

Aletheia Ida, PhD, RA, NCARB, LEED AP

www.aletheiaida.design

Founding Principal, Aletheia Ida Design and Architecture, LLC
www.aletheiaida.com

Co-Founder, Analemma

Analemma is a creative partnership established to produce innovative multimedia art, experiences, and design with an emphasis on environmental and sensory phenomena.

@analemmastudio

EDUCATION + LICENSURE

EDUCATION

- | | |
|---------------|--|
| August 2014 | Ph.D. Architectural Sciences
Center for Architecture, Science and Ecology, New York, NY
Rensselaer Polytechnic Institute, Troy, NY
Built Ecologies emphasis
“Medium, Matter, Form, and Process: Dynamic Hygrothermal Polymeric Membranes,” Dissertation.
Advisor: Anna Dyson |
| December 2005 | MS.Arch. post-professional
University of Arizona, Tucson, AZ
Design and Energy Conservation emphasis |
| August 1998 | B.Arch. professional
University of Oregon, Eugene, OR
Minor in Japanese, Studies in Piano Performance |

PROFESSIONAL REGISTRATION

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|-----------------|--|
| 2003 | National Council of Architectural Registration Boards (NCARB #89546) |
| 2003-2011; 2020 | New York Architecture License (#029359) |
| 2006 | Leadership in Energy & Environmental Design (LEED AP v2.1) |
| 2017-2022 | AIA Safety Assessment Program Certified |

WORK EXPERIENCE

ACADEMIC EXPERIENCE

- 2023**
Spring 2023 **University of Pennsylvania**, Philadelphia, PA
Lecturer, Department of Architecture, Environmental Building Design
Stuart Weitzman School of Design
- 2014 - 2022**
Summer 2021 **The University of Arizona**, Tucson, AZ
Associate Professor, School of Architecture
College of Architecture, Planning, and Landscape Architecture
- Fall 2014 *Assistant Professor*, School of Architecture
College of Architecture, Planning, and Landscape Architecture
- Spring 2014 *Lecturer*, School of Architecture
College of Architecture, Planning, and Landscape Architecture
- 2010 - 2013** **Rensselaer Polytechnic Institute**, Troy, NY
Graduate Teaching Assistant
Arch2360 Environmental and Ecological Systems (60 students, 4 credit course)
- Graduate Research Assistant*, Center for Architecture, Science, and Ecology, New York, NY
Electropolymeric Dynamic Daylighting System (EDDS), building energy analysis
Integrated Concentrating Solar Façade (ICSF), prototype installation and testing assistance
Active Modular Phytoremediation System (AMPS), prototype construction assistance
Solar Enclosure for Water Reuse (SEWR), design development assistance, baseline energy analysis
- 2007 - 2008** **The University of Arizona**, Tucson, AZ
2007 - 2008 *Adjunct Lecturer*, School of Architecture
College of Architecture and Landscape Architecture
- Spring 2008 Arc402 Community Design Studio (6 students, 6 credit course)
Arc452 Capstone Chair (1 student), Capstone Committee Member (4 students)
- Fall 2007 Arc101 Foundation Design Studio (50 students, 4 credit course)
Arc101 Foundation Design Lecture (~200 students)
Arc491 Independent Study Research (1 student)
- 2007 - 2008 *Research Coordinator*, The Drachman Institute
Housing Assessments and Strategic Housing Plans, Arizona Department of Housing (ADOH)
Project Manager: demographic, economic, and housing stock analysis to inform affordable housing needs and sustainable community development; responsible for presentations at Mayor and City Council sessions; managing 8 student employees
- Bowman Hotel Adaptive Reuse, Nogales, AZ, Nogales Community Development Corporation
Project Manager: adaptive reuse studies for affordable housing and mixed-use within NRHP hotel
- Navajo Veteran's Housing, Window Rock, AZ, Navajo Nation Veteran Administration
Project Manager: one-, two- and three-bedroom single-family regional housing design studies
- Boyce Thompson Arboretum Multi-Use Facility, Superior, AZ
Project Manager: schematic design for 16,000sf multi-purpose facility in existing arboretum grounds
- Civano Demonstration Project, Tucson, AZ
Research Author: development and coordination of research for conservation technology guidelines
- Affordable Housing Education Workshops, Arizona Department of Housing (ADOH)
Presenter: development and presentation of eight one-day workshops including green design, good design, and cultural design in affordable housing

ACADEMIC EXPERIENCE (CONT.)

2004 - 2005	The University of Arizona, Tucson, AZ
2004 - 2005	<i>Graduate Teaching Assistant</i> , School of Architecture
Fall 2004 + 2005	Foundation Design Studio, for C. Domin
Spring 2005	Modern Architecture History, for A. Nequette
2004 - 2005	<i>Graduate Research Assistant</i> , School of Architecture
Summer 2005	Frank Lloyd Wright: Florida Southern College book proposal, for C. Domin
Summer 2004	Micro-scale Structures for 3M Acoustic Materials, for D. Clifford
Summer + Fall 2005	<i>Graduate Research Assistant</i> , Drachman Institute
Summer 2005	<i>Graduate Research Assistant</i> , Environmental Research Lab

PROFESSIONAL EXPERIENCE

2022 - current	Aletheia Ida Design and Architecture, LLC, Catskill Mountains, NY <i>Founding Principal</i> AIDA, LLC provides access to knowledge resources, tools, consulting, and courses for homeowners and those pursuing renovations, remodels, or new construction. The practice enables people to achieve healthy home and workspace design by educating them on the basic principles and environmental processes involved while also providing information on building materials and technologies that would be most appropriate for their climate, health, and wellbeing.
2022 - current	Analemma, Catskill Mountains, NY <i>Co-Founder</i> Analemma is a creative partnership that produces innovative multimedia art, experiences, and design. The work emphasizes the integration of environmental phenomena such as light, sound, and material.
2008 - 2009	Ismael Leyva Architects, P.C., New York, NY <i>Associate</i> NYU Landmark Tower, New York, NY, with Grimshaw Architects and Toshiko Mori Project Architect: Schematic Design studies for hotel-residential tower adjacent to three I.M. Pei towers Flower of the East Hotel, Kish Island, Iran, for German developer, Flower of the East Development Co. Project Manager: Design Development and Construction Documents for 240-key resort hotel
2005 - 2007	Rob Paulus Architects, Ltd., Tucson, AZ <i>Associate</i> One North Fifth, Tucson, AZ, Williams and Dame Development, Inc. Project Manager: renovation of existing 96-unit apartment building and addition of 7,500sf retail space Downtown Streetscape Design, Tucson, AZ, City of Tucson and Downtown Tucson Partnership Project Manager: development of comprehensive downtown streetscape budget and conceptual design Julian Drew and Tiberon Building Renovations, Tucson, AZ Project Manager (condominium conversion of two existing buildings including NRHP hotel) La Placita Exterior Renovation, Tucson AZ Project Manager: exterior renovation, landscape, and signage for 140,000sf office and retail complex Southwest Hazard Control Warehouse and Office Buildings, Tucson, AZ Project Manager & LEED Administrator: metal building construction and LEED certified office building Dos Pedros Lofts, Tucson, AZ Project Architect: three single-family lofts using Rastra construction in historic Barrio Viejo district Design Annex, Sacramento, CA Project Architect: 9,300sf zero-energy office building for industrial design firm, site entitlement and DD
1999 - 2004	Ismael Leyva Architects, P.C., New York, NY <i>Associate</i> Astor Place Condominium, New York, NY, with Gwathmey Siegel & Associates Architects Project Architect: ILA - Architect of Record

PROFESSIONAL EXPERIENCE (CONT.)

Farley Pennsylvania (Moynihan) Station Redevelopment Project, New York, NY
with Skidmore, Owings & Merrill, Arup, and HHPA
Project Coordinator: ILA - Architect for 800,000sf USPS portion of 1.2 million SF project

YMCA/YWCA Hotels - Residential Conversion Feasibility Studies, New York, NY
Project Architect: zoning analysis and feasibility studies for residential conversion of three historic hotels

110 Livingston, Brooklyn, NY
Project Architect: feasibility studies for adaptive reuse of historic Board of Education building

Broadway Grand Hotel – Residential Conversion Feasibility Study, New York, NY
with Jean Nouvel Ateliers
Team Leader: conversion of hotel shell and core design

Italian Mission to the UN Lobby and Office Renovation, New York, NY
Project Architect: Design/Build interior renovation

AOL/Time Warner Center, New York, NY, with Skidmore, Owings & Merrill
Team Leader: ILA – Residential Architect, residential interior design CDs and tax-lot documents

Fulton Street Retail Redevelopment, Brooklyn, NY, with Elizabeth Kennedy Landscape Architects
Team Leader: shortlist presentation of conceptual streetscape design for neighborhood revitalization

Mohegan Sun Casino, Uncasville, CT, with Kohn Pederson Fox and The Rockwell Group
Team Leader (assisting KPF with construction documents for fast-track project)

2002 *Interim Marketing Coordinator*
Responsible for preparing Statements of Qualifications and Proposals for public projects

1998 - 1999 **Arquitectonica/CPA**, New York, NY
Intermediate Architect
Latimer Garden Community Center, Bronx, NY, with Hanrahan & Meyers
Team Leader: assisting Hanrahan & Meyers with construction documents

United States Postal Service (USPS) Exterior Renovations, New York
Team Leader: existing conditions assessment, construction documents, and specifications for various exterior restoration and repair projects, including Long Island City Post Office, Radio City Post Office, Bronx General Post Office, and James A. Farley Building Main Post Office

Long Island Railroad Industrial Buildings, Long Island City, NY
Team Leader: design development and construction documents for employee and storage facilities

Queens Processing & Distribution Center and JFK Mail Processing Center Cafeteria Designs
Team Leader: design development and construction documents for cafeteria renovation projects

Department of Design and Construction (DDC) Group Home Renovations, Bronx and Brooklyn, NY
Team Leader: field surveys and construction documents for group home renovation projects

1998 **Portland Community Design**, Portland, OR
Junior Architect
Martin Luther King Blvd. Storefront Renovations, Portland, OR

1997 - 1998 **Nike Retail Design**, Beaverton, OR
Architectural model-maker
Niketown Store Designs: Berlin, Miami, Denver, Las Vegas, Toronto, London

HONORS + AWARDS

AWARDS

INTERNATIONAL AWARDS

- 2021 **Holcim Award**
Sustainable Construction Design Awards, Switzerland
Honorable Mention for Hydroculus prototype with D. Aviv and F. Meggers
- 2018 **Women in STEM²D Scholars Award**
Johnson & Johnson Foundation
Finalist, Design category, (top 3 of >150 International Applicants)
- 1995 **Bridge Concept Competition** (travel stipend)
Daido Institute of Technology, Nagoya, Japan
Gold Prize

NATIONAL AWARDS

- 2011 **Architect R+D Award**
Solar Enclosure for Water Reuse (SEWR)
Center for Architecture, Science, and Technology (CASE)
Design Team Assistant for CASE
- 2008 **National Urban Initiatives Policy Paper Competition** (\$20,000)
DDBC Affordable Housing Energy and Water Conserving Technologies
Policy Paper Author for DDBC projects by Mary Hardin and John Folan
First Prize

