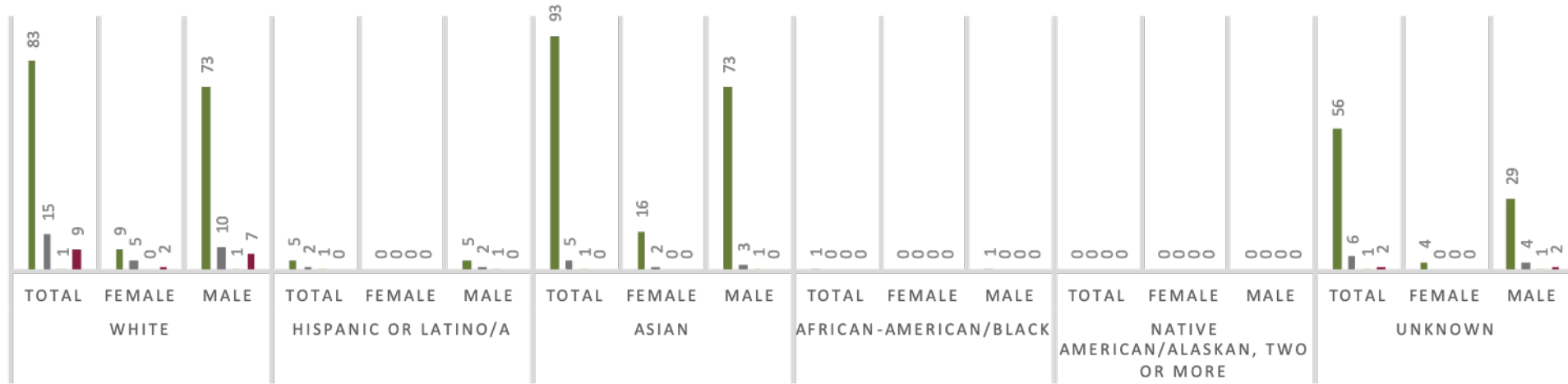
- Our plan will incorporate lessons learned from our first two activity areas, from a thorough literature review of ADVANCE and faculty-equity related works, and from consulting with CSUCI leadership and others in the ADVANCE network through site visits to ADVANCE awardees and participation in the ARC Network's conferences and webinars.

### Results

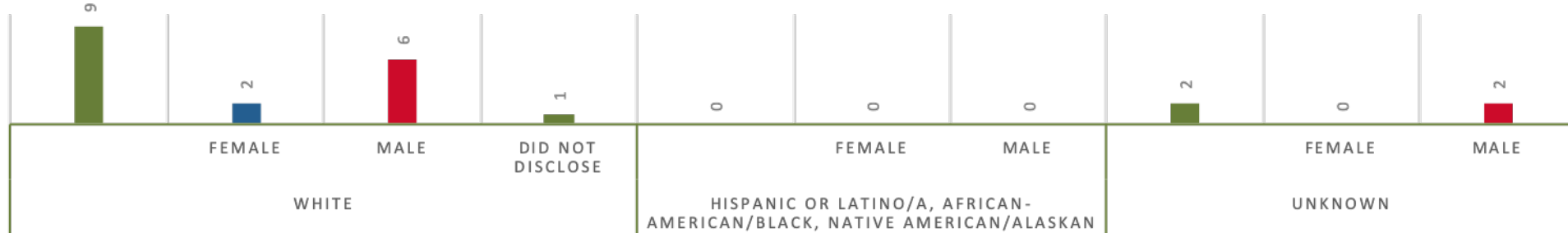
- The team obtained faculty search and hiring data for searches conducted from academic year 2012-2013 through 2019-2020. The team has also been provided the faculty retention, tenure and promotion (RTP) data for Fall 2013 - Fall 2020. The Leadership Team is currently performing the analysis on the faculty search and hiring data.
  - Search and hiring includes data on all individuals who apply for STEM faculty searches, all applicants invited for on-campus interviews, all applicants who receive an offer of a faculty position, and all applicants who accept a position, starting salaries, start-up packages, and which faculty are awarded reassigned time (reductions in teaching load).

## CS DEPARTMENT SEARCH DATA 2012-2019

■ Applicants   
 ■ Finalist   
 ■ Declined   
 ■ Hired



## CS DEPARTMENT HIRES FOR 2012-2019 SEARCHES



Data obtained from Computer Science search and hiring results for academic year 2012-2013 through academic year 2018-2019.

**Conclusion:** Computer Science program needs to make a stronger effort in their recruitment strategies in order to diversify their applicant pool.

### Results

#### Project activities shifted due to COVID pandemic:

##### 1. Investigating Teaching & Service Loads:

- This work consists of identifying inequitable conditions among STEM faculty by answering questions such as: do faculty perceive that the distribution of teaching work is fair overall? Do faculty believe that the distribution of service work is fair overall? Do faculty perceive that there is a commitment to equity in terms of teaching and service loads in their departments and university-wide? Do faculty believe they can request re-distribution of teaching or service work within their departments? Do faculty believe that departments use democratic, transparent, and/or equity-minded practices in determining teaching and service loads?
- We were concerned that the data we collect during the 2021-2022 academic year will not accurately reflect faculty's typical workloads, particularly if faculty work and personal lives continue to be disrupted by the pandemic (a highly unusual time).



