

Omayya H. Ahmad

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EDUCATION

Doctor of Philosophy candidate (expected Spring 2014) Sustainability, Arizona State University, Tempe, Arizona

Dissertation: “Accessibility and Well-Being in the West Bank, Palestine”
(working title)

Chair: Aaron Golub; Committee Members: Rimjhim Aggarwal and Ahmad Saleh Sadaqa

Bachelor of Science in Engineering (2009) Chemical Engineering, Arizona State University, Tempe, Arizona

Certificate of Honors (2009) Barrett Honors College, Arizona State University, Tempe, Arizona

Thesis: “Voices of the Palestinian/Israeli Conflict”

Chair: Jacqueline Martinez; Committee Members: Mirna Lattouf and Francine Banner

PROFESSIONAL EXPERIENCE

Teaching Assistant (August 2013-Present) School of Sustainability, Arizona State University

Graduate Research Associate (August 2013-Present) Sustainability Science Education project at the Center for Sustainable Health, Biodesign Institute

Student Intern (May 2013-July 2013) Ministry of Planning, Palestinian National Authority

GK-12 and Outreach Fellow (2011-June 2013) Sustainability Science for Sustainable Schools, NSF Funded K-12 Project, Arizona State University

Research Assistant (2009-2011) Decision Center for a Desert City (DCDC), Arizona State University

TEACHING EXPERIENCE

Teaching Assistant (May 2013-Present) School of Sustainability, Arizona State University

SOS 110: Sustainable World (2 sections)

Workshop Facilitator (May 13-15, 2013) “Teaching Sustainability.”

Designed and conducted workshop with Jen Fuller. Given to teachers, parents, community members, and municipality representatives at KSH School in Hoofddorp, Netherlands. Sponsored by the Walton Sustainability Solutions Initiatives.

GK-12 Fellow (August 2011-May 2013) Greenway Middle School, Phoenix, AZ

Developed/facilitated sustainability lessons with the Honors Core Program.

GK-12 Fellow (August 2011-May 2012) Desert Vista High School, Tempe, AZ

Developed/facilitated sustainability lessons in environmental science, biology, earth science, English, and French courses.

Teaching Associate (2011) School of Sustainability, Arizona State University, Tempe AZ

SOS 484: Capstone: DCDC Internship Science Practice Integration (1 section)

RESEARCH INTERESTS

Accessibility, Capabilities, Sustainable Transportation, Quality of Life and Well-Being, Sustainable Development, Equity, Social Justice, Sustainability in the Middle East, Global Water Scarcity and Quality, Climate Change and Water, Global Water Policy, Human Health and Climate, Urban Heat Island

RESEARCH EXPERIENCE

Lasting Effects of Interdisciplinary Exposure: Graduate Student Response Following Work in an Interdisciplinary Seminar

Arizona State University, Tempe, AZ, August 2010 – May 2011

The study proposes to evaluate the efficacy of the Community of Graduate Scholars program by assessing past students’ experiences in and perspectives on the program. I worked closely with the study team to create an extensive survey that was administered to previous CGS graduate student researchers in March 2011. I presented a poster for the project at the CGS poster symposium held at DCDC. Research funding provided by DCDC.

Historical Temperature Trends in Phoenix, Arizona from 1896-2009

Arizona State University, Tempe, AZ September 2008 – May 2011

The research project examines daily temperatures obtained from the Sky Harbor weather station over the years 1896-2009 in order to identify temperature trends. With our analysis, identified trends suggest future social implications. My contributions included: 1) identifying heat waves over the period; 2) observing trends in heat wave characteristics, frequency, duration, and intensity; and 3) investigating causes and social implications of temperature trends. Lead investigator is Darren Ruddell, Post Doctoral Scholar at Arizona State University. Research funding provided by DCDC.

Measuring Resilience after a Catastrophic Natural Disaster: A Case Study of Fayette, Haiti after the 2010 Earthquake

Arizona State University, Tempe, AZ August 2010 – February 2011

The study aims to assess three types of resilience (engineering, ecological, and social) inherent to the small Haitian community of Fayette. My work focused on document analysis covering topics of Haitian history and social resilience literature. Lead investigator is Christa Breilsford, graduate student at Arizona State University. Partial funding provided by GISER.