REGIONAL AWARDS

- 2018 **AIA Arizona Research Design Award**
American Institute of Architects (AIA) Arizona
Symbiotic Matter: A Research-Design Framework for Emerging Environmental Building Technology
- 2016 **Crescordia Award, Environmental Education**
Arizona Forward Environmental Excellence Annual Awards
UA SoA Sustainability Pedagogy
- 2005 **Archon Design Competition** (\$1,500)
UA CAPLA
Collaborative design proposal for Arivaca, AZ with Landscape Architecture student Jennifer Patton
Second Prize

SCHOLARSHIPS + FELLOWSHIPS

- 2021 - 2022 **Biosphere2 Faculty Innovation Teaching Fellowship**
University of Arizona, Tucson, AZ
- 2013 **Rensselaer Graduate Fellowship**
Rensselaer Polytechnic Institute, Troy, NY
- 2009 **Ellis and Karin Chingos '37 Graduate Fellowship**
Rensselaer Polytechnic Institute, Troy, NY
- 2009 **Rensselaer Graduate Fellowship**
Rensselaer Polytechnic Institute, Troy, NY
- 2005 **Graduate Student Conference Travel Scholarship**
University of Arizona, Tucson, AZ
- 2004 - 2005 **Graduate Tuition and Registration Scholarships**
University of Arizona, Tucson, AZ

PUBLICATIONS

AUTHORED BOOKS

2024 Engineer, A., Ida, A., Jung, W., and Sternberg, E. *Measuring Impacts of the Built Environment on Health, Wellbeing, and Performance: Techniques, Methods, and Implications for Design Research*. "Health and the Built Environment" short form focus series. London, UK: Routledge Press.

EDITED BOOKS

January 2020 Dickinson, S., Bean, J., and Ida, A., Editors. *Critical Practices in Architecture: The Unexamined*. Cambridge Scholars Book Series: The Arts, Design and Culture in Cities. London, UK: Cambridge Scholars Publishing.

PEER-REVIEWED BOOK CHAPTERS

February 2020 Ida, A. "Fluid Matters: The Water Footprint of Building Materials," in *Examining the Environmental Impacts of Materials and Buildings*, Ed. Blaine E. Brownell. Pennsylvania: IGI Global Press.

November 2018 Ida, A. "Energetic Forms of Matter," in *Reusable and Sustainable Building Materials in Modern Architecture*, Ed. Gulsah Koc. Pennsylvania: IGI Global Press.

INVITED BOOK CHAPTERS

Spring 2021 Kriegh, J., Whittington, J., Lee, H.W., Aviv, D., and Ida, A. *Grow a Greener Data Center*. Online book, sponsored by Google and hosted by University of Washington College of Built Environments.

EDITED JOURNALS

February 2020 Sternberg, E., Engineer, A., and Ida, A., Guest Editors. "Healing Spaces: Designing Physical Environments to Optimize Health, Wellbeing and Performance," *Special Issue for International Journal of Environmental Research and Public Health* (2019), MDPI Open Access.

PEER-REVIEWED JOURNAL PAPERS

December 2020 Ketchum, R.S., Yuan, H.C., Ruiz-Diaz, L., Lyons, N.P., Cui, S., Frasier, M., Showghi, S.A., Kim, K.J., Ida, A., Pan, W., and Norwood, R.A. "Design and Characterization of a Translucent Solar Module (TSM) for Greenhouse Structures." *Journal of Engineering and Architecture*.

June 2017 Smith, S.* Superporous Intelligent Hydrogels for Environmentally Adaptive Building Skins. *MRS Advances*, 2(46), 2481-2488. doi:10.1557/adv.2017.429

INVITED JOURNAL PAPERS

August 2014 Hardin, M. and Smith, S.* "Barrio Collaboration: From Conservation Technologies for Affordable Housing to Public Policy Recommendations." *Arquitectura Ciudad y Region*.

PEER-REVIEWED CONFERENCE PAPERS + PRESENTATIONS

August 2021 Dickinson, S. and Ida, A. "Temporal Boundaries: Multiscalar Modeling Techniques for Climate Change and Design" in Proceedings of *ACSA/EAAE Teacher's Conference: Curriculum for Climate Agency: Design (in)Action*, Brooklyn, NY.

April 2021 Dickinson, S. and Ida, A. "Climate Change and Design: Multiscalar Design Research Within the Sonoran Desert" in Proceedings of *Architectural Research Centers Consortium (ARCC) 2021 Conference: Performative Environments*, Tucson, AZ.

April 2021 Ghaemi, S.** and Ida, A. "Visualizing Thermodynamic Flows in Architectural Research: Multi-scalar Co-benefits of Waste-heat Utilization in Data Centers" in Proceedings of *Architectural Research Centers Consortium (ARCC) 2021 Conference: Performative Environments*, Tucson, AZ.

December 2020 Aviv, D., Wang, Z., Meggers, F., and Ida, A. "Surface Generation of Radiantly-Cooled Building Skin for Desert Climate" in Proceedings of *Association for Computer Aided Design In Architecture (ACADIA) 2020 Conference Proceedings: Distributed Proximities*, virtual event.

*Legal name change from Shane I. Smith to Aletheia Ida in August 2017

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PUBLICATIONS (CONT.)

- November 2020 Alhabib, G.**, Bernal, S., Ida, A., and Engineer, A. "Passive Strategies for Reducing the Impact of Outdoor Air Pollutants on Indoor Air Quality: A Combination of CAM Plants and Hydrogels." *Indoor Air 2020 Conference Proceedings*, Seoul, Korea.
- May 2020 Aviv, D., Moradnejad, M., Ida, A., Wang, Z., Teitelbaum, E., and Meggers, F. "Hydrogel-Based Evaporative and Radiative Cooling Prototype for Hot-Arid Climates" in *Simulation in Architecture and Urban Design (SimAUD) 2020 Conference Proceedings*, Vienna, Austria.
- December 2018 Sharef-Zadeh, F.** and Ida, A. "Building-Integrated Salt Construction: Design Framework for Air Quality and Passive Cooling in Tehran, Iran." *Passive Low Energy Architecture (PLEA) 2018 Conference Proceedings*, Hong Kong, China.
- October 2018 Ida, A. "Machine-Learning for Gel-based Evaporative-cooling Membrane System (GEMS)." *Advanced Building Skins (ABS) 2018 Conference: Responsive and Adaptive Building Skins*, Bern, Switzerland.
- October 2018 Ida, A. "Dynamic Regenerative Integrated Polymeric Skins (DRIPS) Prototype Designs." *Advanced Building Skins (ABS) 2018 Conference: Architectural membranes for High-Performance Building Skins*, Bern, Switzerland.
- June 2018 Ida, A. "Multivalent Analysis of Double-Skin Envelope Hygrothermal Louver System for Dehumidification Cooling, Daylighting, and Water Recuperation." *Simulation in Architecture and Urban Design (SimAUD) 2018 Conference Proceedings*, Delft, Netherlands.
- April 2018 Ida, A. "Multivalent Hygrothermal Material System for Double-Skin Envelope Dehumidification Cooling and Daylighting." *Building Enclosure Science and Technology (BEST) 2018 Conference Proceedings: Looking Back – Moving Forward: Where History Inspires Innovation*, Philadelphia, PA. Building Research Information Knowledgebase (BRIC) website, sponsored by AIA and National Institute of Building Sciences (NIBS).
- June 2017 Mirrhosseini, H.** and Smith, S.* "Socio-Environmental Framework for Integration of Lightweight Tensile Structure Windcatchers in Contemporary Hot-Arid Urban Context of Tehran." *World Sustainable Built Environment (WSBE) 2017 Conference Proceedings*, Hong Kong, China.
- April 2017 Smith, S.* "Superporous Intelligent Hydrogels for Environmentally Adaptive Building Skins." *Materials Research Society (MRS) 2017 Spring Symposium: A Soft Future – From Electronic Skins to Robotics and Energy Harvesting*, Phoenix, AZ.
- October 2016 Smith, S.* and Lasch, C. "Machine Learning for Adaptive Building Envelopes: An Experimental Framework for Intelligent Adaptive Control." *Association for Computer Aided Design In Architecture (ACADIA) 2016 Conference Proceedings: Posthuman Frontiers: Data, Designers and Cognitive Machines*, Ann Arbor, MI.
- June 2015 Smith, S.* "Interscalar Entropy of Dynamic Medium Flows for Metabolic Building System Design Efficacy." *Building Technology Educators' Society (BTES) 2015 Conference Proceedings: Intersections and Adjacencies*, Salt Lake City, UT.
- May 2015 Smith, S.*, Nelson, C., Hardin, M., and Sternberg, E. "Interscalar Design and Health Research Partnership: Research Integration Into Curriculum and Practice." *American Collegiate Schools of Architecture (ACSA) and American Institute of Architects (AIA) 2015 Intersections Conference Proceedings: Intersections Between the Academy and Practice*, Atlanta, GA.
- April 2015 Smith, S.*, and Dyson, A.H. "Framework for Tetra-functional Control of Viscoelastic Molecular Entropy in Biopolymeric Hydrogel Dynamics for Environmentally Responsive Metabolic Processes in Morphological Architectural Membranes." *Material Research Society (MRS) 2015 Spring Symposium Proceedings: Adaptive Architecture and Programmable Matter – Next Generation Building Skins and Systems from Nano to Macro*, San Francisco, CA.

*Legal name change from Shane I. Smith to Aletheia Ida in August 2017

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PUBLICATIONS (CONT.)

- December 2011 Krietemeyer, E.A., Smith, S.* , and Dyson, A.H. "Dynamic window daylighting systems: electropolymeric technology for solar responsive building envelopes." *International Society for Optics and Photonics (SPIE) 2011 Conference Proceedings, 7976: Electroactive Polymer Actuators and Devices (EAPAD)*, San Diego, CA.
- September 2005 Clifford, D., and Smith, S.* "Intelligent building technologies: Operable envelope design." *World Sustainable Building 2005 Conference Proceedings*, Tokyo, Japan.
- August 2005 Vollen, J., et al. "Heliotropic Design and Digital Animation." *Association for Computer Aided Design In Architecture (ACADIA) Conference Proceedings*, Savannah, GA. (Designs for heliotropic pneumatic shading structure by S. Smith*)

TECHNICAL RESEARCH REPORTS

- April 2016 Smith, S.* and Sternberg, E. "University of Arizona," Annual Activities Report, *AIA Design & Health Research Consortium*, 2016.
- September 2008 Smith, S.* "Sustainability and Green Technology," Chapter for *Arizona Town Hall Background Document on Affordable Housing*.
- Fall 2007 "Conservation Technologies for Affordable Housing: Design Guidelines," Editor and compilation author of UA Drachman Institute and DDBC research for *City of Tucson*.

