Pedro Romero, Ph.D., P.E.

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EDUCATION

The Pennsylvania State University, University Park, PA
Doctor of Philosophy (Ph.D.) in Civil Engineering with courses in Statistics and engineering mechanics (elasticity, viscoelasticity, fracture mechanics) (1996)
- Thesis: The Effect of Laboratory Age-Hardening of Asphalt Mixtures on Thermal Cracking Performance Predictions Using the Indirect Tensile Test
- Module taken: material performance, testing, evaluation, and modeling of construction materials.

The Pennsylvania State University, University Park, PA
Master of Science in Civil Engineering (Spring 1991)
- Thesis: Analytical Development of a Dual-Rigid-Load Falling Weight Deflectometer to Obtain Pavement Layer Moduli from Surface Deflections
- Module taken: Non-destructive characterization of Highway Materials and Falling Weight Deflectometer (FWD)

United States Coast Guard Academy, New London, CT
Bachelor of Science in Civil Engineering with High Honors (Spring 1989)
Completed additional courses at Coast Guard and Navy Technical Schools

RELEVANT JOB HISTORY

The University Of Utah, Salt Lake City, UT
Associate (Tenured) Professor of Civil Engineering, 2000-Present
Associate Department Chair (2014-present)

Soil And Land Use Technology, INC., Beltsville, MD
On-site Manager, 1999-2000

Turner-Fairbank Highway Research Center, McLean, VA
Laboratory Technical Manager for Federal Highway Administration under contract from Soil and Land Use Technology, Inc. (Beltsville, MD), 1997-2000

EBA Engineering, Inc, Baltimore, MD
Laboratory Technical Manager, under contract for Federal Highway Administration, 1995-1997

The Pennsylvania Transportation Institute, University Park, PA
Research Assistant. Graduate student and full-time research staff, 1990-1995

PRESENTATION AND PUBLICATION

"Creating a Performance-Based Asphalt Mix Design to Incorporate Oil Sands." Paper #90 ASCE/T&DI International Airfield and Highway Pavement Conference, Miami, FL (June, 2015)

"Evaluating the Effect of Air Voids and Binder Content in Cold Temperature Testing of Asphalt Mixtures Using the Bending Beam Rheometer." Paper #25 ASCE Cold Regions Engineering Conference. Salt Lake City, UT (July, 2015)

"Multiple Labs Repeatability of Low Temperature Testing of Asphalt Mixtures Using the Bending Beam Rheometer." Paper #35 ASCE Cold Regions Engineering Conference. Salt Lake City, UT (July, 2015)

"Characterizing the Low-Temperature Viscoelastic Behavior of Asphalt Mixtures: A Comparative Study." International Journal of Pavement Research and Technology. ISSN 1996-6834. Vol 6 No. 5. Pp. 479-487 (Sep. 2013)

"Evaluating the Representative Volume Element of Asphalt Concrete Mixture Beams for Testing in the Bending Beam Rheometer." Multi-Scale Modeling and Characterization of Infrastructure Materials, Stockholm, Sweden, Pp. 13-30 (10-12 June, 2013)

"Engineering study abroad program on sustainable infrastructure combining engineering and non-engineering students." American Society for Engineering Education (ASEE) Annual Conference Proceedings, 10-13 June, 2012, San Antonio, TX, USA. (June 2012).

"Fracture Energy Evaluation of Cold In-Place Recycling Mixtures." Advanced Testing and Characterization of Bituminous Material (ATCBM09), Eds. ISBN 978-0-415-55854-9 Pp. 1123-1130 (May 2009).

"Improving Leadership and Communication Skills Using Department-Consistent Laboratory Team Experience." Paper AC 2007-857: Proceedings 2007 Annual Conference of the American Society for Engineering Education. Honolulu, HI. (June 2007)

"Evaluation of Long Term Oven Aging of Asphalt Mixtures (AASHTO PP2) on SUPERPAVE Thermal Cracking Performance Predictions." ASTM STP 1322: Symposium of the Progress of Superpave Evaluation and Implementation, New Orleans, LA. Pp 151-168 (1996).

