Supporting the next generation of atmospheric scientists: Results of the CMMAP-SOARS collaboration

Rebecca Batchelor, Rebecca Haacker-Santos
SOARS Program, Spark UCAR Science Education, Boulder, CO

CMMAP-SOARS Protégés

Kimberly Trent (CMMAP-SOARS 2006-07)
B.S. Yale University, 2007 (Applied Physics)
PhD candidate in Applied Physics at the University of Michigan, NSF Graduate Research Fellow, Ford Fellow, & NASA JPFP Fellow

Zizi Serales (CMMAP-SOARS 2007)
B.S. San Francisco State University, 2009 (Geology)
Zizi is now an environmental remedial project manager with EPA R9 Superfund Division

Karen Diaz (CMMAP-SOARS 2008)
B.S. Polytechnic University of Puerto Rico, 2007 (Environmental Engineering)
PhD candidate at Colorado State University in Environmental and Radiological Health Sciences

Alex Gonzalez (CMMAP-SOARS 2007-09, SOARS Fellow)
B.S. Pennsylvania State University, 2008 (Meteorology)
M.S. Colorado State University, 2011 (Atmospheric Science)
PhD candidate in Atmospheric Science at Colorado State University

Nicole Ngo (CMMAP-SOARS 2009)
B.S. University of California, Irvine, 2006 (Earth & Environmental Science)
PhD Columbia University, 2013 (Sustainable Development)
Nicole is now an Assistant Professor in the Department of Planning, Public Policy & Management, University of Oregon

Maximo Menchaca (CMMAP-SOARS 2010)
B.S. University of Illinois, Urbana-Champaign, 2011 (Environmental Studies)
PhD student in Atmospheric Science at the University of Washington, NSF Graduate Research Fellow

Diamilet Perez-Betancourt (CMMAP-SOARS 2010-11)
B.S. University of Puerto Rico, 2012 (Physics)
PhD student in Atmospheric Science at the Massachusetts Institute of Technology, NSF Graduate Research Fellow

Rosimar Rios-Berrios (CMMAP-SOARS 2011)
B.S. University of Puerto Rico, 2012 (Physics).
Graduate student in Atmospheric Science at the University of Albany, NSF Graduate Research Fellow

Vanessa Vincente (CMMAP-SOARS 2011, SOARS Fellow)
B.S. Valparaiso University, 2012 (Meteorology)
Graduate student in Atmospheric Science at Colorado State University.

The SOARS Program

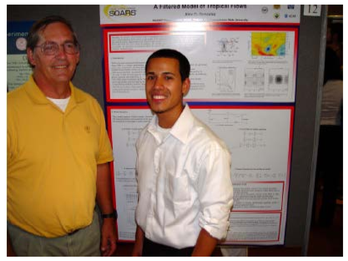
The mission of SOARS is to broaden participation in the atmospheric sciences by engaging students from groups historically under-represented in science, including Black or African-American, American Indian or Alaska Native, Hispanic or Latino, female, first-generation college students and students with disabilities. SOARS welcomes LGBT students. At the heart of SOARS is a ten-week summer program during which participants (protégés) conduct scientific research at the National Center for Atmospheric Research (NCAR) and partnering laboratories.

SOARS and CMMAP have collaborated for the past seven years in recruiting, mentoring and supporting students to transition and succeed in graduate school. A large number of SOARS protégés have entered the atmospheric science program at Colorado State University and are working on CMMAP related topics.

Successful Program Elements

Holistic mentoring

Strong mentoring is the key to a successful summer research experience. SOARS protégés are supported by up to five mentors, guiding the protégé in research, scientific writing, computing, in navigating the culture of a research facility and integrating into SOARS. In addition, the SOARS staff mentors the protégés in academic and career choices.



CSU-SOARS mentor Wayne Schubert & Alex Gonzalez

Supportive learning community

The SOARS learning community is designed around a critical mass of 20-25 diverse students living together. Protégés work on related scientific projects and collaborate to develop and refine their leadership, professional and communication skills. This network supports protégés as they move into the larger national and international atmospheric science community.

SOARS has built a strong alumni network .

Leadership

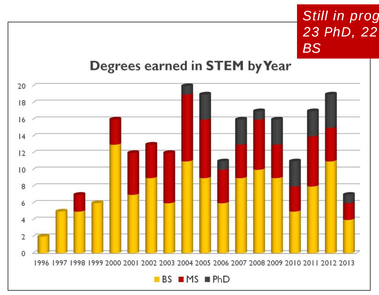
SOARS protégés are encouraged to grow, not only as researchers, but as scientific leaders who can see science as an opportunity to contribute to society. SOARS supports its protégés in their development as future leaders through formal and informal leadership training.

Multiple-year program & financial support

SOARS protégés begin the program as undergraduates and may participate in the summer research program up to four times. During the summer, SOARS offers graduate school seminars, funding for GRE courses and advice on choosing and applying to a graduate program. Once in graduate school, protégés are supported with school funding.

Results

Still in progress: 23 PhD, 22 MS, 9 BS



Degrees earned by SOARS protégés 1996-2013

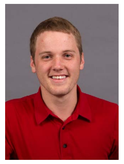
CMMAP-SOARS Protégés

Frances Roberts-Gregory (CMMAP-SOARS 2012)
B.A. Spelman College, 2013 (Sociology and Anthropology)
Graduate student in Environmental Science at the University of California, Berkeley

Ana Ortiz (CMMAP-SOARS 2012)
B.S. University of Illinois at Urbana-Champagne, 2013 (Atmospheric Sciences)
M.S. student in Professional Science at the University of Miami

Jake Zaragoza (CMMAP-SOARS 2012-13, SOARS Fellow)
B.S. Gonzaga University, 2012 (Chemistry)
Graduate student in Atmospheric Science at Colorado State University

Jonathan Martinez (CMMAP-SOARS 2013)
B.S. student in Meteorology at Florida State University



Aaron Piña (SOARS Fellow)
B.S. Texas A&M University, 2011 (Meteorology)
Graduate student in Atmospheric Science at Colorado State University

Matthew Paulus (SOARS Fellow)
B.S. Embry-Riddle Aeronautical University, 2009 (Meteorology)
Graduate student in Atmospheric Science at Colorado State University

Annareli Morales (SOARS Fellow)
B.S. University of Illinois at Urbana – Champaign, 2012 (Atmospheric Science and Geology)
Graduate student in Atmospheric Science at Colorado State University

Future CSU Collaborations

SOARS and its university partners have developed effective collaboration models that allow faculty to include support for a SOARS protégé in their grant proposals. PIs have the lead in defining the summer project and an active role in selecting the student best suited for the project. Supporting a SOARS protégé gives faculty access to top candidates for graduate school, strengthens our field's commitment to students from under-represented groups, and provides PIs with a proven contribution to broader impacts.

For more information, please contact:

Rebecca Haacker-Santos
SOARS Director
rhaacker@ucar.edu, 303-497-8623
www.soars.ucar.edu