BOOK REVIEWS

- December 2005 Smith, S.* , review of "Digital Tectonics." Book Review for *AIA Young Architect's Forum Newsletter*.
- February 2004 Smith, S.* , review of "Mies in Berlin." Book Review for *AIA Young Architect's Forum Newsletter*.

MEDIA + PRESS

- November 13, 2021 "Hydroculus cooling from Arizona: Evaporative and radiant thermal comfort." *Holcim Foundation Sustainable Construction*.
- November 4, 2021 "The internet is killing the environment. These students came up with a brilliant design fix," by Nate Berg. *Fast Company*.
- Summer 2019 "Proud to be Desert Dwellers," by Adrienne Barela, UA Website.
- March 25, 2019 "UA Hosts Tucson's First Women in Data Science Event," by Kristina Makansi, UA Lo Que Pasa.
- November 2017 "UA architect searches for building blocks to fight wildfires," by Stacy Pigott. *United Nations Office for Disaster Risk Reduction Prevention Web*.
- December 2015 Smith, S.* , and Sternberg, E.M. "University of Arizona" in *Design and Health Research Consortium 2015 Progress Report*. American Institute of Architects, Architects Foundation, and ACSA.
- April 2014 "Source Materials" in *Metropolis* (p.55-65); Building-Integrated Desiccant Material designs by S. Smith* , CASE, NYC.

*Legal name change from Shane I. Smith to Aletheia Ida in August 2017

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PATENTS

PATENT DISCLOSURES

- December 16, 2020 Algae Heat-Sink Air Purifier [disclosed UA21-111]
Ghaemi, S. **, Ida, A.
- April 30, 2020 Systems, Methods, Structures and Designs for Separation of Individuals from an Environment [disclosed UA20-197]; Slepian, M., Ida, A., Burleson, W., Engineer, A.
- August 29, 2019 Adaptive Windcatcher Evaporative Cooling System [disclosed UA20-045]
Ida, A., Aviv, D., Meggers, F.
- April 14, 2017 Hydrogel ventilation cooling membrane system [disclosed UA17-17]
- April 14, 2017 Hydrogel evaporative cooling and daylighting glass block unit [disclosed UA17-174]
- March 2013 Dynamic Design Framework for Mediated Bioresponsive Building Envelopes [disclosed RPI]
Dyson, A., Krietemeyer, E., and Smith, S. *, et.al.

PROVISIONAL LICENSES

- November 5, 2015 Building Integrated Biopolymer Sorption Technologies [US Provisional 62/251,202]
Dyson, A., Lokko, M., and Smith, S. *, et.al.

SCHOLARLY PRESENTATIONS

INVITED PRESENTATIONS AND LECTURES

- April 12, 2022 "RESTRUCT: Built Environment Research for Pandemic Solutions," AEGIS Consortium launch, Co-Presenter with B. Bryson, University of Arizona, Tucson, AZ.
- March 10 + 11, 2022 "Naturally Adaptive Building Technology: breathing skins, cooling chimneys, and self-growing structures," feature presentation, Wonder House at SXSW 2022, Austin, TX.
- February 18, 2022 "Critical Material Practice: Adaptive Eotechnic Futures," P3 Critical Practice Lab Seminar, Guest Lecture, UA SoA, Tucson, AZ
- November 30, 2021 "Adaptive Eotechnic Futures: Bioresponsive Building Technologies," UA ARC 220 History of Building Technology, Guest Lecture (virtual)
- October 29, 2021 "Water and the Built Environment," Yale School of Architecture, Guest Lecture, New Haven, CT (virtual)
- September 30, 2021 "Climate Change and Design: Resiliency and Adaptation in the Built Environment," Arizona Institute for Resilience, 2021 Symposium on Resilience Research for Global Development Challenges, Co-Presenter with S. Dickinson, University of Arizona, Tucson, AZ
- September 29, 2021 "Critical Material Practice: Material Futures," Material Matters P3 Capstone Research Seminar, Guest Lecture, UA SoA, Tucson, AZ
- September 15, 2021 "Climate Change and Design," Option Studio Grassroots Teaching Grant Outcomes Presentation, Co-Presenter with S. Dickinson, UA CAPLA, Tucson, AZ (virtual)
- July 7, 2021 "Critical Material Practice," Guest Lecture for D. Aviv EBD Research Seminar, UPenn, Philadelphia, PA (virtual)
- May 17, 2021 "Hospitality Re-Entry: Physical Transport Mechanisms and Environmental Technologies," UA RESTRUCT Spring Symposium, (virtual)
- May 17, 2021 "Integrated Sensing for Premise Plumbing and Premise Plumbing Data Collection: Building Re-Entry," Data Hackathon Outcomes presentation, UA RESTRUCT Spring Symposium, (virtual)
- March 23, 2021 "Building Ecologies: Adaptive Enclosure Systems," Guest Lecture for N. Maloo Ecology + Architecture Seminar, Howard University, Washington D.C. (virtual)

SCHOLARLY PRESENTATIONS (CONT.)

March 12, 2021	"Critical Material Practice: Adaptive Eotechnic Futures," P3 Critical Practice Lab Seminar, Guest Lecture, UA SoA, Tucson, AZ
March 10, 2021	"Premise Plumbing Data Collections," Hackathon pitch, UA RESTRUCT Spring Workshop, (virtual)
December 1, 2021	"Adaptive Eotechnic Futures: Bioresponsive Building Technologies," UA ARC 220 History of Building Technology, Guest Lecture (virtual)
November 19, 2020	"Sustainability Practices in Design and Construction," UA College of Engineering Student Design-Build Team, Guest Lecture, (virtual)
November 3, 2020	"Adaptive Environments Design Lab," Environmental Systems course, Virtual Lab Visit and Guest Lecture, UPenn Weitzman School of Design, (virtual)
October 20, 2020	"3D Printing for Architecture," UA Material Science and Engineering MSE 220, Guest Lecture (virtual)
October 12, 2020	"Critical Material Practice," Datacenter Design Studio Lecture, University of Washington, College of Built Environments, Seattle, WA (virtual)
October 2, 2020	"Material Futures for Micro-clouds," Datacenter Design Studio Introductory Presentation, University of Washington, College of Built Environments, Seattle, WA (virtual)
September 22, 2020	"Research Framework for Hotel Re-Entry: Physical Environments and Human Activities," UA RESTRUCT Built Environment Research Symposium, (virtual)
December 12, 2019	"Data Integrated Processes for Environmental Building Design," UA RESTRUCT Built Environment Research Symposium, Tucson, AZ
December 2, 2019	"Water in the Built Environment," Yale School of Architecture, Guest Lecture, New Haven, CT (virtual)
October 18, 2019	"Critical Material Practice," CAPLA Futures Council, Faculty Presentation, Tucson, AZ
September 23, 2019	"Material Futures for SWAMP (Solar, Water, And Metabolic Processes): Architectural Integration," UA Material Science and Engineering MSE 595a Colloquium, Guest Lecture, Tucson AZ
May 6, 2019	"Bioresponsive Material Systems: Adaptive Eotechnic Futures," Guest Lecture, Andlinger Center for Energy and the Environment, Princeton University, Princeton, NJ.
April 5, 2019	"Data Integrated Design Processes for Emerging Environmental Building Technologies," Women in Data Science (WiDS) 2019 Regional Conference, UA ENR2, Tucson, AZ.
February 26, 2019	CAPLA Futures Council, Introduction Presentation with UA IPWP, Co-presenter with Altaf Engineer and Esther Sternberg, Tucson, AZ
November 28, 2018	"Bioresponsive Material Systems," UA Human Performance Network Meeting, Tucson, AZ
November 5, 2018	"Water in the Built Environment," Yale School of Architecture, Guest Lecture, New Haven, CT
October 24, 2018	"Emerging Environmental Building Technology Design for Regional Adaptation: Exploring Urban Conditions of Los Angeles, Portland-Oregon, and Mexico City," SoA Capstone Seminar Talk, UA, Tucson, AZ
October 17, 2018	"Building-Integrated Cooling Strategies with Circular Economy Material Systems," TenWest Sonoran Cloud City: Cloud Infrastructure. Tucson, AZ
July 24, 2018	"From Molecules to Environment," AIA Collaborative Research Summit, Co-Presenter with E. Sternberg and A. Engineer, Minneapolis, MN
May 14, 2018	"Viable Potable Water Capture from Humid Air Streams in Buildings," Yale Center for Ecosystems and Architecture (CEA), Transforming the DNA of the Built Environment: Linking the Grand Challenges of Energy, Water, Air, Food and Materials through the Mission of Emergency Housing, New Lab – Brooklyn, NY

SCHOLARLY PRESENTATIONS (CONT.)

- November 5, 2016 "Architecture's Fiction of (r)Evolutionary Science," Guest Talk, UA Lunar Lab Hard-Science Science-Fiction Writer's Group, Arizona Inn, Tucson, AZ
- October 6, 2016 "Emerging Environmental Building Technology Design for Regional Adaptation," Guest Lecture, SoA B.Arch Foundation Program History/Theory Series, UA, Tucson, AZ
- September 22, 2016 School of Architecture Slide Slam, Guest Talk, Salon-Salon, Tucson, AZ
- September 15, 2016 "Emerging Environmental Building Technology Design for Adaptive Energy Futures" AzSEC 2016, 5th Annual Conference on Renewable Energy Science, Technology, and Policy, Flagstaff, AZ
- September 7, 2016 "Energy" Guest Lecture, SBE 201, Sustainable Built Environments, UA, Tucson, AZ
- September 1, 2016 Sustainability Pedagogy Overview Introduction Lecture, ARC 102, UA, Tucson, AZ
- May 13, 2016 "Petals to Pedagogy: Integrating Living Building and Community Concepts into Architectural Education," Living Future unConference, Co-Presenter with C. Crosson, Seattle, WA
- November 20, 2015 "Emerging Environmental Building Technologies for Water and Energy Metabolization" UA Water and Energy Sustainable Technologies (WEST) Center, Grand Opening, Tucson, AZ
- November 6, 2015 "Materials + Organ Pipe Cactus" Guest Lecture, ARC 601, MS.Arch, UA, Tucson, AZ
- March 5, 2015 AIA Design + Health Research Consortium 2015 Retreat at RWJF, Princeton, NJ
- May 2013 "Medium, Matter, Form, and Process: Dynamic Hygrothermal Polymeric Membranes" University of Calgary, Faculty of Environmental Design, Invited Speaker, Calgary, Canada
- February 2013 "Medium, Matter, Form, and Process," University of Wisconsin at Milwaukee, School of Architecture and Urban Planning, Invited Speaker, Milwaukee, WI
- April 2008 "Green in Affordable Elderly Housing" 1-hour presentation, Speaker at the Governor's Conference on Aging, Mesa, AZ
- March 2008 "Green in Affordable Housing" 2-hour presentation, Speaker at the ADOH Affordable Housing Institute, Phoenix, AZ
- INVITED PANEL SPEAKER**
- Sep 22, 2023 Sustainable Materials Panel, Engineering Living Materials Institute, KK Wang Industry Day Sibley School of Aerospace and Mechanical Engineering, Cornell University, Ithaca, NY
- July 21, 2023 "DIY Modeling and Analysis: Physical and Digital Rigid Surface Structures," Building Technology Educator's Society (BTES) 202 Reflect, Connect, Project Webinar Series, *Testing and Experimentation*, Panel presentation, Co-presenter with Laura Carr, virtual
- March 21, 2018 Women in Architecture Panel Discussion, Panel speaker, UA School of Architecture. Tucson, AZ
- March 13, 2018 Judith Chafee's Feminist Impact in Architecture, Panel speaker, UA Special Collections. Tucson, AZ
- October 19, 2017 Renewable Energy and Energy Storage, Arizona Student Energy Conference, Panel moderator, Arizona State University, Phoenix, AZ
- April 2014 "How can we better facilitate transdisciplinary research for a transformative impact on the built environment?" Resiliency and the Built Environment Colloquium, Panel speaker, RPI, Troy, NY
- January 2005 "Energy Conservation" Plenary Session Panel, Co-Speaker, Housing Design Symposium, Tucson, AZ

*Legal name change from Shane I. Smith to Aletheia Ida in August 2017

**Supervised Student

SCHOLARLY PRESENTATIONS (CONT.)

