CALIFORNIA NANOSYSTEMS INSTITUTE

UNIVERSITY OF CALIFORNIA SANTA BARBARA

CSEP CENTER FOR SCIENCE AND ENGINEERING PARTNERSHIPS

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K-12 and Community Outreach:

CSEP offers a variety of opportunities for K-12 students, their families, and teachers to interact with university Science and engineering faculty and students. An example is:

School for Scientific Thought (SST): Graduate students design and teach a five-session course for an audience of local and regional high school (HS) students.

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Evaluation:

CSEP provides evaluation support for faculty, including formative program evaluation and long-term tracking of participants.

Collaborations:

- 30+ Faculty and staff
- 40+ Projects from NSF, NIH, UCSB, and private foundations

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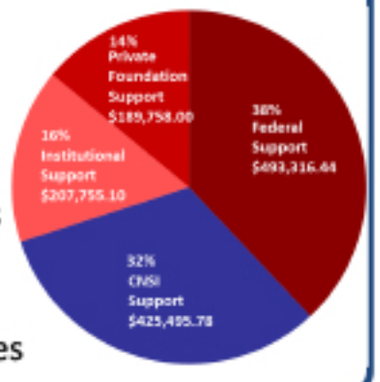
Measuring our success:

Annual Participants

- 3,700+ K-Gray Community
- 70+ Community College Students
- 700+ UCSB Undergraduates
- 580+ Grads/Postdocs
- 60+ Faculty
- 30+ Industry Representatives



Mission:

- Strengthen CNSI's and UCSB's capacity to play a leading role in the education of future scientists and engineers
- Integrate students who represent the diversity of talent in California into the future STEM workforce
- Lead and coordinate the submission of proposals for innovative STEM Projects on campus

Building Credibility/History:

- Began with NSF Research Center awards
- Established partnerships on-and off-campus and track record of recruiting new students into STEM from underrepresented groups
- CNSI established in 2000 - Education Programs built on prior successes in outreach
- CSEP established in 2010 after 20+ years of building expertise and networks within UCSB and among other partners

"Shared Laboratory Facilities" Approach:

- *A Research Group Model*: staff with education and/or technical backgrounds lead programs, and promote innovative projects that enhance the campus' capacity to recruit and retain talented students
- *Collaborative Environment*: promote interdisciplinary collaborations and exchange of expertise/resources across the campus and the community
- *Flexibility* to propose new ideas and respond to timely needs of various groups

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Community College:

CSEP offers summer research experiences and scholarship programs for STEM Community College students. Programs focus on first-hand experience in scientific investigation, broadening academic skills, social networking, and career exploration. Examples are:

Cooke Bridges for Engineering and Science Transfers: one week introduction to research and career exploration. 2012-13: 41% female, 57% underrepresented, 84% first generation.

Scholarships for Transfers to Engage and Excel in Mathematics: GPA at graduation for math transfers: non-STEEM – 2.97, STEEM – 3.44.

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Professional Development:

Emphasizing mentoring and communication skill building, CSEP programs provide training to develop the knowledge and practical experience essential for the success of undergraduate, graduate students and postdoctoral scholars in STEM.

- Teaching and Mentoring
- Communicating Science
- Networking and Career Preparation

Professional Development Series: serves 450+ grads and postdocs in weekly workshops

Beckman Scholars Program: innovative approach to research, mentoring, and leadership for undergrads.

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