### Results

- This last Summer 2022, Drs. O'Connor and Soenke conducted an exhaustive search of the literature on faculty workload inequalities and perceptions of workload equity, and their impact on faculty diversity in STEM. O'Connor and Soenke used these resources to create the DESAFAIR faculty survey materials that will be implemented this Fall. This study will build on:
  - Hidden teaching taxes: CSUCI has a high teaching load (4-4) and an expectation that faculty engage in student-centered and high-impact practices (CSUCI Mission Statement, 2022), making it an ideal location for uncovering additional teaching taxes.
  - Comparing STEM and non-STEM faculty: workload and perceptions of workload equity on burnout, turnover, and turnover intentions among STEM and non-STEM faculty
  - Department culture: investigate the role that cultural norms and interactions have in shaping workloads and perceptions of workloads
  - Impact of COVID-19: provide a snapshot of faculty workload and perceptions of workload equity as faculty emerge from the COVID-19 pandemic.

## Results

### **Project activities shifted due to COVID pandemic:**

2. Examining hiring policies and practices: The Center for Urban Education, CUE, (hired as external consultant by CI to develop a toolkit, webinars, ...) tenure-track faculty hiring toolkit pilot analysis has been shifted due to faculty hiring freezes. The investigation and examination of Hiring Practices will be conducted starting this Fall 2022.

- Two faculty who served on the chemistry hiring committee in spring 2022 will be hired to conduct a pilot analysis using the CUE toolkit.
- These analyses include: examining the job announcement from an equity perspective, a survey of the advertisement and recruitment activities, and a reflection on the application review and interview stages (for instance, did they provide equity-minded interview questions)? The faculty will use the CUE Equity in Faculty Hiring toolkit to assess their practices and provide suggestions for improvements on future searches.

### Results

- The Team has collected CSUCI policies that affect inequities among STEM faculty. The following are initial recommendations and actions for CSUCI administration:
  - Commit to identifying, correcting and updating Policies or Practices that may have helped to create inequalities among STEM faculty.
  - Continue to implement approaches to address gaps and enhance equity for STEM faculty.
  - Help promote a robust CSU system wide commitment to support Policies or Practices focused on the effects of structural racism and discrimination on inequities and provide opportunities that allow diverse perspectives.
  - Implement policy changes that promote anti-racism and remove barriers to professional growth for STEM faculty from diverse backgrounds, including underrepresented groups.
  - Continue to develop a performance expectation for CSUCI Leadership to be accountable for equity, diversity, and inclusion efforts and actively participate in the CSU system-wide DEI efforts.
  - Continue to develop programs to promote institutional culture change in support of inclusivity and equity.

### Results

- Provost Avila (PI) has committed to funding a faculty equity study to address salary inequities that may have resulted from past practices including some variation in salaries offered to incoming new probationary faculty. In Fall 2021, the University hired an external consultant to conduct the study. A primary purpose was to advise the University on whether some faculty salaries were lower than others (significant differences) without reasonable justification. Special attention was paid to whether gender, ethnicity, or race was a factor in any salary discrepancies. Anonymized data were provided to the consultant who performed regression and other statistical analyses to review salaries that were lower than expected.

### Next Steps/Long-Term Plans

#### A. Gather Data

##### A1. *Search/Hiring Data and RTP Data*

1. Search Process Data: Searches were conducted in AY 21-22, thus updates on data will be requested.
2. Hiring Process Data: continue to analyze 2013-2020 hiring data, reassigned time, mini-grant, sabbaticals, etc.; update data on offers, salaries, etc. from AY 21-22; analyze updated AY 21-22 data; interview admin regarding approved requests/how people get reassigned time.
3. RTP Data: analyze 2013-2020 RTP data, update RTP data on AY 21-22, and analyze updated AY 21-22 RTP data.

##### A2. *Investigating Teaching & Service Loads:*

In the Fall of 2022, we will implement/administer TSL survey and analyze results, and in Winter of 2023, we will use the results from the survey to develop protocols and finalize topics/questions for focus groups. In Spring of 2023, we will facilitate focus groups, analyze results, and write up results for inclusion in the grant report.



### Next Steps/Long-Term Plans

#### B. Examine Policies and Practices

##### B1. *Hiring Policies and Practices*

**CUE Hiring Toolkit Pilot Analysis:** All DSCs implementing CUE-related changes to hiring practices; Pilot analysis of AY21-22 hiring in STEM by 1-2 people from one program (using CUE guidelines); Faculty must be from the Discipline-specific search, no outside-department faculty nor Equity Advocates (EAs).

**Other Hiring Practices:** (FA vs Dept Roles; Faculty Equity Advocate embedded program; Lecturers)

##### **Other Campus Policies and Practices:**

- are the RTP expectations aligned with the California Faculty Association Collective Bargaining Agreement?
- are RTP reviewers at all levels required to continue their professional development around understanding implicit bias and engaging in practices promoting equity?
- what accountability structures are in place for professional development/training to serve on faculty and administrative search committees?
- how effective is the campus discrimination complaint process and for whom is it working?