INVITED PANEL MODERATION

- June 10 + 11, 2021 Materials and Fabrication sessions, BTES Conference, Auburn, AL
- March 17, 2021 PhD Workshop, Session leader, ARCC Conference, Tucson, AZ
- Fall 2018 Advanced Building Skins Conference, Panel moderator, Bern, Switzerland
- Spring 2018 Architecture, Media, Politics and Society Conference, Panel moderator, Tucson, AZ
- March 20, 2018 Interdisciplinary and interscalar frameworks for advancing societal processes to challenges around water issues, Panel moderator, UA School of Architecture, Tucson, AZ
- October 19, 2017 Renewable Energy and Energy Storage, Arizona Student Energy Conference, Panel moderator, Arizona State University, Phoenix, AZ

POSTER PRESENTATIONS

- April 2021 Modrek, A.,** Dickinson, S., Dimond, K., and Ida, A. "Classification of Natural Plant Physiology, Behavior, and Morphology to Inform and Adaptive Architecture" poster presentation at the *Architectural Research Centers Consortium (ARCC) 2021 Conference: Performative Environments*, Tucson, AZ.
- June 2019 Ida, A., Giambianco, N.** , Fung, Z.** , and Le, J.** "BENCH: Biorhythmic Evaporative-cooling Nano-teCH," *Building Technology Educators' Society (BTES) Conference*, Amherst, MA.
- June 2019 Moradnejad, M.** , Aviv, D., Ida, A., and Meggers, F. "WATeRVASE: Wind-catching Adaptive Technology for a Roof-integrated Ventilation Aperture System and Evaporative-cooling," *Building Technology Educators' Society (BTES) Conference*, Amherst, MA.
- October 2017 Mirrohsseini, H.M.** , and Ida, A. "Prototypes for Integration of Vernacular Windcatchers with Lightweight Tensile Structures in Contemporary Hot-Arid Urban Context," *SOLAR 2017 Conference*, Denver, CO.
- June 2017 Smith, S.* , et.al. (with MS.Arch/M.Arch Students) "Material Intersections of Situational Response: Compositions and Processes for Transforming Economies of Waste, Interventions for Environmental Restoration, and Cultural Building Techniques," poster presentation at the *Architectural Research Centers Consortium (ARCC) 2017 Conference*, Salt Lake City, UT.
- January 2017 Smith, S.* "Adaptive Energy Futures: Emerging Building Technologies and Intelligent Adaptive Control Systems," poster presentations at the *Institute for Energy Solutions (IES) Kick-off Event*, University of Arizona, Tucson, AZ.

RESEARCH WORKSHOPS

- July 25 - 26, 2023 "Engineering Materials for a Sustainable Future," NSF ERVA Visioning Workshop, IBM Almaden Research Facility, San Jose, CA
- April 10 - 15, 2022 RESTRUCT Spring Workshop: Introduction and Overview Presentation; Outdoor KIOSK, UA Alumni Plaza, Tucson, AZ
- February 12, 2020 Datacenter Design Courses: Workshop Presentation, University of Washington, Seattle, WA (virtual)
- February 11, 2019 "Material Metabolism: Dynamic Material Systems for Environmental Adaptation in Buildings," presentation and workshop for UA MS.Arch EBT and UPenn MSD. EBD studio programs, Tucson, AZ.
- March 2017 Environmental Site Analysis, Digital Workshop, C. Murphy ARC 451 studio, UA, Tucson, AZ
- October 2013 "Building Envelopes: Considerations of Thermodynamic Behaviors," workshop, Workshop coordinator and co-chair, including three presentations and two laboratory sessions, RPI, Troy, NY

SCHOLARLY PRESENTATIONS (CONT.)

EXHIBITS

- April 2022 "KIOSK" Prototype Installation, RESTRUCT 2022, University of Arizona, with A. Ida, Tucson, AZ
- March 10 - 13, 2022 "SHAPE" Prototype Installation, SxSW 2022, UA Wonder House, with J. Malmborg, Austin, TX
- September 2021 "WATeRVASE" Prototype Installation, CAPLA East Roof, Univ. Arizona, with D. Aviv and F. Meggers, Tucson, AZ
- May 22 - Nov 21, 2021 "Hydroculus" Virtual Exhibition, CityX Italian Pavilion, Venice Biennale, with D. Aviv and F. Meggers, Venice, Italy
- March 11 - 15, 2019 "Materials" Course Exhibit, Sundt Gallery, CAPLA, Tucson, AZ

INDUSTRY PARTNER PRESENTATIONS

- May 26, 2021 "Integrated Sensing for Premise Plumbing," Tucson Water Research Oversight Committee, (virtual)
- August 10, 2020 "Integrated Sensing for Premise Plumbing," WET Center NSF IUCRC, Funding request presentation with Tucson Water, (virtual)
- August 21, 2019 Advanced Building Design for Data Centers, Research Presentation. Microsoft, Seattle, WA (virtual)
- August 1, 2019 "NEXT Energy Technologies: OTF-PV Building Integration," Introductory Presentation, Co-presenter with Neal Armstrong and Bob Norwood. NEXT Energy. Santa Barbara, CA
- June 12, 2019 CIRC Research Team, Industry Partnership Introductory Presentation. Aligned Energy. Phoenix, AZ
- May 2, 2019 CIRC Research Team, Industry Partnership Introductory Presentation. Google. Sunnyvale, CA
- March 25, 2019 IPWP Research Team, Industry Partnership Introductory Presentation. Oracle. Tucson, AZ (virtual)
- January 11, 2019 "Bio-Responsive Material Systems," UA IPWP Meeting with IBS, Tucson, AZ (virtual)
- December 12, 2018 "Generative Design for Adaptive Datacenter Building Typologies," CIRC Research Team, Microsoft Industry Partnership Update Presentation. Optical Sciences, UA, Tucson, AZ
- December 12, 2018 "Bio-Responsive Material Systems," UA IPWP Intertek Meeting, Tucson, AZ
- September 4, 2018 "Generative Design for Adaptive Datacenter Building Typologies," CIRC Research Team, Microsoft Industry Partnership Presentation. Redmond, WA
- December 2017 Microsoft and UA Team for NSF ERC, Research presentation, OSC, UA, Tucson, AZ
- November 2017 Sto Corporation building materials manufacturer/panel fabricator alliance, ADL Ventures invite.
- August 2017 UA MSFT Data Center Research Kick-Off Session, College of Optical Sciences, UA, Tucson, AZ.
- August 2017 Microsoft and UA Team for Industry Partnership, Research site visit to Microsoft Data Center and Headquarters, Quincy and Bellevue, WA.
- February 2017 UA IES and Microsoft, Research presentation, Institute for the Environment, Tucson, AZ
- December 13, 2016 "SWAMP Building Technologies for Solar, Water And Metabolic Processes," UA Water and Energy Sustainable Technologies (WEST) Center, Industry Partner Annual Meeting, Tucson, AZ

AWARDED GRANTS + CONTRACTS

NATIONAL FUNDING

- 2016 - 2018 **Superporous Electroactive Hydrogels for Closed-Loop Water Cooling Systems** (\$100,000)
National Science Foundation (NSF) EARly Grant for Exploratory Research (EAGER)
Principal Investigator: Aletheia Ida (60%)
Co-PI: Pierre Lucas, Professor, Material Science and Engineering, University of Arizona
- 2008 - 2009 **UA School of Architecture Solar Decathlon House** (\$100,000)
Department of Energy (DOE)
Project Proposal Co-Author Assistant - energy conservation aspects
PI: Jason Vollen, Assistant Professor, School of Architecture, University of Arizona

INDUSTRIAL PARTNER FUNDING

- 2021 - 2022 **Adaptive Cooling Oculus: Prototype Development and Testing** (\$148,500)
Microsoft Datacenter Engineering
PI: Aletheia Ida; Co-PIs: Dorit Aviv, UPenn and Forrest Meggers, Princeton Univ.
- 2018 - 2019 **Cloud Infrastructure Renewal Challenge (CIRC)** (\$250,000)
Microsoft Datacenter Engineering
Co-PI: Aletheia Ida (15%) - Advanced Building Design (\$37,500)
Co-PI: Dan Kilper, Professor, Optical Sciences
Co-PI: Kerri Hickenbottom, Assistant Professor, Chemical and Environmental Engineering
PI: Bob Norwood, Professor, Optical Sciences

PUBLIC PARTNER AND NON-PROFIT ORGANIZATION FUNDING

- 2021 - 2022 **Critical Practice Lab: Moyo, Uganda** (\$18,000)
Pipeline Worldwide, Phoenix, AZ, Jamie Nollette, Program Director
Co-PI: Aletheia Ida - Building Material Research
Co-PIs: Courtney Crosson and Altaf Engineer, Assistant Professors, School of Architecture
PI: Chris Trumble, Associate Professor, School of Architecture
- 2021 - 2022 **Datacenter Cooling Systems and CFD Modeling for Energy and Water** (\$136,049)
Salt River Project (SRP), Phoenix, AZ, Leeann Yacuel, Program Director
Co-PI: Aletheia Ida (50%) - Advanced Space Design and CFD Simulations (\$68,024)
PI: Kerri Hickenbottom, Assistant Professor, Chemical and Environmental Engineering
- 2021 - 2022 **Building Integrated Sensing for Premise Plumbing Analyses (Phase II)** (\$10,000)
Tucson Water, Dan Quintanar, Program Director with Cynthia Leo, Water Scientist
Principal Investigator: Aletheia Ida
NSF IUCRC: Water and Energy Technology (WET) Center sponsored
- 2020 - 2021 **Water and Energy Savings in Data Centers** (\$87,225)
Salt River Project (SRP), Phoenix, AZ, Leeann Yacuel, Program Director
Co-PI: Aletheia Ida (50%) - Advanced Space Design and Cooling System Analysis (\$43,613)
PI: Kerri Hickenbottom, Assistant Professor, Chemical and Environmental Engineering
- 2020 - 2021 **Building Integrated Sensing for Premise Plumbing Analyses (Phase I)** (\$10,000)
Tucson Water, Dan Quintanar, Program Director with Cynthia Leo, Water Scientist
Principal Investigator: Aletheia Ida
NSF IUCRC: Water and Energy Technology (WET) Center sponsored

AWARDED GRANTS + CONTRACTS (CONT.)

