#### SARA PATRICIA CHAVARRIA

#### **CONTACT INFORMATION**

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#### **BACKGROUND**

Dr. Sara Chavarria designs and conducts informal educational programming that creates learner-centered interactive experiences for minoritized (underserved and underrepresented) students (K-20) as well as for teachers/educators that serve these populations. She is especially interested in best practices for attraction and retention of low income, first generation undergraduate students and advises university partners on effective design of K-16 academic summer programs to engage and retain underrepresented audiences in their areas of study. She also provides extensive broader impact grant writing support to education faculty and faculty from UA Colleges of Engineering, Agriculture, Medicine, and Science and connects College of Education researchers with UA faculty to leverage Education science expertise on topics such as Access, Inclusion, Diversity, Equity, Justice, and Retention of students to facilitate research on effective learning practices for UA students and PK-12 audiences. She also collaborates with researchers, administrators, and staff across campus to facilitate institutional partnerships, support effective initiatives, and advance scholarship that promote equitable access to high-quality educational experiences, resources, tools, and expertise.

Her portfolio includes coordinating multifaceted outreach projects, including the design of curriculum for Native American audiences; the design and incorporation of high school student digital stories to situate their identity in the field of archaeology, social sciences, and environmental sciences (LSWHTA); the design, coordination of summer research experiences for undergraduates with 12 months of faculty/research mentoring support (NSF REM; IES AWARDS Plus); the development of Social Studies curriculum units for PULSE (Promoting Understanding and Learning for Society and Environmental Health) and for the International School of Toulouse, France; the development of Summer Institutes for High School Students and for Secondary School teachers (Archaeology and Dendrochronology + Fire Ecology); and the design of mentor hosting handbooks for K-12 (Kindergarten-12<sup>th</sup> grade) schools and education organizations

#### **EDUCATION**

2000 Ph.D., Language, Reading, and Culture (Minor: Anthropology), University of Arizona

1995 M.A., Anthropology, University of Arizona

1988 B.A. Anthropology, University of Texas, San Antonio

# PROFESSIONAL EXPERIENCE

# 2016-Present Assistant Dean, Research Development and Outreach, UA College of Education

• Identify grant opportunities for our faculty and researchers; support faculty with grant writing, program design, and program evaluation design.

- Create and secure interdisciplinary collaboration opportunities for our faculty with faculty and researchers in other units at the University of Arizona.
- TLS 400, the. Instructor, Career readiness course for the Literacy, Learning and Leadership BS, Department of Teaching and Sociocultural Studies, College of Education, University of Arizona.
- Oversee the college's outreach programming efforts which include hosting faculty from other universities, hosting K-12 teachers and their students while on UA campus, connecting K-12 teachers to other efforts on campus for campus visits (admissions, museums, centers, laboratory tours, etc.)

# 2012-Present Assistant Director, UA STEM Learning Center

- Broader Impact grant writing consultation, program design, and evaluation design. Broader impact efforts are coordinated to serve the community's needs more effectively, sustainably, and consistently by pooling resources in programmatic design
- Presenting SLC program efforts to faculty and stakeholder groups.
- TRIO Student Support Services STEM program. Supporting assessment needs review and design by request.

# 2006-2016 Director of Education Outreach, UA College of Education

Oversee the college's outreach programming efforts which include hosting faculty from other universities, hosting K-12 teachers and their students while on UA campus, connecting K-12 teachers to other efforts on campus for campus visits (admissions, museums, centers, laboratory tours, etc.). Efforts included the design of K-12 handbooks to assist them in hosting UA volunteers, informal education curriculum design, running summer programs, and teaching TLS 400.