**C) Develop a 5-Year Plan** to enhance faculty equity in STEM.

### Summary

DESAFIAR represents excellent potential to advance positive social outcomes. Enhanced understanding of systemic factors that contribute to inequities experienced by women, HUGs, LGBTQ, and persons with disabilities allows organizations to change these factors and create systems that promote equity. The analysis of recent STEM faculty hiring and recommendations to improve the outcomes of future hiring, leads to better participation of a diverse faculty in STEM. The engagement of current STEM faculty in both the hiring analyses and the “Investigating Teaching and Service Loads” aspects of DESAFIAR results in educating a larger contingent of STEM faculty regarding issues that have impacts on equity for STEM faculty. DESAFIAR is a strong initiative moving our faculty recruitment practices from traditional (with few to no gains in diversity) to transformative, through an equity-minded lens, with hopes of a significant increase in the diversity of faculty applicant pools, candidates making it to phone and campus interview, and a significantly larger number of minoritized faculty hires in future academic years to develop a diverse STEM workforce.

## Questions?

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CAL POLY

# Culturally-Informed Strengths-Based Approach to Advance Early Career Faculty Success and Retention

*Danny Almeida – Cal Poly San Luis Obispo*

*Collaborators: Jane Lehr, Camille O’Bryant, Sonia Ramrakhiani, Andrew Byrne, Victoria Bhavsar, April Dawn, Bryan Berrett, Joy Goto, Rudy Sanchez, Kara Dellacioppa, Kirti Celly, Philip Vieira*



CAL POLY



CalPolyPomona

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CALIFORNIA STATE UNIVERSITY  
DOMINGUEZ HILLS

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## Culturally-Informed Strengths-Based Approach to Advance Early Career Faculty Success and Retention

### Questions?

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Alliance Website: <https://www.calstate.edu/impact-of-the-csu/research/csu-agep-alliance-for-diversity-and-strengths-of-stem-faculty>

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**Kindling Inter-university Network for Diverse (KIND)  
Engineering Faculty Advancement in the  
California State University System**

*Lalita Oka – California State University, Fresno*



**CAL POLY**

**SJSU** SAN JOSÉ STATE  
UNIVERSITY



**ASPIRE**  
THE NATIONAL ALLIANCE FOR  
INCLUSIVE & DIVERSE STEM FACULTY

**Lalita Oka**, Associate Professor

Fresno State, Department of Civil and Geomatics Engineering

loka@csufresno.edu

## Project Overview

Why?	What?	How?
<ul style="list-style-type: none"> <li>• Percentage of Women faculty in Engineering</li> <li>• Inequity for URM</li> <li>• Help for foreign-born / foreign-trained (FB/FT) faculty</li> <li>• Currently no system-wide data is available</li> </ul>	<ul style="list-style-type: none"> <li>• Self-study to identify challenges</li> <li>• Support women and URM faculty</li> <li>• FB / FT faculty issues</li> <li>• Systemic issues for PUI (Predominantly Undergraduate Institutions)</li> </ul>	<ul style="list-style-type: none"> <li>• Create Dashboards</li> <li>• Undergo IChange</li> <li>• Research Alliance</li> <li>• Mentoring and Networking</li> </ul>

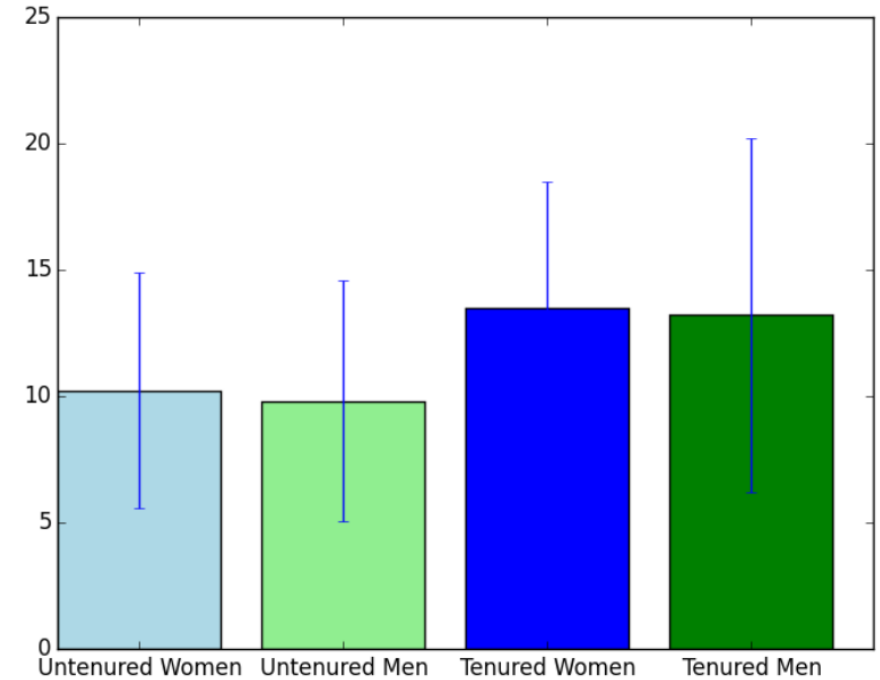
## Background

- Geotechnical Women Faculty (GTWF) gra
- Study highlighted disparities between
  - Women and Men
  - Tenured and tenure-track



What about CSU system?

