

Sandra Maria Bernal Cordova, Ph.D.

Curriculum Vitae

CHRONOLOGY OF EDUCATION

- 2018** **Ph.D.** Arid Lands Resource Science, University of Arizona.
Dissertation: Socially Constructed Narratives for Exploring the Impacts of Air Pollutant Infiltration in Built Environments. Chair/Advisor Diane Austin, Ph.D.
Major in Arid Lands Resource Science. **Minor** in Climate Change
- 2007** **B.A. in Architecture**, Universidad Nacional Autónoma de México.
- 2017** **Certificate** of College Teaching, University of Arizona.

CHRONOLOGY OF EMPLOYMENT

- 2018 to present** Lecturer at the College of Architecture, Planning and Landscape Architecture, University of Arizona.
2021- present School of Landscape Architecture
2018- 2021 School of Architecture
- 2014 to 2018** Graduate Teaching Assistant at the Graduate Interdisciplinary Programs, University of Arizona.
- 2004-2008** Student worker and grader, Facultad de Arquitectura, UNAM.
- 2001 - 2008** Intern at College of Architecture, UNAM Office of Special Projects
- 1992 - 2008** Owner/ project manager at Private practice/ Architecture Design Studio and contractor

HONORS AND AWARDS

- 2023** CAPLA Darryl B. Dobras Award for Excellence.
- 2022** Adobe Creative Campus Faculty Fellow.
- 2020** University of Arizona Hispanic Serving Institution Fellow.
- 2020** USGBC September Shero, Women in Green.
- 2019** USGBC Arizona Person of the year for contributions as MLAB member.
- 2017** USGBC Arizona Person of the year for contributions as MLAB member and UA – USGBC student leader.
- 2015** UA Foundation, Outstanding GDP Graduate Teaching Assistant Award for meritorious performance.

SERVICE/OUTREACH

- 2024** UA representative at the USGBC LEED Cities and Communities Consensus Committee (CCCC)
- 2024** Faculty Adviser of the Building Better Alliance CAPLA Student Club
- 2023 - Present** Faculty Adviser of the Wildcats Archery Sport Club, University of Arizona.
- 2023 - Present** Faculty Adviser of the CAPLA International Student Club.
- 2023- Present** Member of the University Council for Assessment, UA.
- 2023- Present** Member of the UA Climate Action.
- 2022** Judge for the University of Arizona Excellence Award.
- 2022-23** Reviewer of abstracts for the ARCC–EAAE Conference.
- 2021- Present** Instructional Designer at CAPLA.
- 2021-Present** CAPLA, Franke Honors College Day of the Death event.
- 2021** Reviewer of abstracts for the AIA/ACSA Intersections Research Conference: COMMUNITIES.
- 2021** Reviewer of abstracts for the 2021 AIA/ACSA Intersections Research Conference: COMMUNITIES.
- 2021** Abstract and paper reviewer for ARCC-EAAE 2022 International Conference: "Resilient City: Physical, Social and Economic Perspectives."
- 2021** Reviewer of session proposals for the Mountain channel for USGBC Live conference.
- 2021** Judge for ENR Southwest's 2021 Best Projects inaugural Excellence in Sustainability competition.
- 2019-21** Board Member of the Tucson 2030 District.
- 2018- Present** CAPLA liaison with the Consulate of Mexico in Tucson.
- 2018-20** Board Member at Watershed Management Group.
- 2016-23** Market Leadership Advisory Board member for the US Green Building Council Arizona.

Sandra Maria Bernal Cordova, Ph.D.

Curriculum Vitae

2018 - Present Instructional Designer for Classics and Religious Education Main Campus, Online and Gen Ed Courses.

PUBLICATIONS - CREATIVE ACTIVITY

- 2020** Peer-reviewed, **Bernal, S.**, Engineer, A., and Chalfoun, N. Implications of Natural and Mechanical Ventilation in the Exposure to Dust in Housing: Case of Study in Tucson, Arizona, US. *Vivienda y Comunidades Sustentables*. 4 (7) 77-91 ISSN: 2594-0198.
- 2019** Peer-reviewed, Engineer, A., and **Bernal, S.**, Co-Pi, 25% contribution, 2019, July, Towards a human-centered approach to art museum design. *The International Journal of Architectonic, Spatial, and Environmental Design*, 13(2),1-12.
- 2018** *Dissertation, **Bernal, S.**, Austin, D., Finan, T., Marsh, S., Chalfoun, N. 2018, August, ProQuest Dissertations & Theses Global. (2128028111).