Watering the Sun Corridor

Arizona State University, Tempe, AZ January 2010 – October 2010

The study proposed to prepare a document to present the water supply and demand in the Sun Corridor based on best available data, climate models, population projections, and visions of future lifestyles and growth patterns. I contributed by searching for studies relating to water in areas within the Sun Corridor. Lead investigator is Grady Gammage Jr., Senior Research Fellow at Morrison Institute for Public Policy. Partial research funding provided by DCDC.

Art and Science Integration

Arizona State University, Tempe, AZ, August 2009 – May 2010

I participated in a graduate student seminar designed to advance interdisciplinary research and communication among diverse academic disciplines. Our efforts allowed for an organized collaboration between our group of scientific researchers and graduate student photographers, which culminated in a panel discussion and poster presentation in April 2010. The seminar is part of ASU's Decision Center for a Desert City (DCDC), and was conducted by Katja Brundiers, GIOS Academic Professor, and Bethany Cutts, GIOS Graduate Teaching Assistant.

Project video: <http://vimeo.com/11284134>

Balancing Energy and Water Consumption in an Urban Desert Environment

Arizona State University, Tempe, AZ December 2009 – May 2010

The research project examined three distinct data sets, including energy and water consumption and temperature information for 16 census blocks in the Phoenix Metropolitan Area in 2005 so as to quantify trade offs between energy, water, and climate. My contributions included: 1) creating a pictorial profile of each census block; and 2) identifying trends among temperature and energy and water use. Lead investigator is Darren Ruddell, Post Doctoral Scholar at Arizona State University. Research funding provided by DCDC.

PUBLICATIONS

Ruddell, D., Hoffman, D., **Ahmad, O.**, & Brazel, A. (2013). Historical threshold temperatures for Phoenix (urban) and Gila Bend (desert), central Arizona, USA. *Climate Research*, 55, 201–215.

PRESENTATIONS

Poster Presentations

O. Ahmad, J. Fuller, A. Raymondi, & K. Talbot. *Sustainability Science for Sustainable Schools: Sustainability Projects as a Method for Student Engagement*. Presented at the GK-12 Annual Conference, Washington D.C., March 2012.

O. Ahmad, G. Hawkins, & R. Neel. *Lasting Effects of Interdisciplinary Exposure: Graduate Student Response Following Work in an Interdisciplinary Setting*. Presented at the Decision Center for a Desert City Community of Graduate Scholars Poster Symposium, Tempe, AZ, May 2011.

O. Ahmad, G. Hawkins, & R. Neel. *Lasting Effects of Interdisciplinary Exposure: Graduate Student Response Following Work in an Interdisciplinary Setting*. Presented at the American Association for the Advancement of Science Annual Conference, Washington D.C., February 2011.

O. Ahmad & D. Ruddell. *Balancing Energy and Water Consumption in an Urban Desert Environment: A Case Study on Phoenix, AZ*. Presented at the Decision Center for a Desert City Community of Graduate Scholars Poster Symposium, Tempe, AZ, May 2010.

O. Ahmad & D. Ruddell. *Balancing Energy and Water Consumption in an Urban Desert Environment: A Case Study on Phoenix, AZ*. Presented at the Association of American Geographers Annual Conference, Washington D.C., April 2010.

D. Ruddell, D. Hoffman, & **O. Ahmad**. *Historical Temperature Trends in Phoenix, Arizona from 1896-2009*. Presented by D. Hoffman at the Association of American Geographers Annual Conference, Washington D.C., April 2010.

O. Ahmad & D. Ruddell. *Balancing Energy and Water Consumption in an Urban Desert Environment*. Presented at the 12th Annual CAP LTER Poster Symposium, Tempe, AZ. January 2010.

D. Ruddell, D. Hoffman, & **O. Ahmad**. *Historical Temperature Trends in Phoenix, Arizona from 1896-2009*. Presented by D. Hoffman at the 12th Annual CAP LTER Poster Symposium, Tempe, AZ. January 2010.

Invited Presentations

Sustainability Science for Sustainable Schools. Presented to Japan-U.S. Teacher Exchange Program for Education for Sustainable Development, Arizona State University, Tempe, AZ, April 2013.

International Research: Palestine Study. Presented to SOS 530 Sustainable Development, Arizona State University, Tempe, AZ, November 2012.

O. Ahmad, K. Gorovitz, & D. Zavaleta. *Sustainability Initiatives at Desert Vista High School*. Presented at Tempe Union High School District Governing Board Meeting, Tempe, AZ, March 2012.