No Data! 😞



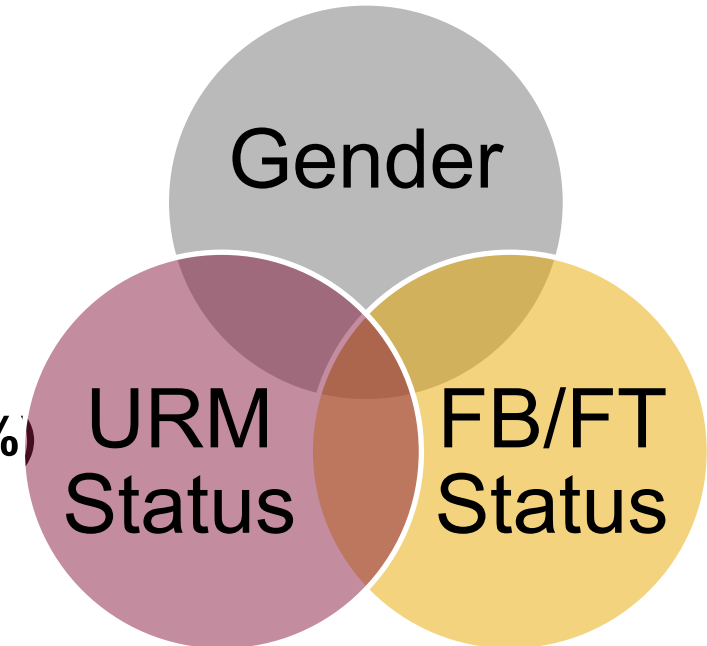
Source: Data from Geotechnical Engineering Community  
(GTWF grant: Syracuse University)

## Background

### Intersectionality in KIND

- CSU has < 15% women (national average ~ 20%)
- Most campuses are 'Minority Serving Institutions'  
What about Engineering Faculty Demographics?
- FB/FT – Predominant group (> 60%) (nationally ~ 56%)