UNIVERSITY FUNDING

- 2021 - 2022 **Adaptive Environments Design Lab (AEDL)** (\$5,000)
Biosphere2 Faculty Innovation Teaching Fellowship, University of Arizona
PI: Aletheia Ida
Co-PIs: S. Dickinson, S. Li, K. Dimond, Associate Professors, CAPLA
- 2021 - 2022 **Built Environment Data Resource Development** (\$10,000)
RESTRUCT, University of Arizona
PI: Aletheia Ida
Co-PI: Adam Henry, School of Government and Public Policy, UA
- Spring 2021 **Premise Plumbing Data Collection** (\$1,500)
Hackathon funding, RESTRUCT, University of Arizona
PI: Aletheia Ida
- 2018 - 2019 **Cloud Infrastructure Renewal Challenge (CIRC)** (\$250,000)
Office for Research, Discovery, and Innovation (ORDI) Accelerate for Success Grant
Co-PI: Aletheia Ida (15%) - Advanced Building Design (\$40,000)
Co-PI: Dan Kilper, Professor, Optical Sciences
Co-PI: Kerri Hickenbottom, Assistant Professor, Chemical and Environmental Engineering
PI: Bob Norwood, Professor, Optical Sciences
- 2018 **Energy and Water Conserving Building Materials: Equipment** (\$20,163)
Water, Environmental and Energy Solutions (WEES) Shared Infrastructure Funds
Principal Investigator: Aletheia Ida (90%)
Co-PI: Pierre Lucas, Professor, Material Science and Engineering
Co-PI: Altaf Engineer, Assistant Professor, School of Architecture, IPWP
Co-PI: Jonathan Bean, Assistant Professor, CAPLA
- 2017 **Superporous Electroactive Hydrogels for Closed-Loop Water Cooling Systems** (\$40,346)
Water, Environmental and Energy Solutions (WEES) Interdisciplinary LINKS
Co-PI: Aletheia Ida (40%) - Architecture Undergraduate Student Research Assistants
PI: Pierre Lucas, Professor, Material Science and Engineering
- 2016 **Differential Thermal Conductivity Analyzer: Equipment** (\$65,844)
Water, Environmental and Energy Solutions (WEES) Equipment and Infrastructure Grant
Co-PI: Aletheia Ida (15%) - Architectural Building Materials
Co-PI: Perry Li, Professor, Aerospace and Mechanical Engineering
Co-PI: Jinhong Zhang, Associate Professor, Mining and Geological Engineering
PI: Lianyang Zhang, Associate Professor, Civil Engineering
- 2015 - 2016 **Solar, Water, and Metabolic Processes (SWAMP)** (\$45,000)
Renewable Energy Network (REN) Faculty Exploratory Grant
Principal Investigator: Aletheia Ida (60%)
Co-PI: Chris Lasch, Lecturer, School of Architecture
Co-PI: Clayton Morrison, Associate Professor, Information, Science, Technology and Arts
Co-PI: Pierre Lucas, Professor, Material Science and Engineering
- 2005 **Sustainable Lighting Committee** (\$15,000)
UA Facilities Management
Graduate Research Assistant, proposal co-Author
PI: Nader Chalfoun, Professor, School of Architecture

AWARDED GRANTS + CONTRACTS (CONT.)

COLLEGE FUNDING

- 2022 **Linking Design and Science: Knowledge innovation toward adaptive socio-environmental ecologies** (\$20,000)
College of Architecture, Planning and Landscape Architecture (CAPLA) Grassroots Research Grant
PI: Aletheia Ida
Co-PIs: S. Dickinson, S. Li, K. Dimond, Associate Professors, CAPLA
- 2020 - 2021 **Climate Change and Design Integrated Research Studio** (\$8,000)
College of Architecture, Planning and Landscape Architecture (CAPLA) Grassroots Teaching Grant
Co-PI: Aletheia Ida (50%)
PI: Susannah Dickinson, Associate Professor, School of Architecture
- Spring 2020 **Soundscapes with Hydrogel Actuated Podium Electronics (SHAPE)** (\$10,000)
College of Architecture, Planning and Landscape Architecture (CAPLA) Women's Endowment Grant
Principal Investigator: Aletheia Ida
Collaborator: John Malmborg

COLLABORATORS

C. Dossick (Univ. of Washington, Construction Management), J. Kriegh (Univ. of Washington, College of Built Environment), C. Lee (UW CM), M. Momayez (UA Mining and Geological Engineering), K. Muralidharan (UA MSE), M. Shafae (UA SIE), M. Chertkov (UA Applied Mathematics), Y. Son (UA SIE), J. Kim (Yale, Chemical and Environmental Engineering), K. Hickenbottom (UA, Chemical and Environmental Engineering), D. Aviv (UPenn, Environmental Building Design), F. Meggers (Princeton University, Andlinger Center and Architecture), N. Armstrong (UA, Chemistry and Biochemistry), G. Koc (Yildiz Technical University, Turkey, Architecture) R. Norwood (UA, Optical Sciences), D. Kilper (UA, Optical Sciences), A. Dyson (Yale University, Architecture), T. Sadler (Microsoft, Data Center Architecture), P. Lucas (UA, Material Science), D. Runge (UA, Material Science), E. Saez (UA, Chemical Engineering), H. Mirhosseini (Penn State, Architecture), V. Lane (UA, Architecture), C. Crosson (UA, Architecture), S. Trumble (UA, Architecture), P. Reimer (UA, Architecture), B. Lang (UA, Architecture), L. Zhang, (UA, Civil Engineering), P. Li (UA, Mechanical Engineering), J. Zhang (UA, Mining), K. Muralidharan (UA, Civil Engineering), K. Simmons-Potter (UA, Electrical Engineering), M. Lokko (RPI, Architecture), J. Volen (AECOM, Building Science), C. Lasch (Taliesin West, Architecture), E.M. Sternberg (UA, Medicine), M.C. Hardin (UA, Architecture), C. Morrison (UA, Information Science), A.C. Nelson (UA, Planning), S. Dickinson (UA, Architecture), M. Nyman (RPI, Environmental Engineering), R. Gilbert (RPI, Biotechnology), R. Ozisik (RPI, Material Science), L. McGown (RPI, Chemistry), E.A. Krietemeyer (Syracuse University, Architecture), P. Stark (Harvard University, Engineering), D. Clifford (CalPoly, Architecture)

Graduate Advisor: A.H. Dyson (Rensselaer Polytechnic Institute, Professor, CASE, Founding Director; Yale University, Endowed Professor, Center for Ecosystems and Architecture, Founding Director, current)

TEACHING

COURSE TEACHING

ARC 561i	FALL 2022 Lima, Peru UA microcampus Material Properties and Tests (8 students, 3 credit course)	ARCH 708	SPRING 2023 UPenn EBD program Bioclimatic Design Studio (11 students, 2 credit course)
ARC 461i 561i	FALL 2021 Material Properties and Tests (16 students, 3 credit course)	*** ARC 222	SPRING 2022 Building Technologies I (77 students, 3 credit course, 3 labs)
ARC 601	Integrated Research Studio (3 students, 6 credit course)	ARC 521b	Integrated Technologies II (8 students, 3 credit course, 1 lab)
ARC 900	Master's Research (2 students, 3 credit advising)	ARC 900	Master's Research (1 student, 3 credit advising)
ARC 910	Master's Thesis (1 student, 8 credits advising)	ARC 910	Master's Thesis (1 student, 8 credit advising)
ARC 599	Independent Study: 3D Ceramic Printing (1 student, 1 credit course)	ARC 599	Independent Study: Adaptive Tech Prototyping Design (1 student, 3 credit course)
ARC 461i 561i	FALL 2020 (HYBRID) Material Properties and Tests (22 students, 3 credit course)	ARC 900	SPRING 2021 (SABBATICAL) Master's Research (1 student, 3 credit advising)
ARC 410f 510f 601	Integrated Research Studio* *** (21 students, 6 credit course)	ARC 910	Master's Thesis (3 students, 1-4 credit advising)
ARC 900	Master's Research (2 students, 3-6 credit advising)		
ARC 910	Master's Thesis (4 students, 5-6 credits advising)		
ARC 599	Independent Study: Computational Fluid Dynamics (1 student, 3 credit course)		
ARC 461i 561i	FALL 2019 Material Properties and Tests (11 students, 3 credit course)	* ***ARC 222	SPRING 2020 (HYBRID) Building Technologies I (77 students, 3 credit course, 3 labs)
ARC 497a 597a	Research Methods (4 students, 3 credit course)	* **ARCE 223	Environmentally Adaptive Systems I (12 students, 3 credit course, 4 labs)
ARC 900	Master's Research (2 student, 6 credit advising)	**ARC 521b	Integrated Technologies II (4 students, 3 credit course, 1 lab)
ARC 910	Master's Thesis (1 student, 4 credit course)	ARC 900	Master's Research (2 students, 3 credit advising)
		ARC 910	Master's Thesis (4 students, 4-8 credit advising)
ARC 461i 561i	FALL 2018 Material Properties and Tests (22 students, 3 credit course)	**ARC ARCE 223	SPRING 2019 Environmentally Adaptive Systems I (83 students, 3 credit course, 4 labs)
ARC 497a 597a	Research Methods (3 students, 3 credit course)	**ARC 521b	Integrated Technologies II (2 students, 3 credit course, 1 lab)
ARC 900	Master's Research (1 student, 6 credit advising)	ARC 900	Master's Research (1 student, 6 credit advising)
ARC 599	Independent Study: Environmental Parametrics (1 student, 3 credit course)	ARC 909	Master's Project (1 student, 8 credit advising)
		ARC 599	Independent Study: Chitosan Robotic Fabrication (1 student, 3 credit course)

*New course

**Significantly altered course from previous semesters

***Co-taught course

COURSE TEACHING (CONT.)