TEACHING AND ADVISE EXPERIENCE

- **The University of Utah**

Strength of Materials (CVEEN 2140): Fall 2000, Spring 2013
Civil Engineering Materials (CVEEN 3510): Every Spring 2001 – 2011, Fall 2013
Pavement Design (CVEEN 5570/6570): Every Fall 2001 - 2014
Advanced Materials (CVEEN 7560): Spring even years 2002 – 2012, Fall 2014
Pavement Maintenance (CVEEN 7570): Spring odd years 2003 - 2013
Sustainable Infrastructure (CVEEN 5920): Summer 2012
Sustainable Materials (CVEEN 5920): Spring 2014, 2015

- **Formal Teaching Training**

United States Military Academy, West Point, NY
ASCE's Excellence in Civil Engineering Education Teaching Program (ExCEEd) (Week-long program during summer 2001)
National Center for Asphalt Technology, Auburn University, Auburn, AL
Professor Training Course. (Week-long program during summer 2001)
Western Alliance to Expand Student Opportunities, Salt Lake City, UT Faculty Doctoral Mentoring Seminar, (Fall 2002)
Portland Cement Association, Skokie, IL
Professor Training Course, (Summer 2003) American Society of Civil Engineers, Reston, VA
Faculty Advisor Training Workshop (Fall 2003)
Center for Teaching and Learning, University of Utah, Salt Lake City, UT Annual teaching seminars

- **Teaching Awards**

Named the 2004-2005 Utah Engineer Educator of the Year by the Utah Section of the American Society of Civil Engineers (ASCE)
Selected among the College of Engineering Top Instructors for Fall 01, 11 Semesters

Selected among the College of Engineering Top Instructors for Spring 04, 08 Semesters
Voted most supportive professor by Student Advisory Committee for 2009 and 2010
Named Outstanding Mentor, 2013
Awarded the Ben Jacobsen Kingfisher Ranch Award for Exceptionally Effective Teaching, 2013
Candidate for University of Utah Distinguish Teaching Fellowship (Fall 2014)

- **Service Activities**

Member, Transportation Research Board Committee on Asphalt Materials (AFK20) (2008-Present)
Member, Education Committee, Utah Asphalt Pavement Association (2010-present)
Member, Transportation Research Board Committee on Characteristics of Bituminous Materials to Meet Structural Requirements (AFK50). 1997-2006
Founding Member, Transportation Research Board Subcommittee on Latin American Activities (under Committee on International Activities, A0010) (2000-2012)

RESEARCH EXPERIENCE

Evaluation of the Pavetracker to Determine In-situ Density of Hot-Mix Asphalt.
U of U Project # 55600010, FY 2001
PI Pedro Romero, $10,000
Sponsoring Agency: Federal Highway Administration, US Department of Transportation

Use of Bisfoam-3 as Seismic Retrofit of Non-Reinforced Masonry Structures.
U of U Project # 50500827, FY 2002
PI Pedro Romero, $10,000
Sponsoring Agency: Delta Plastics Corporation, Terra Bella, CA

Internal Curing of High Performance Concrete.
U of U Project # 50500843, FY 2002
PI Pedro Romero, $29,572
Sponsoring Agency: The Expanded Shale Clay and Slate Institute, Salt Lake City, UT

Evaluation of Data from the Pavement Quality Indicator (PQI) and Pavetracker
U of U Project # 55600011, FY 2002
PI Pedro Romero, $10,000

Sponsoring Agency: Federal Highway Administration, US Department of Transportation

Results from the Pooled-Fund study on Electromagnetic Density Gauges
U of U Project # 55600012, FY 2002
PI Pedro Romero, $3,000
Sponsoring Agency: Federal Highway Administration, US Department of Transportation

Life Cycles of Pavement Preservation Seal Coats
U of U Project # 53500044, FY 2003
PI Pedro Romero, $25,311
Sponsoring Agency: Utah Department of Transportation

