

Soft Materials Research Center



*Education Outreach,
Human Resources,
Diversity*

*Christine Morrow
Director*



*Joseph Maclennan
Associate Director*

SMRC Pathways

- ◆ *transitioning - high school to undergraduate*
 - *GoldShirts (Engineering College)*
 - *partnership with Arrupe Jesuit High School*
 - *high school research experience*

- ◆ *transitioning - undergraduate to graduate*
 - *SMRC Pathway Partnership Program*



transitioning - undergraduate to graduate

- ◆ *Pathway Partnerships (2007 – present)*
 - *2007 – Cal Poly Pomona*
 - » *Professor James Rego (SMRC collaborator)*
 - *2008, 2011 – MRSEC Supplements*

“The purpose of this partnership is to provide cross-disciplinary research experiences for minority undergraduate students in Center laboratories, and to promote successful student research projects at Cal Poly Pomona.”



Pathway Partnerships with undergraduate & minority-serving institutions (UMSIs)

- ◆ *California Poly – Pomona (2008 – 2013)*

CAL POLY POMONA

- ◆ *California Poly – San Louis Obispo (2013 –)*



- ◆ *Metropolitan State University of Denver (2013 –)*



- ◆ *Texas State University, San Marcos (2016 –)*



Pathway Partnership context and scenario

- ◆ **UMSI/ SMRC collaboration**
 - joint UMSI / SMRC research project
 - SMRC provides partial UMSI research funding
 - » REU support
 - » UMSI release time
 - » joint proposals for UMSI funding
- ◆ **UMSI faculty select prospective UMSI students**
- ◆ **REU research on joint project**
 - ongoing activity by a student in both UMSI and SMRC labs (~1.5 years)
 - » context comparable to that of graduate students
 - » career mentoring
 - » in-depth evaluation by UMSI & SMRC faculty
- ◆ **offer of graduate admission to UCB with RA support (~ half accept)**
- ◆ **graduate study at UCB**
 - ongoing research participation (effective first-year research)
 - mentoring
 - standard graduate courses, candidacy requirements



Pathway Partnerships participant timelines

First name	Home institution	Background	Home REU	Center REU	admission to grad school	grad courses	thesis research	Degree completed/anticipated
Angel	Cal Poly Pomona	URM, M	S2008, F-2008	Su 2008-09	2009, UCB, Physics	F 2009	F2011-2014	PhD Physics, 2014
Consuelo	Cal Poly Pomona	URM, F	S2009, F-2009	Su 2009				BS Chemistry, 2009
Carlos	Cal Poly Pomona	URM, 1st gen.	S2009, F-2009	Su 2009	2015, UC Irvine, Health Policy			BS biology, 2009, MBA, 2017
Alyssa	Cal Poly Pomona	URM, F	S2011, F2011	Su 2011	S 2012, UCB Chemistry	S 2012	S 2014-2017	PhD Chemistry, 2017
Armond	Cal Poly Pomona	1st gen.	S2011, F2011	Su 2011	S 2012, Cal St LA, Physics	S 2012		MS, Physics, 2014
Edward	Cal Poly Pomona	URM, M	S2013, F2013	Su 2013	F 2013 UCB Chemistry	S 2013	S 2015-2018	PhD Chemistry, (2018)
Joshua	Cal Poly SLO		S2013, F-2013	Su 2013	F 2014 UCLA Mat Sci and Engin.	F 2014		BS, MS, Physics, 2016
Alicia	Metro State Denver	F	S2013, F2013, F20	Su 2013, 2014	F 2016, Miami U., Biology			BS, Chemistry, 2016
Lee	Metro State Denver	1st gen.	S2014, F2014		F 2015, UCB, Chemistry	F 2015	F 2016-	PhD Chemistry, (?)
Nicholas	Metro State Denver			Su 2014	F2017, U Montana	F 2017		BS, Physics, 2016
Mitchehell	Metro State Denver	1st gen.	S2016, F2016	Su 2016	F 2016 UCB Chemsitry	F 2017	S 2018-	PhD Chemistry, (?)
Valerie	Metro State Denver	F, 1st gen.	S2016, F2016	Su 2016	F 2017, U Wyoming	F 2017		BS, Chemistry, 2017
James	Cal Poly SLO		S2016, F2016	Su 2016	F2017, U Oregon	F 2017		BS, Physics, 2017
Vincent	Cal Poly SLO	1st gen.	S2016, F2016	Su 2016	applying CS or Physics			BS, Physics, 2017
Carlos	Cal Poly SLO	URM	S2016, F2016	Su 2016	F2018, USC Physics	F 2018		BS, Physics, 2017
Steven	Tx State SM	1st gen.	F2017	Su 2017	UC Davis, Chemistry	F 2018		BS, Chemistry, 2018
Carlos	Tx State SM	URM	F2017	Su 2017				BS, Physics
Dania	Metro State Denver	F, 1st gen.	F2017	Su 2017	F 2018 UCB Chemsitry	F 2018		PhD Chemistry, (?)
David	Tx State SM	URM, 1st gen.	F2017	Su 2018	applying medical school			BS, Chemsitry, 2018
Heather	Tx State SM	F	F2017	Su 2018	applying medical school			BS, Chemsitry, 2018

green highlights indicate students on UCB PhD pathway

summary

◆ *SMRC Pathway Partnerships*

- *UMSI talent pool is deep*
- *alternative trajectory that creates Ph.D.s*
- *stimulate post-graduate training as a career choice*
- *MRSEC Program – a particularly well-suited venue for such a pathway*
- *can be done in the PREM context but you don't need a PREM*



Superseed-funded Workshop



PATHWAY TO THE WORKFORCE

AUGUST 12-16TH, 2019 - UNIVERSITY OF CALIFORNIA SANTA BARBARA



a Workshop in Leadership, Communication, and Professional Competencies for NSF MRSEC/PREM Students and Post-docs

This is a five-day, intensive, professional development summer workshop for a diverse cadre of undergraduate and graduate students and post-docs in science and engineering. The purpose is to train a diverse group of participants to build their professional networks and competencies at an early stage of their scientific careers. Participants from the NSF MRSEC and PREM networks are invited to apply starting in January 2019.

Contact pathways@colorado.edu for more information.

Complete website coming soon!