- 100% Engagement project designing a handbook on leadership pathways for volunteers at non-profit locations. (<a href="https://www.coe.arizona.edu/LeadPathways">https://www.coe.arizona.edu/LeadPathways</a>)
- UA Laboratory of Tree-Ring Research, CSI (Catastrophe Science Investigators) Middle School Girls research workshop (<a href="www.coe.arizona.edu/trlessons">www.coe.arizona.edu/trlessons</a>)
- UA Laboratory of Tree-Ring Research, Teacher Workshops (<a href="https://www.coe.arizona.edu/treeringsummer">https://www.coe.arizona.edu/treeringsummer</a>), Student Activities, videos, and Lesson Design (<a href="https://www.coe.arizona.edu/trlessons">https://www.coe.arizona.edu/trlessons</a>) (<a href="https://www.coe.arizona.edu/forestfirevideos">https://www.coe.arizona.edu/trlessons</a>) (<a href="https://www.coe.arizona.edu/trlessons">https://www.coe.arizona.edu/trlessons</a>) (<a href="https://www.coe.arizona.edu/trlessons">https://www.coe.arizona.edu/trlessons</a>) (<a href="https://www.coe.arizona.edu/trlessons">https://www.coe.arizona.edu/trlessons</a>)
- Co-Chair, The UA Collaborative for Community Outreach and Extension organization. Hosts the UAforYOU website. (http://uaforyou.arizona.edu)
- Passport to High School Summer Institute program coordination, College of Education, University of Arizona, Tucson, Arizona (http://www.coe.arizona.edu/P2HS)
- *Hosting Mentors Handbooks*, College of Education, University of Arizona, Tucson, Arizona (<a href="http://www.coe.arizona.edu/HostingMentors">http://www.coe.arizona.edu/HostingMentors</a>)
- Summer Enrichment Program for High School Teachers (2012), College of Education, Tree-Ring Laboratory, Biosphere 2, University of Arizona, Tucson, Arizona <a href="http://www.coe.arizona.edu/treeringsummer">http://www.coe.arizona.edu/treeringsummer</a>
- The College of Education's new BA in Science Education: *Literacy, Learning, and Leadership* Internship Team (<a href="http://www.coe.arizona.edu/L3internship">http://www.coe.arizona.edu/L3internship</a>)

#### 2006-2013 Director of Education Outreach, UA College of Education

Coordinating Education Outreach projects with Wildcat School to better serve K-12 school research. Activities included collaborations with Project SOAR and lesson design for Project SOAR mentors, co-founding the UA Collaborative for Community Engagement, designing and offering Passport to High School Summer Institute to incoming 9<sup>th</sup> grade students, coordinating after school STEM and Finance Literacy programs for middle school students, coordinating

graduate interns at the school, assisting teachers with curriculum design efforts, serving on the Advisory Board, and coordinating volunteers at the school in academic and after school contexts.

# 2003-2006 Evaluation, Consultation, Mentoring, and Curriculum Development (Tucson)

- Center for Desert Archaeology Inc's San Pedro Ethnohistory Project. Product evaluation of outreach website funded through NEH (National Endowment for the Humanities) introducing the ethnohistories of various Native American tribal groups and their relationship to the archaeology sites of Southern Arizona (2006).
- NSF IGERT in the Archaeological Sciences at the University of Arizona mid-program evaluation (Spring 2005)
- PULSE Program, Southwest Environmental Health Sciences Center, Community Outreach and Education Program—Conceptual Design and Curriculum development. Developing full year social studies curriculum units for grades 10 through 11 in World History and American History. <a href="http://pulse.pharmacy.arizona.edu/">http://pulse.pharmacy.arizona.edu/</a>
- Integrative Graduate Education and Research Traineeship (IGERT) Summer Teacher Institute— Teacher Workshop Coordinator (2004-2007) and Outreach Coordinator (2005-2006). IGERT Program for the Archaeological Sciences, University of Arizona. The two week Institute introduced local teachers to post-field archaeology research and study. As Outreach Coordinator, worked with the graduate fellows in their partnerships with local teachers and museums. <a href="http://datamonster.sbs.arizona.edu/IGERT/outreach.php">http://datamonster.sbs.arizona.edu/IGERT/outreach.php</a>
- Pueblo High School, TUSD—World History Curriculum Development.

# 2000-2002 Teaching, Consultation, Mentoring, and Curriculum Development (France)

• International School of Toulouse (<a href="http://www.internationalschooltoulouse.net/">http://www.internationalschooltoulouse.net/</a>)
Curriculum Development: Grade 6 (The Albi project), Grades 7 & 8 (Archaeology Unit) and Student Mentoring for Grades 11 & 12 (Social Studies IB Research Projects).