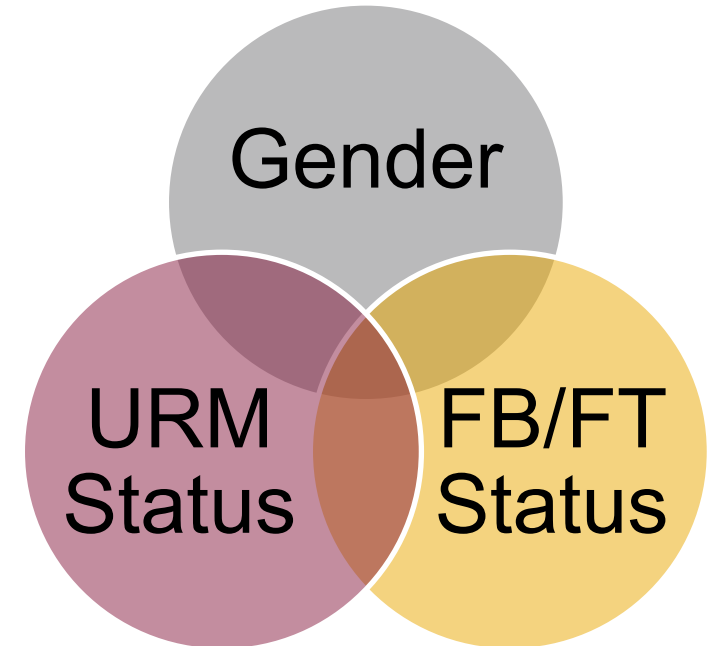
No reliable data



## Activities

### Broad Themes of KIND

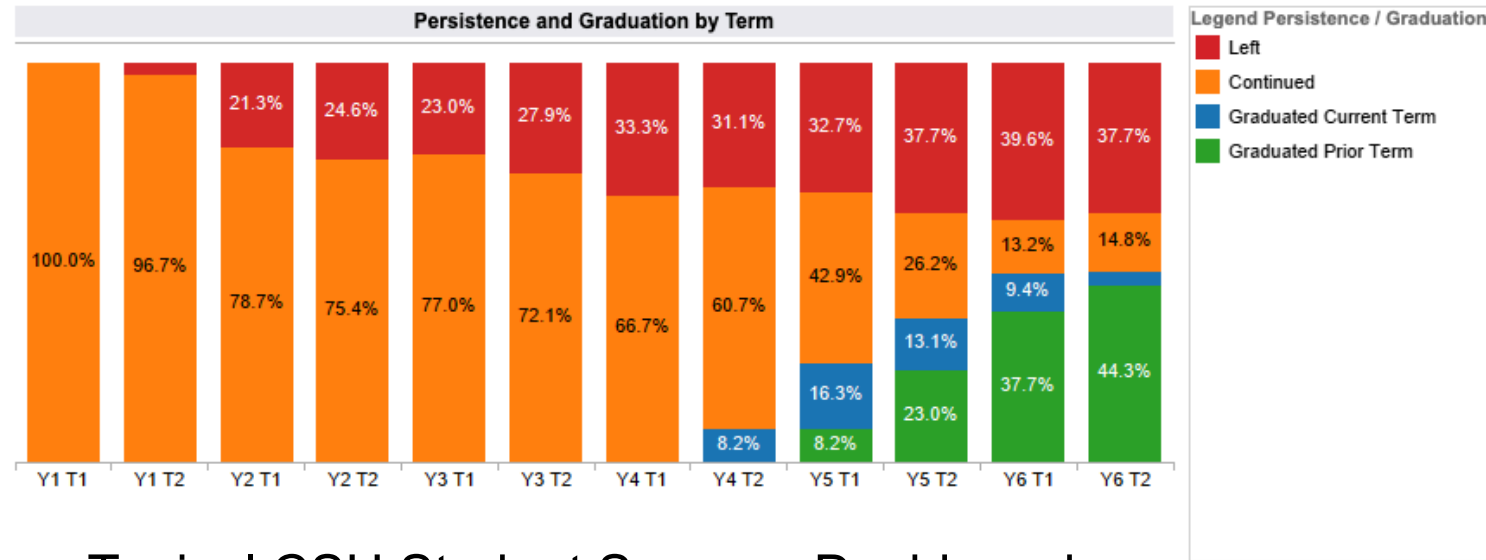
- Faculty dashboard
  - Hiring Dashboard
  - Retention and Promotion Dashboard
- IChange – Institutional Change
- Research Alliance
- Mentoring and Networking



**Activities**

Dashboard- Data Collection

- Ethnic demographics - Collect via Qualtrics
- Retention, Advancement Data - collect from Faculty Affairs
- Blinding data -
- IRB

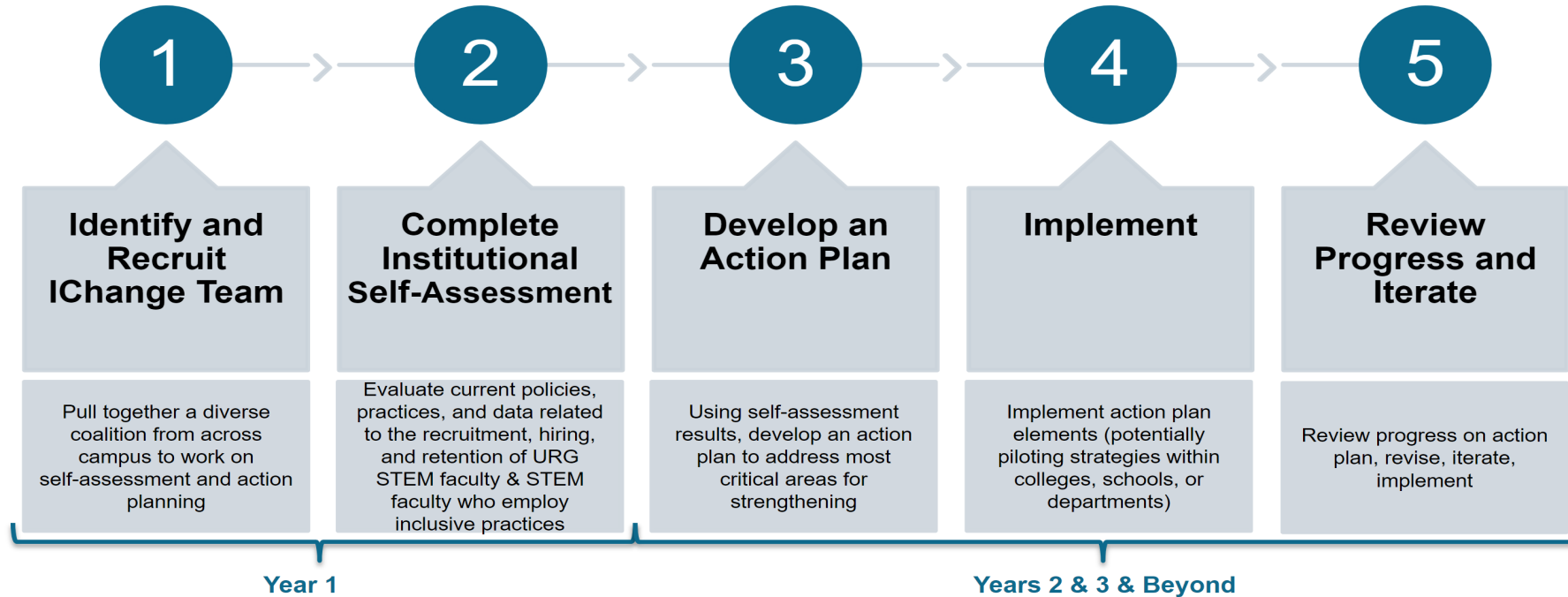


Typical CSU Student Success Dashboard



**Activities**

# IChange Team Process



## Activities

### Research Alliance

**Goal:** Establish collaborative relationships between engineering faculty across CSU

**How?**



#### Research Alliance

- Diverse teams - 4 teams/yr
- Annual conference
- Faculty Learning Community
- Grant writing workshops
- Early career support
- Publications