AWARDED GRANTS AND CONTRACTS

- 2025** South32 Hermosa Project Phase 1: Asset Inventory, Gap Analysis, and Innovative Pathways, P.I. Bo Yang, PhD., **Co-PI Sandra Bernal**, PhD, Co-PI Altaf Engineer, PhD., Co-PI Kenneth Kokroko, Co-PI Shujuan Li, PhD., Co-PI Yao-jan Wu, PhD., Co-PI Ali Shamshiripour, PhD., Co-PI Anastasiya Pocheptova, PhD., Co-PI Ming Li, PhD., ~\$300,000.
- 2024** CAPLA, College of Medicine Student Lounge Planning Project. **P.I. Sandra Bernal, Ph.D.**, Co-P.I. Altaf Engineer, Ph.D., Co-P.I. Bo Yang, Ph.D. Funding Amount \$18,000
- 2024-25** Community Design and Action Capstone Pedagogical Partnership. P.I. Teresa Rosano, Co-P.I. Laura Carr, Co-P.I. Courtney Crosson, Co-P.I. Altaf Engineer, **Co-P.I. Sandra Bernal**.
- 2023-24** UA College of Medicine Phoenix Community Garden Project, P.I. **Sandra Bernal, Ph.D.** Funding amount \$4,660.
- 2022-23** Health Sciences Library Visioning & Space Planning Project, Drachman Institute, P.I. Altaf Engineer, Ph.D., Co-P.I. Bo Yang, Ph.D., **Co-P.I. Sandra Bernal, Ph.D.** Funding amount \$34,600.
- 2023** SBE – Iskashitaa Community Garden Partnership, P.I. Nataliya Apanovich, Ph.D., Co-P.I. Garret Smith, Ph.D., Co-P.I. **Sandra Bernal, Ph.D.**
- 2022** US Department of State IDEAS (Increase and Diversify Education Abroad for U.S. Students) Grant for Navigating Education in Borderlands, P.I. Nadia Alvarez, Ph.D., Co-P.I. Melody Buckner, PhD., Key personnel **Sandra Bernal, Ph.D.**
- 2021-22** 100,000 Strong- Partners of the Americas Grant, Green Infrastructure in Hot Dry Climates: An Educational Endeavor in Urban Spaces Facing Vulnerability, P.I. Jose Manuel Ochoa, Ph.D., Co-P.I. Adriana Zuniga, Ph.D., Co-P.I. **Sandra Bernal, Ph.D.**
- 2022** Community engagement project for a river restoration in Nogales, Arizona, P.I. Adriana Zuniga, Ph.D., Co-P.I. Bo Yang, Ph.D., Co-P.I. **Sandra Bernal, Ph.D.**, Arizona Institutes for Resilience TRIF/WEES Initiative.
- 2021-22** North American Development Bank (NADB) funding for Evaluating the impacts of the Corralitos Landfill on the quality of life of residents in Las Cruces and Doña Ana, NM, P.I. Adriana Zuniga, Ph.D., Co-P.I. **Sandra Bernal, Ph.D.** Co-P.I. Nicole Iroz, Elardo, Ph.D., Co-P.I. Tony Colella, Ph.D.
- 2020-22** Bilingual Employee Engagement Program- THRIVE to deepen participation in the Sustainable Action Plan for County Operations (SAPCO). UA CAPLA, Office of Sustainability & Conservation at Pima College and Mrs. Green's World (MGW). P.I. **Sandra Bernal, Ph.D** Funding amount \$7,971.
- 2020-21** Research and Training Program for Sustainability Planning of Local Business in Arizona. SCALE UP Local First Arizona-CAPLA (UA), State of Arizona Dept of Administration and DOE Green Fund, P.I. Altaf Engineer, Ph.D., Co-P.I. **Sandra Bernal, Ph.D.**
- 2017** Into the Blue, Voices of Sustainable Fishing, Feasibility Study, Haury Challenge Grant 2017, P.I. Cody Sheehy Co-P.I., **Sandra Bernal, Ph.D.** Co-P.I. Arin Haverland, Ph.D.