<p>FALL 2017</p> <p>**ARC 497a 597a Research Methods (6 students, 3 credit course)</p> <p>ARC 909 910 Master's Thesis (1 student, 8 credit advising)</p> <p>ARC 399 599 Independent Studies: CFD and LCA (2 students, 3 credit courses)</p>	<p>FALL 2016</p> <p>ARC 497a 597a Research Methods (6 students, 3 credit course)</p> <p>ARC 909 910 Master's Project or Thesis (3 students, 8 credit advising)</p>	<p>FALL 2015</p> <p>ARC 201 Design Studio: Principles (18 students, 6 credit course) (Coordinator, 48 students)</p> <p>**ARC 497a 597a Research Methods (8 students, 3 credit course)</p> <p>ARC 909 910 Master's Thesis (4 students, 8 credit advising)</p> <p>ARC 399 Independent Study: TLA Initiative (1 students, 2 credit course)</p>	<p>FALL 2014</p> <p>*ARC 201 Design Studio: Principles (14 students, 6 credit course) (Coordinator, 60 students)</p> <p>*ARC 497a 597a Research Methods (14 students, 3 credit course)</p> <p>ARC 900 Master's Research (1 student, 6 credit advising)</p>	<p>SPRING 2018</p> <p>**ARC ARCE 223 Environmentally Adaptive Systems I (68 students, 3 credit course, 4 labs)</p> <p>* **ARC 521b Integrated Technologies II (2 students, 3 credit course, 1 lab)</p> <p>ARC 900 Master's Research (1 student, 6 credit advising)</p>	<p>SPRING 2017</p> <p>ARC 223 Environmentally Adaptive Systems I (70+ students, 3 credit course, 3 labs)</p> <p>ARC 520c Environmentally Adaptive Systems I (5 students, 3 credit course, 1 seminar)</p> <p>*ARC 461i 561i Material Properties and Tests (18 students, 3 credit course)</p> <p>ARC 900 Master's Research (1 student, 6 credit advising)</p>	<p>SPRING 2016</p> <p>**ARC 223 Environmentally Adaptive Systems I (70+ students, 3 credit course, 3 labs)</p> <p>**ARC 520c Environmentally Adaptive Systems I (6 students, 3 credit course, 1 seminar)</p> <p>ARC 900 Master's Research (3 students, 3 credit advising)</p> <p>ARC 909 910 Master's Report or Thesis (2-4 students, 8 credit advising)</p>	<p>SUMMER 2015</p> <p>*ARC 497b 597b Scandinavia Study-Abroad Special Projects in Architecture: Building Enclosures (20 students, 3 credit course)</p>	<p>SPRING 2015</p> <p>*ARC 223 Environmental Control Systems I (70+ students, 3 credit course, 3 labs)</p> <p>*ARC 520c Environmental Control Systems I (4 students, 3 credit course, 1 seminar)</p> <p>ARC 900 Master's Research (6 students, 6 credit advising)</p> <p>ARC 909 910 Master's Thesis (1 students, 8 credit advising)</p> <p>ARC 599 Independent Study: Adaptive Skins (1 student, 2 credit course)</p>
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*New course

**Significantly altered course from previous semesters

***Co-taught course

CURRICULUM DEVELOPMENT

- 2020 - 2021 **B.Arch P3 Research Cluster: Critical Practices**
In collaboration with Assistant Professors Courtney Crosson, Altaf Engineer, and Assoc. Professor Chris Trumble, we developed a series of cohesive course offerings for a P3 capstone research cluster.
- 2020 - 2021 **Master of Science in Architecture: Core Program**
As newly appointed Chair of the Master of Science in Architecture program, I developed an over-arching curricular structure to facilitate multiple concentration areas for student and faculty research. The curriculum is now established with a core research studio, research methods, and research seminar to provide cohesion for the student and faculty cohort involved in this program.
- Fall 2020 **ARC 410f|510f|601: Climate Change and Design Studio**
In collaboration with Associate Professor Susannah Dickinson, we received a CAPLA Grassroots Teaching Grant to support the course development of a new integrated research studio on climate change and design. The course was developed for robust regional travel with an emphasis on the Sonoran Desert across transborder Arizona-Mexico locations, but the first semester of offering was limited in this capacity due to the COVID pandemic. We prepared four course modules with new digital skills and field work research tools and techniques. We provided the students with access to a series of outside guest lectures and workshops. Future developments will include enhanced collaboration with faculty in Mexico.
- Spring 2018 **ARC 521b: Integrated Technologies II**
I worked on developing the course outline, schedule, syllabus, lecture contents, reading selections, and integrated assignments in collaboration with Lecturer Valerie Lane.
- Spring 2018 **ARCE 223: Architectural Engineering - Environmentally Adaptive Systems**
The ARCE 223 course was added as a requirement for the new Architectural Engineering program, and is cross-listed with the ARC 223 course. Special modules for digital tools and skills were developed to assist the ARCE students with different background knowledge to be successful in the ARCE 223 course lab exercises.
- Spring 2017 **AMP EBT: Accelerated Master's Program Emerging Building Technologies**
AMP in Emerging Building Technologies developed for B.Arch/MS.Arch and proposed to School of Architecture in Fall 2016. Approved by UA Graduate College, Spring 2017.
- Spring 2017 **ARC 461i|561i: Material Properties and Tests**
New course development for an ARC 461i|561i Material Properties and Tests upper division elective and core requirement for MS.Arch EBT students. The course encompasses three modules, including material selection and properties, material probes and testing, and material prototypes. The first course offering occurs in Spring 2017.
- Fall 2016 **MS.Arch EBT: Master of Science in Architecture, Emerging Building Technologies**
MS.Arch program concentration in Emerging Building Technologies developed and proposed to School of Architecture in 2015-16 AY; approved by SoA Curriculum Committee in Spring 2016. Approved by UA Graduate College, Fall 2016.
- Summer 2015 **Study Abroad Program: Scandinavia**
Co-developed with Brad Lang, SoA Lecturer, for initial study abroad excursion in Summer 2015. Special Projects course development for Building Envelopes. Site visits to significant buildings, cultural institutions, universities, professional offices, urban landscapes, and walking tours developed for four cities in four countries for one-week each for a total of a one-month length program. Cities include Copenhagen, Stockholm, Oslo and Helsinki.
- 2014 - 2019 **Sustainability Pedagogy in Architecture**
Sustainability Pedagogy for B.Arch Design Studio courses co-developed in 2014 and launched in 2014-15 AY with an implementation plan across five years for the first graduating class in Spring 2019. Sustainability Pedagogy for M.Arch Design Studio courses co-developed in 2015-16 and launched in 2016-17 AY with an implementation plan across three years for the first graduating class in Spring 2019. Major revisions for implementation co-developed in 2018-19 for launch in Fall 2019 with B.Arch optimization changes. Co-developed with Paul Reimer, Siri Trumble, Brad Lang, Courtney Crosson, Michael Kothke, Chris Trumble.

THESIS COMMITTEES

CHAIR

- 2022 **Wen Xie**, MS. Arch EBT, "Eco-Efficient Prototype Design for Asylum Seeker Housing in Nogales, Sonora: A Parametric Approach," 2022.
- 2021 **Anahita Modrek** MS. Arch EBT, "Adaptive Multi-scalar Design Approach for Urban Dust Storms," 2021.
Andrew Pappas, MS. Arch EBT, "Design Optimization for 3D Printing Efficient Clay Dwellings," 2021.
Kavya Dhir MS. Arch DEC, "Evaluation of Urban Heat Island Strategies Using a 3D Urban Microclimate Model," 2021.
- 2020 **Sara Ghaemi**, MS. Arch DEC|EBT, "Innovative Algae-based Heatsink System for Data Center Integration," 2020.
Maryam Moradnejad, MS. Arch EBT, "Modular Design Technique for an Adaptive Cooling and Daylighting Roof Aperture System," 2020.
Chung Tse-Lin, MS. Arch EBT|HC, "A Theory of Nature Architecture Through Indigenous Knowledge: Evaluation With Post-Disaster Building Design," 2020.
- 2019 **Samira Mivehchian**, MS. Arch IO, "Biophilic Design Principles to Improve Architecture for Homelessness: Tucson Case Study," 2019.
- 2017 **Fatemeh Sharef-Zadeh**, MS. Arch, "Environmentally Adaptive Architecture: Building-Integrated Salt construction for Air Quality and Passive Cooling in Tehran," 2017.
Dylan Arceneaux, BS. SBE, "Cellulose Aerogel Application in the Built Environment," 2017.
- 2016 **Prabhjeet Matharoo**, MS. Arch, "Re Purposing of Material: Plastic Waste in Indian Urban Conditions for Housing-Integrated Water-Collecting Filtration Panels," 2016.
Homeira Mirhosseini, MS. Arch, "Integration of Traditional Thermal Mass Windcatcher Socio-Environmental Concepts for Contemporary Hot-Arid Urban Context of Tehran Through Lightweight Tensile Structures," 2016.
Xiaoying Zhuo, MS. Arch, "Integration of Traditional Chinese Building Concepts and Ecological Considerations in Contemporary Tall Wood Structures," 2016.
- 2015 **Fatemeh Malekzadeh**, MS. Arch, "Integration of Phase Change Materials in Commercial Buildings for Thermal Regulation," 2015.
Kimia Pakfar, MS. Arch, "Regenerative Design, Going Beyond Green: Date Palm Structures as Alternative Design Resolution in Salton Sea," 2015.
Shaghayegh Ansari, MS. Arch, "An Investigation Into Water Usage and Water Efficient Design for Persian Gardens," 2015.
Suzan Borazjani, MS. Arch, "Salt Architecture for Ecological Regeneration in Salton Sea," 2015.
Golnaz Shirazi, MS. Arch, "Defining Biophilic Design Strategies to Achieve Occupant-Interface and Healing in Healthcare Facilities in Hot-Humid and Cold-Arid Climates with an Emphasis on Patients' Interior Room Experience," 2015.

THESIS COMMITTEES (CONT.)

COMMITTEE MEMBER

- 2022 **Chumei Rui**, MS. Arch HBE, "Evaluation of Ancient Fengshui Principles and Their Impact on Layouts of Contemporary Residences for Human Health," 2022.
Kylie Biddle, MS. Arch HBE, "Flexible Workspaces and Post-COVID-19 Design," 2022.
Felipe Florentino, MS. Arch CSP, "Spatialities and temporalities in the Gowanus Canal - the intersection of the work of Lina Bo Bardi and Rem Koolhaas for intervention in the industrial site," 2022.
- 2021 **Venus Abdollahi**, MS. Arch DCE|HBE, "Adaptive Facade Design for Glare Mitigation and Outside Views in Work Environments," 2021.
Saleh Naseer, MS. Arch DCE|HBE, "Classroom Design for Indoor Environmental Quality to Improve Second-Language Learning Conditions," 2021.
Robert Heil MS. Arch EBT, "A Dynamic Assessment of Indoor Air Quality Through Passive and Active Filtration Measures," 2021.
- 2020 **Ghayda Alhabib**, MS. Arch HBE, "Passive Strategies for Reducing the Impact of Outdoor Air Pollutants on Indoor Air Quality: A Combination of CAM Plants and Hydrogel Filters," 2020.
- 2019 **Ryan Schindler**, MS. Arch HBE, "Discovering the ROI of Evidence-Based Design Through the Lens of Daylight," 2019.
- 2018 **Susan Bierer**, MS. Arch HC, "Analysis of an Adaptive Reuse Program: Four Case Studies from Phoenix, AZ," 2018.
- 2017 **Rahil Zarpoush**, MS. Arch, "Mitigating Noise Levels Within the Main Campus of University of Arizona by Integrating Biodegradable Polylactic Acid as an Acoustic Panel to Buildings," 2017.
Omar Humaidan, MS. Arch, "Utilizing Energy Efficiency Strategies to Achieve a Net-Zero Energy Commercial Building in the Hot-Arid Region of Mecca, Saudi Arabia," 2017.
Khaled Almazam, MS. Arch, "Analyzing and Designing an Off-Grid Commercial Library Building at Najran University in the Hot Arid Climate of Najran, Saudi Arabia," 2017.
Hussein Al Salih, MS. Arch, "Methodology for Daylight Optimization Towards Net Zero Buildings in Hot Arid Climates," 2017.
Monica Sanchez, MS. Arch, "Kinetic Green Wall System Applications on Reducing Carbon Emissions in Hot-Arid Climates," 2017.
- 2016 **Mosad Alhawas**, MS. Arch, "Toward Net-Zero Residential Buildings in the Arabian Gulf Region (Lessons learned from the Arabian Gulf vernacular architecture)," 2016.
Ivan Gaxiola, MS. Arch, "Mitigating Urban Heat Island Through Integration of Agriculture in the Built Environment in Arid Regions," 2016.
- 2015 **Cortney West**, MS. Arch, "Indoor Plant Integration for Air Filtration and Energy Conservation," 2015.
Osvaldo Ruis, MS. Arch, "The Green Box: A Software to Learn Strategies to Reduce Energy Consumption," 2015.
- 2014 **Elmira Shojaei**, MS. Arch, "Iranian Windcatchers and Human Thermal Comfort Spatial Integration," 2014.