#### Engineering Research Directory

- Discipline
- Equipment / facilities
- Industry-partnership

## Activities

### **Goals:** Inter-Campus Networking and Mentoring Program

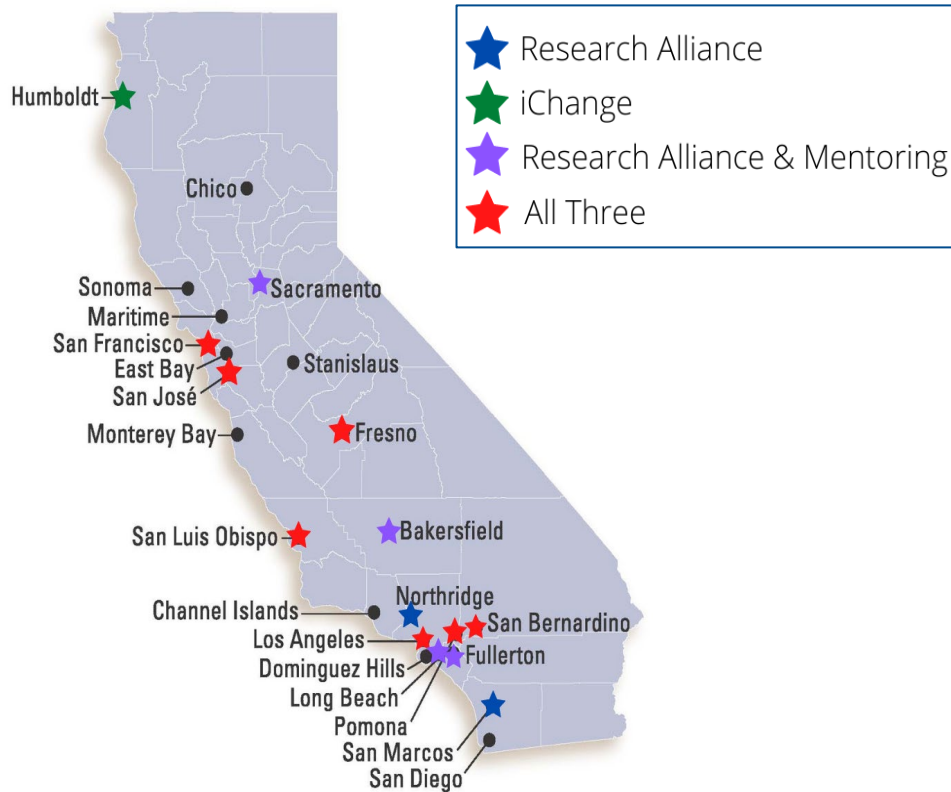
- Provide networking and mentoring opportunities (for the entire CSU system)
- Provide resources for overcoming bias and other career obstacles (for the entire CSU system)

- Virtual Mentoring Sessions – For existing faculty
- Annual Mentoring Session – Graduate students and Post-Docs
- Annual Faculty Success Seminars



Image credit:  
CWRU Venture Mentoring Program website

## Results



- 8 campuses – Dashboard and Ichange
- 13 campuses participating in at least one activity
- 61 faculty in Research Alliance cohort
- 3 teams – 8 faculty received Research Alliance mini grants
- Speed mentoring sessions – 2 sessions
  - 10 campuses
  - 30 faculty participants

## **Next Steps/Long-Term Plans**

- Dashboard – Permanent tool for hiring and retention
- Ichange - Self study – policy changes
- Research Alliance – Inter-campus collaborative research
- Mentoring and Networking – Establish inter-campus network

## Questions?

### Contact Information:

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# ADVANCEGeo: Transforming workplace climate in the geosciences in partnership with professional societies

*Allison Mattheis, Cal State LA*

***Collaborators:** Erika Marín-Spiotta, Asmeret Asefaw Berhe, Rebecca Barnes, Meredith Hastings, Blair Schneider, Billy Williams, Melissa Burt, Sora Kim, Jessica Blois*



**Allison Mattheis**, Associate Professor

Cal State LA, Division of Applied & Advanced Studies in Education

[amatthe5@calstatela.edu](mailto:amatthe5@calstatela.edu)

# Why the geosciences?



United States Geological Survey Group, Hayden Expedition, ca 1870-1875. (Photo by W.H. Jackson/The New York Historical Society/Getty Images)



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# ADVANCEGeo: Transforming Workplace Climate in the Geosciences in Partnership with Professional Societies

## Project Overview

1. Develop and deliver bystander intervention and workplace climate training with discipline-specific scenarios and that incorporate intersectionality.
2. Collect data.
3. Develop teaching modules that identify harassment as research misconduct.
4. Develop a sustainable model that can be transferred to other disciplines in partnership with professional societies.