SUBMITTED GRANTS - CONTRACTS

- 2024** (pending) Community Health Improvement through Landscape, Linkages, and Innovative Technologies - CHILL_IT., P.I. Freya Spielberg, MD, Co-PI Leah Miller, MD, **Co-PI Sandra Bernal, PhD**, Co-PI Madurai Sriram Iyengar, PhD, Co-PI Kacey Ernst, PhD, EPA Community Challenge Grant Track 1, ~\$20,000,000.

Sandra Maria Bernal Cordova, Ph.D.

Curriculum Vitae

OTHER SCHOLARSHIP

- 2024** Research Poster, **Bernal, S.**, Engineer, A, Zeshan, A, Tasnim, S,. Adaptive Feedback Mechanisms in Architecture: A Gamified Approach to User-Centered Design and Education, 2024 CAPLA Research Showcase.
- 2021** Proceedings, **Bernal, S.**, Murrieta, J, and Gaxiola, I,. Intentional and Unintentional Performance: Analyzing the Validity and Agency of Ancient Environmental Design on Contemporary Architecture Advancement. ARCC, 2021.
- 2020** Proceedings, Crosson, C., and **Bernal, S.** "The Citizen-Architect: Collaborative Solutions between the Public and Profession for Long Term Design Performance Success."
- 2020** Proceedings, °Alhabib, G., Engineer, A., Ida, A., and **Bernal, S.** Passive Strategies for Reducing the Impact of Outdoor Air Pollutants on Indoor Air Quality: A Combination of CAM Plants and Hydrogel membranes. International Society of Indoor Air Quality & Climate.

WORKS IN PROGRESS

- 2025** (pending) Peer-reviewed, **Bernal, S.**, Engineer, A, Zeshan, A., Rethinking Institutional Architectural Renovation through User-Centered Approaches: A Professional-Pedagogical Exploration in Health Science Education Facilities
- 2025** (pending) Peer-reviewed, Apanovich N., **Bernal, S.**, King, G., Limbaugh, A., Smith, G., Addressing food insecurity and social isolation among college students and refugees through a participatory urban agriculture initiative.

MEDIA

- 2023** **Podcast** ConsulMex Tucson "Tu Voz Sin Fronteras." <https://open.spotify.com/episode/2N0GuASwBGTGoS3NbQeri0?si=xCAUDqEARwiLNrwG5Bmllw>
- 2022** **Podcast** Futuros Desiertos https://youtu.be/Rj_K7KJ10Ok?si=uqRW26vfodcQor9b
- 2022** **Podcast** Tejiendo Indentidades, KXCITucson. <https://kxci.org/podcast/sandra-bernal/>
- 2021** **Magazine article** La Ciudad Ni Siquiera Existe. <https://notassinpauta.com/2021/02/09/la-ciudad-ni-siquiera-existe/>
- 2021** Semana de la Ciencia: Red Global Mex: Implicaciones Culturales en sustentabilidad. <https://www.youtube.com/live/U8TROKtUTQ?si=UXeYUmenW94dmwQZ>
- 2020** **Web Article** USGBC SHEROES 2020. <https://www.usgbc.org/articles/purpose-drives-leadership-usgbc-september-sheroes>
- 2019** **Promo video** ARID Lands UA_GIDP. <https://vimeo.com/373979921>
- 2018** **Expert Interview** USGBC Sonoran Branch partners with community to push green building initiatives (<http://online.theelectrictimes.com/january-2018/8?issueID=68&pageID=8>).