O. Ahmad, C. Brelsford, R. Delaney, E. Freeman, C. Kunzweiler, & Q. Wang. *Measuring Resilience after a Catastrophic Natural Disaster: A Case Study of Fayette, Haiti after the 2010 Earthquake*. Presented at Resilience 2011, Tempe, AZ, March 2011.

Education in Sustainability. Presented to Center for Research in Engineering, Science and Technology, Paradise Valley High School, Phoenix, AZ, February 2010.

Education in Sustainability. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, December 2009.

O. Ahmad, D. Ruddell, & D. Hoffman. *Historical Temperature Trends in Phoenix, Arizona from 1896-2009*. Presented at the Decision Center for a Desert City Chinese Academy of Sciences Presentations, Tempe, AZ October 2009.

Guest Lecture

Introduction to Sustainability. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, August 2013.

Urban Heat Island. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, March 2013.

Social Justice in the Middle East. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, February 2013.

Sustainable Transportation. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, February 2013.

Consumption and Print Advertising. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, December 2012.

Arizona Water Consumption. Holmes Elementary School, Mesa, AZ. November 2012.

Arizona Water Consumption. Tempe History Museum, Tempe, AZ. October 2012.

Introduction to Sustainability. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, August 2012.

Sustainable Transportation: Paris vs. Phoenix. Presented to 30 students, Desert Vista High School, Phoenix, AZ, April 2012.

The Externalities Game. Presented to 20 students, Desert Vista High School, Phoenix, AZ, February 2012.

Introduction to Sustainability. Presented to 480 students, Desert Vista High School, Phoenix, AZ, October 2011 - May 2012.

Urban Heat Island. Two-day lecture presented to 150 students, Desert Vista High School, Phoenix, AZ, December 2011 & February 2012.

Atmospheric Carbon Dioxide and Climate Change. Presented to biology students, Desert Vista High School, Phoenix, AZ, November 2011.

Consumption and Print Advertising. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, October 2011.

Introduction to Sustainability. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, September 2011.

Water Conservation and Rainwater Harvesting. Presented to environmental summer program, Paseo Hills Elementary School, Phoenix, AZ, July 2011.

Concepts of Sustainability. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, September 2010.

Pillars of Sustainability. Presented to Honors Core, Greenway Middle School, Phoenix, AZ, November 2009.

Media Coverage

Hoofddorp (2013). "American doctoral students teach about sustainability." InforMeer, May 22, 2013.

Schwartz, M. (2013). "Student connects art, sustainability through experiential learning."
ASU News, Science & Tech, May 14, 2013.
https://asunews.asu.edu/20130513_sustainable-schools

SCHOLARSHIPS AND AWARDS

President's Award for Sustainability, Arizona State University 2013

Grand Lodge of Arizona Scholarship, 2006-2007 & 2009

Dean's List, Arizona State University, Fall 2005, Spring 2008 & 2009

Arizona State University Provost Scholarship, 2005-2009

Scottish Rite of Arizona Scholarship, 2006-2007

MEMBERSHIPS

American Institute of Chemical Engineers (2007–2010)

Omega Phi Alpha, National Service Sorority (2008–2009)

SERVICE

Gila River War Relocation Center Memorial restoration, March 2013

Future City Competition, January 2013

Science Expo, February 2012

Brookdale Place Retirement Community, December 2011

Earth Fest, October 2011

School of Sustainability Recruitment Event, March 2011

Waste Management Sustainably Forum, February 2011

Tour de Fat, October 2010

School of Sustainability Graduation Ceremony, May 2010

Center for Research in Engineering, Science and Technology, 2009 – 2010

Greenway Middle School, 2002 – Present

Ronald McDonald House, 2008

Crisis Nursery, 2008

Alzheimer's Association: Memory Walk, 2008

American Cancer Society: Relay for Life, 2008

Amor Ministries, Casa de Amor, 2008

Trick-or-Treat for UNICEF, 2008

Arizona Student Vote Coalition, 2008

Adopt a Family, 2007

FOREIGN LANGUAGE AND TRAVEL

Conversational in Spanish

Countries Visited: Palestine, Israel, Mexico, United Kingdom, France, Italy, Germany, Monaco, Netherlands, Austria, and Belgium