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# ADVANCEGeo: Transforming Workplace Climate in the Geosciences in Partnership with Professional Societies

## Activities

- Developed trainings and led > 140 workshops/presentations
- Built relationships with campus admin and programs
- Generated online resources on relevant research and tested strategies
- Developed workplace climate survey
- Hosted first Train-the-Trainers workshop
- Expanded to other fields: ecology, animal behavior, evolutionary biology, neuroscience, chemistry, sociology, psychology, political science

# Changing culture and climate at all levels







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# ADVANCEGeo: Transforming Workplace Climate in the Geosciences in Partnership with Professional Societies

## ADVANCEGeo Intervention Approach:

- All members of community are bystanders, and *There is no such thing as a neutral bystander*
- Acknowledge power dynamics
- Provide a range of tools
- Address individual and collective behavior: workplace climate
- In-person interactive training with real-world scenarios
- Tailored to the discipline and audience
- Facilitated by scientists for scientists
- Data-driven approach
- Leverage role of professional societies





## Lessons Learned

Reimagining the Scientific Enterprise:

- Redesign science education
- Interrogate the history of our disciplines, institutions, practices and beliefs
- Reinvent mentoring
- Prioritize safety and people over data and disincentivize misconduct
- Redefine scientific success
- Recognize and compensate labor
- Be courageous



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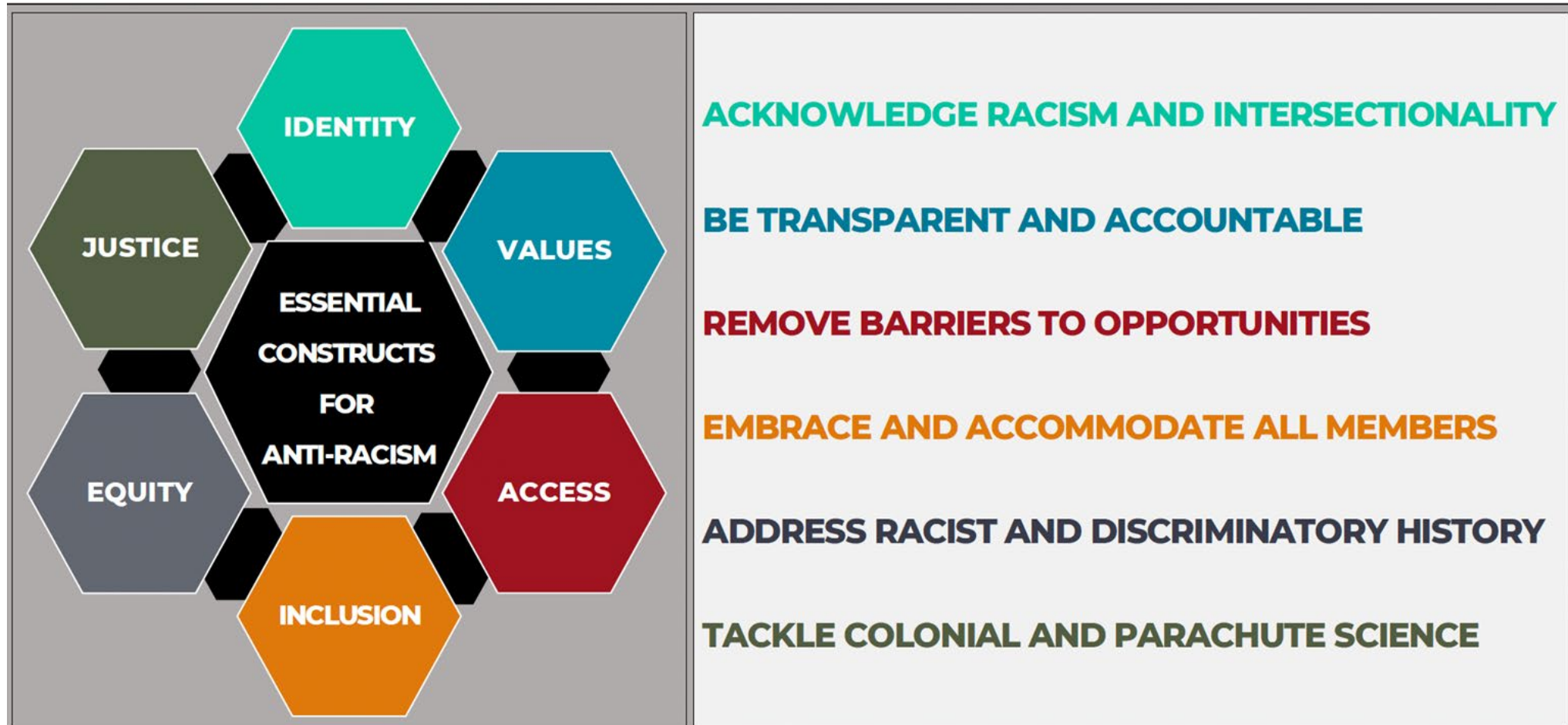
## Next Steps/Long-Term Plans

New grant building on this work (begins 9/1/22): **Collaborative Research: ADVANCE Partnership: Empowering scientists to transform workplace climate through the ADVANCEGeo community-based intervention program**

- (1) Develop and test a workplace climate intervention program for academic departments and future faculty training programs;
- (2) Develop and test a train- the-trainers certification and capacity-building program to engage and activate STEM leaders;
- (3) Develop and disseminate scaffolded online resources related to improving workplace climate for broad STEM audiences; and
- (4) Implement a plan for sustained national impact in partnership with professional associations.