# 1995-1999 Education Outreach, Training, and Development (Tucson)

- Old Pueblo Archaeology Center—Archaeology Education Outreach and program evaluation.
- Cholla High School—Curriculum development and Teaching
- GLOBE Science Program, University of Arizona, Dept. of Hydrology—Teacher Training of Soil Moisture teaching modules and program evaluation of teacher training of GLOBE trainings in Tucson and on the Navajo Reservation.

#### 1992-2002 Coordination, Editing and Administration

- EUROpean Cloud Systems (EUROCS) Project, Météo France, Toulouse, France—Project Coordinator (2000-2002) http://www.cnrm.meteo.fr/gcss/EUROCS/EUROCS.html
- Arizona State Museum Archaeological Series, Tucson, Arizona—Programming editor (1992-1999)

# 1991-1999 Archaeological Fieldwork and Labwork (Tucson)

- Old Pueblo Archaeology Center Project Director of various archaeology survey and excavation contracts. (1994-1999)
- Arizona State Museum Lab supervisor and instructor for Gila River Cultural Center student training Red Earth Program. (Summer 1995 & 1996)
- Arizona State Museum's Marana Platform Mound Community assistant lab supervisor & field schools crew supervisor (1991- 1994)

• Led or assisted on various Archaeological Survey Projects (1991- 1999)

#### **CURRICULUM and OUTREACH MATERIALS DEVELOPMENT**

Volunteer Hosting Handbook: Leadership Pathways for Volunteers. May 2016.

(https://www.coe.arizona.edu/hosting-ua-volunteers-handbook-community-organizations)

*UA Laboratory of Tree-Ring Research* outreach teacher developed online tools:

(http://www.coe.arizona.edu/trlessons) (https://www.coe.arizona.edu/forestfirevideos)

UA for You Design Team, University of Arizona's new Outreach Portal (http://uaforyou.arizona.edu)

Passport to High School Summer Institute Lessons & Activities (2013), College of Education, University of Arizona, Tucson, Arizona (<a href="http://www.coe.arizona.edu/P2HS/LessonDownload">http://www.coe.arizona.edu/P2HS/LessonDownload</a>)

Hosting Science Mentors: A Handbook for Middle and High Schools (2011), College of Education, University of Arizona, Tucson, Arizona (<a href="http://www.coe.arizona.edu/HostingMentors">http://www.coe.arizona.edu/HostingMentors</a>)

Hosting Mentors: A Handbook for Middle and High Schools (2011), College of Education, University of Arizona, Tucson, Arizona (<a href="http://www.coe.arizona.edu/HostingMentors">http://www.coe.arizona.edu/HostingMentors</a>)

*Industrialization of the American Landscape (2006).* PULSE Curriculum project, College of Pharmacy, University of Arizona, Tucson, Arizona.

(http://pulse.pharmacy.arizona.edu/11th grade/industrialization/social/index.html)

Disease and Epidemics: Architects of History (2005). PULSE Curriculum project, College of Pharmacy, University of Arizona, Tucson, Arizona.

(http://pulse.pharmacy.arizona.edu/10th grade/disease epidemics/social studies/index.html)

Dawn of New Revolutions (2004). PULSE Curriculum project, College of Pharmacy, University of Arizona, Tucson, Arizona. (http://pulse.pharmacy.arizona.edu/10th\_grade/dawn\_new/index.html)

Fertilizers, Pesticides, and Human Health: American History (2004). PULSE Curriculum project, College of Pharmacy, University of Arizona, Tucson, Arizona.

(http://pulse.pharmacy.arizona.edu/11th\_grade/industrialization/social/index.html)

#### **Awarded GRANTS**

Access, Wellness, and Relational Determinants of Student Success (AWARDSS) PLUS: Pathways to Doctoral Studies for Underrepresented Students in Education-Related Fields, PI – Michelle Perfect (S. Chavarria Coinvestigator). Award Amount: \$1,403,860.00. Dates: 8/1/21-7/31/26. IES Pathways to Graduate Programs. Website: <a href="https://sites.google.com/email.arizona.edu/awardssmain">https://sites.google.com/email.arizona.edu/awardssmain</a>

*Linking Southwest Heritage through Archaeology,* Co-PI's Barbara Mills & Sara Chavarria. Award Amount: \$170,000.00. Dates: 8/1/18-7/31/19; 8/1/19-7/31/20; 8/1/20-7/31/22— National Park Service. Website: <a href="https://swheritage.arizona.edu/">https://swheritage.arizona.edu/</a>