Evaluation of Flexcrete Reinforced Panels
U of U Project # 50501023, FY 2003
PI Pedro Romero, $16,268
Sponsoring Agency: ISG Resources, Salt Lake City, Utah

Testing of Landfill Reinforcement Members
U of U Project # 50501127, FY 2004
PI Pedro Romero, $900
Sponsoring Agency: Landfill Services Corporation, St. George, Utah

Development of Truss Splices for the Mormon Tabernacle
U of U Project # 50501203, FY 2005
PI Pedro Romero, $21,500
Sponsoring Agency: Reaveley Engineers and Associates, Salt Lake City, Utah

Evaluation of Segregation of Hot-Mix Asphalt (National Pooled-Fund Study SPR 3-082)
U of U Project # 55600019, FY 2005
PI Pedro Romero, $75,000
Sponsoring Agency: US Department of Transportation Federal Highway Administration
Project awarded based on being the "only known source with the required expertise, history, and knowledge"

Testing of Recycled Railroad Ties
U of U Project # 50501278, FY 2005
PI Pedro Romero, $500
Sponsoring Agency: Resyk Corporation, Brigham City, Utah

Evaluation of Superpave Program in Utah
U of U Project # 53500066 FY 2006 PI Pedro Romero, $50,000
Sponsoring Agency: Utah Department of Transportation

Full-Scale Testing of WC Series Buckling Restrained Braces
U of U Project # 50501378 FY 2006
PI Pedro Romero with L. Reaveley, $35,000 Sponsoring Agency: Star Seismic LLC

Utah's Engineers: A Statewide Initiate for Growth*
U of U Project # 58501295 FY 2007
Co-PI Pedro Romero with C. Furse (PI) A. Bergerson (Co-PI), and S. Richardson (Co-PI), $1,996,335 total ($137,560 my final share)
Sponsoring Agency: National Science Foundation

Control of Cracking in Asphalt Concrete Pavements
U of U Project # 53500078 FY 2007 PI Pedro Romero, $119,534
Sponsoring Agency: Utah Department of Transportation

Characterization of Aggregates through the Coefficient of Thermal Expansion
U of U Project # 53500081 FY 2008 PI Pedro Romero, $28,578
Sponsoring Agency: Utah Department of Transportation

Evaluation of Failures Beneath Pavement Markings
U of U Project # 53500086 FY 2009 PI Pedro Romero, $20,000
Sponsoring Agency: Utah Department of Transportation

Analysis and Evaluation of the Simple Performance Test
U of U Project # 53500093 FY 2010 PI Pedro Romero, $35,769
Sponsoring Agency: Utah Department of Transportation

Implementation of Low Temperature Test for Asphalt Mixtures
U of U Project # 53500100 FY 2012 PI Pedro Romero, $63,000
Sponsoring Agency: Utah Department of Transportation

Development of Natural Asphalt Using Utah Oil Sands
U of U Project # 53300415 FY 2012
PI Pedro Romero, $40,000 ($80,000 in matched funds)
Sponsoring Agency: Utah Governor's Office of Economic Development

Mountain Plains Consortium Transportation Center
U of U Project # 54502411 FY 2013

PI Pedro Romero, $31,515 (my portion)
Sponsoring Agency: US Department of Transportation Research and Innovative Technology Administration (RITA) through North Dakota State University.

Performance Evaluation of Highway Surface Treatments
U of U Project #53500108- FY 2013
PI Pedro Romero, $58,960
Sponsoring Agency: Utah Department of Transportation

Mountain Plains Consortium Transportation Center
U of U Project # 54502884 FY 2014
PI Pedro Romero, $25,000 (my portion)
Sponsoring Agency: US Department of Transportation Research and Innovative Technology Administration (RITA) through North Dakota State University.

Prevention of Low Temperature Cracks
U of U Project #53500116- FY 2014
PI Pedro Romero, $45,000
Sponsoring Agency: Utah Department of Transportation

Development of Containers for Low Level Radioactive Waste
U of U Project 50502820 PI Pedro Romero, $20,000
Sponsoring Agency: POSCO Engineering PLC, South Korea