STUDENT AWARDS + RECOGNITION

- 2020 **Sara Ghaemi**, UA Tech launch Arizona Student Innovation Award, 2020
2018 **Fatemeh Sharef-Zadeh**, ARCC King Medal, 2018
2017 **Fatemeh Sharef-Zadeh**, Taleghani Fellowship, 2017
2015 **Shaghayegh Ansari**, Taleghani Fellowship, 2015
Dylan Arceneaux, TLA Fellowship, 2015
Long Long, AIA Student Showcase, ARC 201 Studio prize, 2015

GUEST TEACHING

GUEST REVIEWS + JURIES

Dec 2023	Univ. of Pennsylvania MSD. Environmental Building Design, Bill Braham studio, Philadelphia, PA
May 2023	Yale University, Center for Ecosystems and Architecture, Soil Sisters, New Haven, CT
May 2023	City College of New York, School of Architecture, Designing an Eco Space Studio, New York, NY
Dec 2020	Univ. of Washington, College of the Built Environment, Living Building Data Center Studio, Seattle, WA
Sep 2020	Kansas State Univ., College of Architecture, Chad Schwartz studio, Manhattan, KS
May 2020	Univ. of Pennsylvania MSD. Environmental Building Design, Dorit Aviv studio, Philadelphia, PA
Nov 2019	Princeton University, Environmental Technologies, F. Meggers graduate course, Princeton, PA
May 2019	Univ. of Pennsylvania MSD. Environmental Building Design, Dorit Aviv studio, Philadelphia, PA
May 2019	Princeton University, Ph.D. Dissertation Defense Committee, Hongshan Guo, Princeton, PA
Dec 2018	Taliesin West, Architecture Studio Reviews, M.Arch studios 1, 2, and 3
Dec 2017	BS. Sustainable Built Environments Capstone Showcase and Awards, SoA judge, CAPLA, UA
Sep 2017	Arizona Student Energy Conference, Poster Presentations, guest reviewer, ASU, Phoenix, AZ
Jan 2017	Arizona Water Association Annual Conference, Student Poster Presentations, Tempe, AZ
Dec 2016	Richard + Bauer Prize, Jury Chair, ARC 401 Comprehensive Design Studio, SoA, UA, Tucson, AZ
Fall 2016	UA Institute of the Environment Fall Fest, Poster Presentations, Tucson, AZ
Fall 2016	Arizona Student Energy Conference, Poster Presentations, Flagstaff, AZ
Summer 2015	Univ. of Michigan, MS.Arch Design + Health practicum with Sean Vance, Ann Arbor, MI
Fall 2012	RPI School of Architecture, 3rd year design studio, Bali cultural center, with Julia Watson, Troy, NY
Spring 2012	RPI School of Architecture, 2nd year design studio reviews with Andrew Saunders, Troy, NY
Fall 2011	RPI School of Architecture, 2nd year bio-polymeric design studio with Zbigniew Oksiuta, Troy, NY
Fall 2008	Pratt Institute, 4th year design studio reviews, Brooklyn, NY
2006-2008	Univ. of Arizona School of Architecture, 5th, 4th, 3rd, and 2nd year design studio reviews, Tucson, AZ

STUDENT RESEARCH LEARNING ENGAGEMENT

2020-2022	SRP Datacenter Water and Energy grant, Co-PI, UA, Tucson, AZ One Graduate Student (Architecture) 1-year Assistantship One Post-Doc Scholar (Chemical and Environmental Engineering) half-time position
Fall 2020	WET Center NSF funding, PI, UA, Tucson, AZ One Graduate Student (Architecture) 1-semester Assistantship
2018-2019	Microsoft Datacenter CIRC funding, co-PI, UA, Tucson, AZ One Graduate Student (Architecture) 1-year Assistantship Two Graduate Students (Architecture) Supplemental Comp Two Undergraduate Students (Architecture) Supplemental Comp
2018-2019	UA ORDI AFS Grant, co-PI, UA, Tucson, AZ One Graduate Student (Architecture) 1-semester Assistantship Three Undergraduate Students (Architecture) Supplemental Comp
2017	UA WEES Grad/Undergrad Interdisciplinary Links Grant, co-PI, UA, Tucson, AZ One Graduate Student (Material Science) 1-semester Assistantship Five Undergraduate Students (Architecture) Summer Supplemental Comp
2016-2018	NSF EAGER Superporous Electroactive Hydrogels, PI, UA, Tucson, AZ One Graduate Student (Material Science) 1-year Assistantship Two Graduate Students (Architecture) 1-year Supplemental Comp Two Undergraduate Students (ECE and Architecture) Supplemental Comp
2015-2016	UA REN Faculty Exploratory Grant, PI, UA, Tucson, AZ One Graduate Student (ECE) 1-year Assistantship One Graduate Students (Architecture) Summer Supplemental Comp Two Undergraduate Students (Architecture) Summer Supplemental Comp

SERVICE

SCHOOL SERVICE

CHAIR

Spring 2022	UA SoA P3 Curriculum Task Force, <i>Chair</i>
Sum 2020 - 2022	UA Master of Science in Architecture (MS.Arch), <i>Program Chair</i>
Fall 2020 - 2022	UA SoA MS.Arch Admissions Committee, <i>Chair</i>
Fall 2018-Spr 2020	UA SoA Sustainability Pedagogy Committee, <i>Chair/Co-Chair</i>
Fall 2018-Spr 2020	UA SoA Graduate Executive Committee, <i>Chair</i>
Spr 2017-Spr 2020	UA MS.Arch Emerging Building Technology, <i>Sub-plan Chair</i>
Spring 2015-2016	UA SoA Sustainability Pedagogy Committee, <i>Chair</i>
Fall 2014-2016	UA MS.Arch Independent Option Program, <i>Chair</i>

COMMITTEE MEMBER

Spring 2022	UA SoA Design Communication Faculty Search Committee, <i>member</i>
Fall 2021	UA SoA Promotion and Tenure Reviews
Fall 2020	UA SoA Curriculum Committee, MS.Arch Program representative
Sum 2020	UA SoA Curriculum Committee, P3 task force, <i>member</i>
Fall 2019-Spr 2020	UA Architectural Engineering program committee, SoA faculty <i>member</i>
Fall 2018-Spr 2020	UA SoA Curriculum Committee, Sustainability Pedagogy Representative
Fall 2018-Spr 2020	UA SoA M.Arch Admissions Committee, <i>member</i>
Fall 2018	UA SoA Administrative Assistant Search Committee, <i>member</i>
Fall 2017-Spr 2020	UA SoA Material Laboratories Committee, <i>member</i>
Fall 2017-2018	UA SoA Digital Technologies Committee, <i>member</i>
Fall 2016-Spr 2020	UA SoA Graduate Executive Committee, MS.Arch EBT representative
Fall 2016-2017	UA SoA Bylaws Task Force, <i>member</i>
October 2016	UA SoA Strategic Planning Initiative, <i>UA and CAPLA connections leader</i>
2016, 2017	UA SoA Monsoon Awards for Sustainable Design Excellence, Selection Committee, <i>member</i>
Spring 2016	UA SoA NAAB Accreditation Visit coordination: MS.Arch, ARC 201, ARC 223, Sustainability Pedagogy
2015-current	UA SoA MS.Arch Admissions Committee, <i>member</i>
2014-Spr 2020	UA SoA Milestone Portfolio Review Committee, Environmental Systems
2014-2020	UA SoA Sustainability Pedagogy Committee, <i>member</i>
2014-current	UA SoA Technology Stream, <i>member</i>
2014-2017	UA SoA Curriculum Committee, MS.Arch program representative
2012-2013	Dean's Student Advisory Committee, School of Architecture, Rensselaer Polytechnic Institute, Troy, NY
May 2006	Southern Arizona AIA Student Scholarship Awards, Selection Committee, Tucson, AZ
April 2006	Archon Design Competition, Selection Committee, Univ. of Arizona, Tucson, AZ
2004-2005	Sustainable Lighting Committee, Active Research Member, Tucson, AZ

COLLEGE SERVICE

CHAIR

Spring 2018	UA CAPLA Strategic Planning, Research Workgroup, <i>co-Chair</i>
Fall 2016-2017	Sustainable Built Environments + Architecture Faculty Search Committee, <i>Chair</i>

COMMITTEE MEMBER

Fall 2021	UA CAPLA Associate Dean of Research Search Committee, <i>member</i>
2021	UA CAPLA SoA Director Search Committee, <i>member</i>
Fall 2020 - Fall 2021	UA CAPLA Drachman Institute Interim Faculty Executive Committee, <i>member</i>
Spring 2020	UA CAPLA College Curriculum Committee, <i>interim member</i>
Fall 2018	UA CAPLA Drachman Institute Task Force, <i>member</i>
2018	UA CAPLA West Building Master Planning Workgroup, <i>member</i>
2018- Spring 2019	UA CAPLA Strategic Planning and Operations Advisory Committee, <i>member</i>

UNIVERSITY SERVICE

CHAIR

- May 2021 - May 2022 UA RESTRUCT, *Director*
Strategic Initiative for Interdisciplinary Research on the Built Environment
- December 2017 UA Institute for Energy Solutions Strategic Planning Focus Group
Built Environments and Human Health, *co-Leader*