Integrating Archaeological and Indigenous Data Sources to Explore the Peopling of the North American Continent along the Ice Free Corridor, PI – Maria Nieves Zedeno. Award Amount: \$884,946.00. (S. Chavarria, senior personnel year 3, curriculum design) Dates: 4/15/19 – 3/31/22. NSF OPP- Arctic Social Sciences

Beautiful Patterns, an Upward Bound 2 Week Camp, supplemental grant (PI – Gary Rhoades). Award Amount: \$39,981.00. (S. Chavarria, senior personnel, College of Education match). Dates: 1/1/19-7/31/19. - Dept of Education TRiO

Examining Adolescents' Spatial Thinking through Community-Based Multimodal StoryMaps, PI B. Smith and co-PI S. Chavarria. Award Amount: \$9,960.50. Dates: 07/01/2018-06/30/2019 UArizona Seed Grant.

AFRI: Sustainable Bioeconomy for Arid Regions, PI Kimberly Ogden, University of Arizona. Award amount: up to \$14,990,363 (S. Chavarria, co-PI, teacher professional development lead); Dates: 10/1/17-9/30/22. – Dept of Agriculture NIFA. Website: <a href="https://sbar.arizona.edu/education">https://sbar.arizona.edu/education</a>

Preparing the Next Generation of Native American and Hispanic STEM Innovators, PI, GERARDO U. LOPEZ, University of Arizona. Award Amount: \$599,999.94 (S. Chavarria, co-investigator, as an educational STEM advisor.) Dates: 7/1/17-6/30/20. Agnes Nelms Haury Program in Environment and Social Justice, 2017 Haury Challenge Grant awardee.

STEM RISE ARIZONA video: https://youtu.be/r6WlAbtG0a4.

EFRI NewLAW: Photo-elasticity Enabled Non-reciprocal Acoustic Wave Propagation in Solid-state Media, PI PIERRE DEYMIER, University of Arizona. Award amount: \$1,943,863.00 (S. Chavarria, senior personnel, education activities); Dates: 10/1/16-9/30/20. – NSF

- +Supplemental Research Experience and Mentoring (REM) award: \$91,776.00; Dates: 6/18/2018-6/17/019. NSF
- +Supplemental Research Experience and Mentoring (REM) award: \$96,006.00; Dates: 6/18/2019-6/17/2020. NSF
- +Supplemental Research Experience and Mentoring (REM) award: \$98,982.00; Dates: 6/1/2020-5/30/2021. NSF

Inspiring the Next Generation of Naval Scientists and Engineers in NROTC Battalions Through Undergraduate Navy-Relevant Geospatial Experiences, PI - SARA CHAVARRIA, University of Arizona. Award amount: \$747,382.00, 8/1/16-7/31/19. — Office of Naval Research (ONR). Website: <a href="https://navigate.coe.arizona.edu/">https://navigate.coe.arizona.edu/</a>

2017 Raytheon award to fund student participants. Awarded amount: \$10,000

2018 Raytheon award to fund student participants. Awarded amount \$11,000

2019 Raytheon award to fund student participants. Budgeted amount \$11,000

*Undergraduate "Leadership Pathways to Career" Project.* PI - SARA CHAVARRIA, University of Arizona. Award amount: \$11,576.00. May 2015-June 2016. Tool: https://coe.arizona.edu/sites/default/files/Hosting UA Volunteers-Full Handbook.pdf

Collaborative Research: Processes and Patterns in the North American Monsoon Macrosystem, PI - RUSSEL MONSON, University of Arizona. Award amount: \$2,950,000.00 (S. Chavarria Education budget \$122,976.01); Dates: 4/1/11-5/17. – NSF

CNH: Long-term vulnerability and resilience of coupled human-natural ecosystems to fire regime and climate change at an ancient Wildland Urban Interface, PI - THOMAS SWETNAM, University of Arizona. Budget from Award amount: \$2,500,00.00. (S. Chavarria education budget \$87,695.00); Dates: 9/1/11-1/28/16. – NSF Website: <a href="https://coe.arizona.edu/tree-rings-forest-fire-ecology-lessons">https://coe.arizona.edu/tree-rings-forest-fire-ecology-lessons</a>