CONFERENCES/SCHOLARLY PRESENTATIONS

- 2024** Panelist and Rounds Table Facilitator, Tools for Advancing Sustainability in Higher Education, Building Transformation Forum, USGBC, Phoenix, Arizona.
- 2023** Bernal, S., Zeshan, Asif H. Panelist at the Global Placemaking Summit, Placemaking X, Mexico City.
- 2022** Engineer, A., and Bernal, S. Pre- and post-COVID-19 synergies between research and practice in health and the built environment. PLEA, 2024, Santiago de Chile.
- 2021** Presenter, Deepening Government Employees' Engagement in Sustainability, Pima County, CAPLA, MGW. NAAEE 50th Annual Conference & 18th Annual Research Symposium.
- 2021** Presenter, at Servicios de Energia y Habitabilidad y Comfort Termico session. II Coloquio Internacional Virtual Probreza Energetica y Cambio Climatico en la Region Transfronteriza de Mexico y Estados Unidos/ November 26th, 2021.
- 2019** Engineer, A. and **Bernal, S.** Towards a human-centered approach to art museum design. Learning from volunteers' perceptions and experiences. Inclusive Museum Conference, Buenos Aires, Argentina. November 2019.

Sandra Maria Bernal Cordova, Ph.D.

Curriculum Vitae

- 2019** Engineer, A. and **Bernal, S.** Environmental Design Strategies to Improve Visitation in State Museums Situated in Hot, Arid Climatic Conditions in the Southwest U.S. Shared Cultural Heritages 2: Memory, Spaces, Experiences, and Boundaries, San Luis Potosí, Mexico, June 2019.
- 2019** Engineer, A. and **Bernal, S.** Towards a human-centered approach to art museum design. Environmental Design Research Association (EDRA50), Brooklyn, NY. May 2019.
- 2016** Presenter, Water and teaching practice. Nader Chalfoun, Omar Yuseff, **Sandra Bernal**, Universities Council on Water Resources, June 2016.
- 2015** Presenter, Assessment of the Implications of Natural and Mechanical Ventilation on Human Health in The Residential Sector Healthy Buildings America, Boulder Colorado, May-June 2015.

COMMUNITY PRESENTATIONS

- 2023** Organizer of two Master Lectures Sacal and Luis Barragan, Sundt Gallery, CAPLA, , in collaboration with Consulado De Mexico en Tucson and CAPLA.
- 2023** Organizer of Sacal: Universal Mexican exhibition at the UABookstore and Sundt Gallery, in collaboration with Consulado De Mexico en Tucson and CAPLA.
- 2022** Panelist, IDEAS, Foreign Policy Alignment.
- 2021** Panelist, II Congreso Internacional de Arquitectura Habitabilidad y Ciudades Competitivas 2021, UNISON.
- 2021** Presenter, "Scientia motus-ciencia en movimiento, Apostando por el future," session de Sustentabilidad: Implicaciones Culturales en la Justicia Climatica, Red Global MX capitulo España, Instituto de los Mexicanos en el Exterior and Secretaria de Relaciones Exteriores.
- 2021** Facilitator for the Green Stormwater Infrastructure Training in Spanish for the GSI at Tucson Water.
- 2020** Panelist, Women in Green: Mountain Region Sheroes Panel Discussion. Panelist and Shero with the topic of 'purpose.' USGBC Mountain Regions October 12th, 2020.
- 2019** Plenary Presenter, Sucar, Crockett, **Bernal**, Martinez, "Building Better Bridges" a collaborative panel: University of Arizona, INAOE, Peace Corps. The Consortium for North American Higher Education Collaboration (CONAHEC) and North American Center for Collaborative Development (NACCD) conferences, University of New Mexico, Las Cruces, NM, April 4, 2019.
- 2019** Presenter, Cultural Implications in Sustainable Solutions, Binational Symposium Shared Cultural Heritage SBS- México Initiatives, University of Arizona, Feb-March 2019.
- 2018** Facilitator, The Emerging Professionals Carrer Panel US Green Building Council Arizona, October 2018
- 2017** Panelist, Arizona Living Economy Forum, Shared Ownership and Community Capital, Local First AZ., September 2017.
- 2016** Facilitator, Tucson and Its Global STEM Opportunities Pima Community College, STEM Challenge, October 2016.