COMMITTEE MEMBER

- Fall 2019-Spr 2020 UA Architectural Engineering Faculty Search Committee, member
Spring 2019 UA Material Science and Engineering (MSE) Faculty Search Committee, participant
Fall 2018 UA Systems and Industrial Engineering (SIE) Faculty Search Committee, member
Fall 2018-Spr 2020 UA Renewable Energy Advisory Committee, member
Fall 2018 UA Strategic Planning "Energy and Climate" Design Initiative Team, member
2018 UA Undergraduate Council Policy Sub-Committee, CAPLA representative
November 2017 UA Undergraduate Studies in Environmental Sciences Workshop, SoA representative
Fall 2016-2017 WEES Visioning Committee: 2017-2021 Initiatives, participant
Fall 2016-Fall 2019 Faculty Advisory Board, UA Water and Energy Sustainable Technology (WEST) Center, Tucson, AZ
Spring 2016 WEES Accelerate for Success, Grant Proposal Reviews, UA Office for Research and Development
2016-2018 UA Undergraduate Council Committee, CAPLA representative
2016-2017 UA Undergraduate Council Programs Sub-Committee, CAPLA representative

STATE SERVICE

- 2016-2020 Arizona Technology Council, Building Technology Committee Coordinator, AZ

NATIONAL SERVICE

- Jan 2020-Dec 2021 Building Technology Educators' Society (BTES), Board Member
Spr 2020-Spr 2021 ARCC 2021 Conference organizing committee, Tucson, AZ, member
October 2017 AIA Post-Disaster Safety Assessment Volunteer, Corpus Christi, TX
2015-2017 AIA Design and Health Research Consortium, inaugural team member, PI, UA IPWP

OTHER SERVICE ACTIVITIES

TECHNICAL

- Fall 2021 Sustainability, MDPI journal, paper review
Fall 2021 The Plan Journal, paper reviews
Spring 2021 NSF EPSCoR proposal reviews, Alexandria, VA (virtual)
Fall 2020 NSF CMMI Grant Proposal review panel, Alexandria, VA (virtual)
Fall 2020 Journal of Cleaner Production, Elsevier Press, paper review
Fall 2020-Spr 2021 ARCC 2021 Conference abstract and paper reviews, Performative Environments
Fall 2020-Spr 2021 BTES 2021 Conference abstract and paper reviews, Out of Bounds
Sum 2020 ENQUIRY Journal, paper review
Fall 2019 IGI Global Press, chapter reviews
Spr 2019-Fall 2020 DBMC 2020, Scientific Review Committee, Durability of Building Materials and Components
2018 NSF EAGER DREAM-B proposal reviewer
2018 NSF CMMI Grant Proposal review panel, Alexandria, VA
2018 Technology, Architecture and Design (TAD) Journal, paper reviews
2017-2018 Editorial Advisory Board, IGI Global Press
December 2017 AMPS 2018 conference papers, abstract reviews, Critical Practice in an Age of Complexity
2017-2018 IBPC 2018 Scientific Review Committee, International Association of Building Physics (IABP)
Spring 2017 ACADIA 2017 conference papers, Disciplines and Disruptions
Summer 2016 NIH BUILD (U54), ASCEND Grant Proposals for Biomedical Research at Morgan State University
Spring 2016 ACADIA 2016 conference papers, Posthuman Frontiers: Data, Designers and Cognitive Machines

MENTORING

- Fall 2020-Spr 2021 UA Women in Science and Engineering (WISE) Mentoring Program [Tabassum H., Student]
Fall 2018-Spr 2019 UA Faculty Mentorship Program [Anna Koosman, Assistant Professor SoA]
Fall 2017-Spr 2018 SoA Faculty Mentoring [Ben Lepley, Lecturer SoA]
Fall 2015-Spr 2016 SoA Faculty Mentoring [Annie Kurtin, Lecturer SoA]

OTHER SERVICE ACTIVITIES (CONT.)

VOLUNTEER

2017	One Million Cups, Tucson Start-Up non-profit organization, participant, Tucson, AZ
Summer 2016	Tumacocori Mission Adobe Restoration, AZ
Spring 2014	AIAS Portfolio Design Charrette, Advising Faculty Member, School of Architecture, UA
September 2006	Miramonte Neighborhood Overlay Zoning Design Charrette, organizing participant, Tucson, AZ
Fall 2005	Association for Women Faculty, Graphic Design Volunteer, Univ. of Arizona
April 2005	Vernacular Architecture Forum, Volunteer, Tucson, AZ
2004-2005	Rincon Heights Neighborhood Improvement Plan Implementation Team, Tucson, AZ
December 2004	Art Brown MOCA Tour, Docent, Tucson, AZ
2003-2004	'Architalker' for the Center for Architecture, New York, NY
March 2002	Brooklyn Center for the Urban Environment Design Charrette, Co-Facilitator, Brooklyn, NY
June 1998	Historic Hollywood District Urban Design Charrette, participant, Portland, OR
Summer 1998	Habitat for Humanity construction volunteer, Portland, OR
1995-1997	'Flavor' newsletter (exploring gender and race in architecture), Creator/Editor, Univ. of Oregon

MEMBERSHIPS AND AFFILIATIONS

UNIVERSITY AFFILIATIONS

2020-2022	Affiliate Faculty, Material Science and Engineering, UA COE, courtesy appointment
2020-2022	Affiliate Faculty, Aerospace and Mechanical Engineering, UA COE, courtesy appointment
2020-2022	Affiliate Faculty, UA Arizona Institute for Resilience (AIR)
2018-2022	Affiliate Faculty, GIDP ALRS (Arid Lands Resource Sciences)
2016-2022	UA Arts and Environment Network, Member, Tucson, AZ
2016-2020	Affiliate Faculty, GIDP SCCT (Social, Cultural, and Critical Theory)
2015-2020	Affiliate Faculty, UA Institute of the Environment
2015-2018	Affiliate Faculty, UA Institute for Energy Solutions
2014-2022	Affiliate Faculty, UA Institute on Place, Wellbeing and Performance

PROFESSIONAL AFFILIATIONS

2023-current	American Institute of Architects, New York Chapter, New York, NY
2020-2022	American Institute of Architects, Southern Arizona Chapter, Tucson, AZ
2016-2020	Association for Computer Aided Design in Architecture (ACADIA), Member
2016-2020	Association for Robotics in Architecture, Member
2016-2021	Building Technology Educators' Society, Member
2015-2020	Materials Research Society, Member
2008-2011	American Institute of Architects, New York Chapter, New York, NY
2005-2007	American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), Member
2005-2006	American Institute of Architects, Southern Arizona Chapter, Tucson, AZ
2005-2006	Modern Architecture Preservation Project (MAPP), Active Member, Tucson, AZ
2003-2004	American Institute of Architects, New York Chapter, New York, NY

PROFESSIONAL DEVELOPMENT

CONFERENCES

PROFESSIONAL CONFERENCES

- October 2017 AIA Arizona State Conference, Phoenix, AZ
- January 2017 AZ Water Association Annual Conference, Tempe, AZ
- May 2015 AIA National Convention, Atlanta, GA
- May 2005 AIA National Convention, Las Vegas, NV
- May 2004 AIA National Convention, Chicago, IL
- August 1995 Second Annual AIA Architectural Diversity Conference, San Francisco, CA

WORKSHOPS

PROFESSIONAL WORKSHOPS

- July 2018 AIA Collaborative Research Summit, Minneapolis, MN
- March 2017 AIA Design + Health Research Consortium Workshop, Detroit, MI
- April 2016 AIA Design + Health Research Consortium Workshop, Alexandria, VA
- March 2015 AIA Design + Health Research Consortium Workshop at RWJF, Princeton, NJ
- Spring 2008 Affordable Housing Institute, affordable housing development workshop series, Phoenix, AZ

RESEARCH WORKSHOPS

- November 2017 UA ORDI Data Acquisition, Ownership and Management Workshop, Tucson, AZ
- November 2017 UA ORDI Ethics of Collaborative Research and Working with Industry Workshop, Tucson, AZ
- Spring 2017 NSF Career Grant preparation workshop series, Phase II participant, UA, Tucson, AZ
- 2016-2017 CAPLA Research Workshops, participant, UA, Tucson, AZ
- Fall 2016 UA Press Workshop, Unraveling the Book Publishing Process, UA, Tucson, AZ
- Fall 2016 UA Research Outside the Box Faculty Engagement Workshop, Confluence Center, Tucson, AZ
- October 2015 DOE Energy Forum, University of Arizona Old Main, Tucson, AZ
- September 2015 UA Water, Energy, Arid Environment Strategic Planning Workshop at Biosphere 2, Oracle, AZ
- Spring 2015 NSF Career Grant preparation workshop series, Phase I participant, UA, Tucson, AZ

TEACHING WORKSHOPS

- November 2017 UA Graduate Center and ODIEX Mitigating Unconscious Bias in the Workplace, Tucson, AZ
- November 2017 UA CSW Mentoring Graduate Students: Strategies for Success Workshop, Tucson, AZ
- Summer 2017 Collaborative Learning Mini-Course, University of Arizona, Tucson, AZ
- 2016-2017 Faculty Learning Workshops, participant, University of Arizona, Tucson, AZ
- 2012-2013 Preparing Future Faculty Workshop series, Rensselaer Polytechnic Institute, Troy, NY

SERVICE WORKSHOPS

- Fall 2016 UA Recruitment and Hiring Workshop, Faculty Affairs, Tucson, AZ
- Spring 2016 UA Student Admissions Workshop, Graduate College, Tucson, AZ

EDUCATION

CONTINUING EDUCATION

- October 2017 AIA Safety Assessment Program certification training, Corpus Christi, TX
- 2016-2017 Building Performance Modeling Workshops, participant, Performance Network, London, UK
- Summer 2005 Graduate Writing Workshop, University of Arizona, Tucson, AZ
- 2001-2003 Cooper Union continuing education courses in collage arts, New York, NY
- Summer 1996 Rome Summer Architecture Program, Univ. of Oregon, Rome, Italy

TECHNICAL SKILLS

SOFTWARE

PROFICIENCY

Microsoft Office Suite + 365

Word, Excel, PowerPoint, Outlook, Microsoft Project, OneDrive, SharePoint

Adobe Creative Cloud

Photoshop, Illustrator, InDesign

Rhino

AutoCAD

Grasshopper tools + plugins

EnergyPlus

eQUEST

OpenFoam + blueCFD-core

Radiance + DAYSIM

WINDOW, THERM + Optics

FAMILIARITY

ArcGIS

REVIT

Arduino

Processing

Enscape

Lumion

DaVinci Pro

EMPIRICAL TESTING

Various microcontrollers, sensors, + coding

Drone videography

Thermography

Light meters + photosensors

Anemometers

Water Quality Testing

Sound meters + acoustic test chambers

Wind tunnel testing

Differential Thermal Conductivity (DTC) testing

Differential Scanning Calorimetry (DSC) testing

Dynamic system controls testing

Scanning Electron Microscopy (SEM) + microscopy

FABRICATION + ASSEMBLY

3D printing

CNC routing

Laser cutting

KUKA robotics

Polymer synthesis

Ceramics

Glass

Wood

Various assembly methods

Various finishing techniques

Lighting systems

PV systems

Plumbing systems

Actuation control + feedback systems