*UA College of Education Passport to High School Institute Program*, Lead - S. CHAVARRIA, University of Arizona. Award amount: \$10,213.00. Dates: Summers 2012, 2013 – Tohono O'odham Grant-in-Aid award. Curriculum link: https://coe.arizona.edu/k-12-teaching-resources

Wildcat School Reading Initiative Team, Lead - S. CHAVARRIA, University of Arizona. Award amount: \$2,999.79. Funds purchased books for a school literacy program. Date: 2008 -Dollar General Youth Literacy Grant

*Wildcat School's Wild Outdoor Learning Environment*, Lead – S. CHAVARRIA, University of Arizona. Award amount: \$5,000.00. Funds to start a school garden. Date: 2007 - Lowe's Toolbox for Education Grants

#### PROPOSAL REVIEWS

NSF 2017

University of Arizona (Internal Grants) 2016, 2017, 2018, 2019

#### COMMUNITY OUTREACH, PRESENTATIONS and TRAININGS

- Academics for Black Survival and Wellness training, July 2020
- Designing a GIS Course for Non-GIS Undergraduate Majors: Lessons Learned, ESRI Education Summit, July6-9, 2019, San Diego, CA. Authors: A. Ruff, S. Chavarria, K. Siderelis, M. Higgins
- Linking Southwest Heritage Through Archaeology: Using Critical Heritage Dialogues to Engage High School Students and Promote Higher Education Pursuits, National Association for Broader Impacts, May 1, 2019, Tucson, Arizona. Authors: S. Chavarria, B. Mills, S. Bond.
- Linking Southwest Heritage Through Archaeology: Engaging Diverse High School Students and Their Communities, Society for American Archaeology, April 11, 2019, Albuquerque, NM. Authors: S. Chavarria, B. Mills, S. Bond.
- Planning Committee, Women's Hackathon, University of Arizona, Oct 2017, Oct 2018
- Forest Fire Ecology Lessons: Middle and High School Applications. STEM on the Range Teacher Professional Development Workshop, November 6, 2015, Tucson, Az
- *The 5 E's of STEM Learning*. Boys and Girls Clubs Facilitator Training, August 28, 2015, Phoenix, AZ.
- The 5 E's of STEM Learning in Informal Contexts. AZCASE Out of School Conference, November 15, 2014, Phoenix, Arizona
- Manuscript Reviewer: *The Leakeys: A Biography*, by Mary Bowen-Kruhm, 2005. Greenwood Press, Westport, CT

#### **MENTORING**

- Biosphere 2 Innovative Faculty Teaching Fellows, Invited. Inaugural year Sept 2020 Aug 2021.
  - Inaugural year involves invited fellows from various colleges to develop the application-based competitively selected teaching fellow cohort program
- Inclusive Leadership Cohort Certificate mentor, University of Arizona, 2019 to present
  - Mentored faculty, staff, administrators from various units across the University campus.
- Arizona Assurance mentor, University of Arizona, 2011 to 2019
- NASA Space Grant Intern mentor. FHiRE project, 2016-1017

# PROFESSIONAL ORGANIZATIONS, COMMITTEES, and RECOGNITIONS

- Society for American Archaeology
  - o Public Education Committee Member 2019-2021
- Advancing Research Impact in Society (ARIS) member
- National Alliance of Broader Impact 2016-2019
- American Association of University Women
  - o Trainer, Start Smart 2017-2020
- American Education Research Association

- Arizona Girls Collaborative Project Advisory Board
- National Organization of Research Development Professionals (NORDP) member
- UA Diversity in STEM member
- UA College of Engineering Kanto Project Advisory Board
- College of Education 2014 Maria Urquides Laureate Award In honor of the Tucson educator and College of Education alumna who was a pioneer in bilingual education and a tireless advocate for the social and education rights of children. It is to recognize awardee contributions in this area.
- College of Education 2016 Professional Staff Award for Excellence In appreciation for the work, leadership and contributions to the college.
- Women in Science and Engineering (WISE) 2017 Award for Excellence in Campus Community Outreach for STEM Diversity

This award is given to faculty or staff for their dedication to fostering diversity in STEM fields through their work to build connections between the University of Arizona and the wider Tucson/southern Arizona community.

# **LANGUAGES**

English and Spanish