# Practice intentionality



Ali et al. 2020. An actionable anti-racism plan for geoscience organizations.  
*Nature Communications*



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# ADVANCEGeo: Transforming Workplace Climate in the Geosciences in Partnership with Professional Societies

## Summary

The ADVANCEGeo program for equity in STEM is informed by critical feminist approaches that seek to disrupt unequal power dynamics in strongly gendered and racialized disciplines. The main organizational change intervention is a community-based model for bystander intervention education, informed by a feminist ethics of care. The program aims to enact interventions at the individual and collective level through behavior change education and organizationally through implementation of ethical codes of conduct that frame harassment, bullying and discrimination as scientific misconduct (Marin-Spiotta 2018; Marin-Spiotta et al. in review). Originally proposed to address sexual harassment, centering intersectionality expanded ADVANCEGeo's capacity to address a range of exclusionary and discriminatory behaviors to better address observed demographic trends in STEM.





# ADVANCEGeo: Transforming Workplace Climate in the Geosciences in Partnership with Professional Societies

## Questions?

### Contact Information:

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## **Next Steps/Closing Remarks**

Dr. Frank A. Gomez  
Executive Director, STEM-NET  
Office of the Chancellor

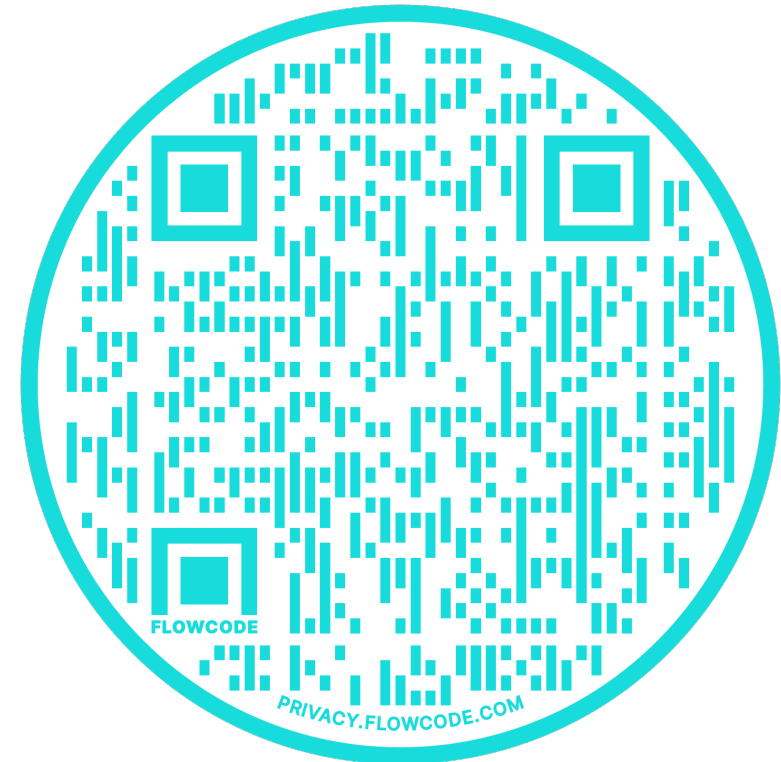


<https://www2.calstate.edu/impact-of-the-csu/research/stem-net>

## Webcast Feedback Survey

Please take a few moments to tell us about your webcast experience.

Use the QR Scan Code to download it



## Virtual Research Café 10.0

Date: Wednesday, September 21, 2022

Time: 11am-12pm

Register Here

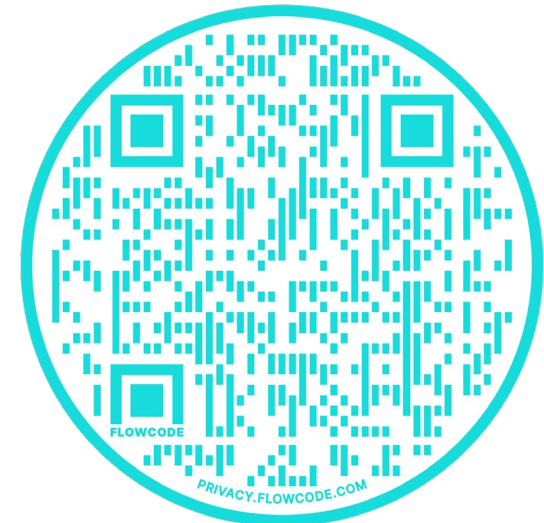


## 2022 STEM-NET SoCalGas Student Research Fellowship Virtual Research Café

Date: Friday, September 16, 2022

Time: 11am- 12PM

Register Here



## STEM-NET October Webcast

Topic: CSU Exemplars in Physics

Date: Thursday, October 6, 2022

Time: 10am- 11:30AM

Register Here





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[csustemnet@lists.calstate.edu](mailto:csustemnet@lists.calstate.edu)



**Begin a Conversation with Colleagues and Join our Private CSU STEM-NET Facebook Group**

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