

CONTACT INFORMATION	Priscilla C. Fonseca 275 Mount Carmel Avenue, TH-ENR Hamden, CT 06511 USA	tel: (203) 582-7919 pcfonseca@quinnipiac.edu webspace.quinnipiac.edu/pcfonseca
CURRENT POSITION	Assistant Professor of Civil Engineering Department of Engineering Quinnipiac University	Aug 2014-present
EDUCATION	Northwestern University , Evanston, IL <i>Ph.D. Civil Engineering</i> Thesis: "Characterization and numerical modeling of calcium silicate hydrate" Advisors: Hamlin M. Jennings and José E. Andrade University of Michigan , Ann Arbor, MI <i>M.S.E. Civil Engineering</i> Massachusetts Institute of Technology , Cambridge, MA <i>S.B. Civil Engineering</i>	Dec 2009 Dec 2003 Jun 2000
PROFESSIONAL LICENSE	Professional Engineer in the Commonwealth of Pennsylvania License No. PE082394	Jun 2014
HONORS AND AWARDS	McCormick School of Engineering Dissertation Year Fellowship, 2009 Illinois Minority Graduate Incentive Program (3-yr fellowship), 2004 - 2006 ASCE Arthur M. Wellington Award, 2006 Rackham Engineering Award (fellowship) 2002 - 2003	
PUBLICATIONS	Fonseca, P.C. and Scherer, G.W., "An image analysis procedure for quantifying the air void system of mortar and concrete," <i>Materials and Structures</i> , August 2014. Jacobsen, S., Fonseca, P.C., Overli, J.A., and Scherer, G.W., "Freezing induced stresses in concrete-steel composite beams and effect of air voids," (in prep). Fonseca, P.C., Andrade, J.E., and Jennings, H.M., "A nanoscale numerical model of calcium silicate hydrate," <i>Mechanics of Materials</i> , August 2011. Fonseca, P.C. and Jennings, H.M., "The effect of drying rate on early-age morphology of C-S-H as observed in environmental SEM," <i>Cement and Concrete Research</i> , December 2010. Fonseca, P.C., Andrade, J.E., and Jennings, H.M., "A nanoscale numerical model to predict macroscale properties of cement paste," <i>16th US National Congress of Theoretical and Applied Mechanics, State College, PA</i> , June 2010. El-Tawil, S., Severino, E., and Fonseca, P., "Vehicle Collision with Bridge Piers," <i>Journal of Bridge Engineering, ASCE</i> , June 2005.	

PRESENTATIONS “An image analysis procedure for quantifying the air bubble system in mortar and concrete,” Department of Civil and Environmental Engineering, Princeton University, 2013.

 “A Numerical Model of C–S–H Nanoparticles to Predict Mechanical Properties of C–S–H Gel Phases in Cement Paste,” American Ceramic Society (ACerS), Nashville, TN, 2011.

 “Introduction to Concrete Technology,” Lecture series at Drexel University for the class CAEE 201 Introduction to Infrastructure Engineering, 2010, 2011.

 “Nanoscale characterization and modeling of cement paste,” Drexel University, 2009.

 “Microstructural changes of C–S–H due to drying as observed in ESEM,” American Ceramic Society, Detroit, MI, 2007.

 “Control and quantification of the microstructure of cement,” Advanced Cement Based Materials, Evanston, IL, 2006.

COURSES TAUGHT **WRI 502 Writing an Effective Scientific Research Article** **Fall 2013**
Princeton University

- Level: Graduate
- Enrollment: 12 students

CIVE 701 Structural Analysis I **Fall 2011, Fall 2010**
Drexel University

- Level: Graduate
- Enrollment: 25 students

MEM 230 Mechanics of Materials **Spring 2011, Spring 2010**
Drexel University

- Level: Undergraduate
- Enrollment: 65 students

CIVE 401 Structural Design II (Reinforced Concrete) **Winter 2011**
Drexel University

- Level: Undergraduate
- Enrollment: 65 students

Shared courses:

Fundamentals of Engineering (FE) Exam Reviews (3 sessions)
Drexel University

- Level: Undergraduate/Graduate
- Enrollment: approximately 30 students

COURSES TAUGHT
(CONT'D)

Shared courses (cont'd):

CIVE 478 Seminar on Technical Writing

Fall 2010, Fall 2011

Drexel University

- Level: Undergraduate seniors
- Number advised: 8 students

CAE 491 Senior Design Project I

Fall 2011

Drexel University

- Level: Undergraduate seniors
- Number advised: 1 group

Graduate teaching assistant:

CivE 216 Solid Mechanics

Fall 2007, Winter 2008, Winter 2009

Northwestern University

- Level: Undergraduate
- Enrollment: 30/75 students

PREVIOUS
POSITIONS

Princeton University

Princeton, NJ

Postdoctoral Research Associate: Jan 2012 - May 2014

Teaching Fellow, Writing in Science and Engineering : Feb 2013 - Jan 2014

Drexel University

Philadelphia, PA

Assistant Professor: Mar 2010 - Dec 2011

Altran Corp.

San Francisco, CA

Lead Engineer: Oct 2001 - Aug 2002

Engineer: Apr 2001 - Sep 2001

Consulted for PG&E's Diablo Canyon Nuclear Power Plant. Retrofitted reinforced concrete walls to meet updated NRC and ACI code requirements for seismic loads. Used finite element methods for structural analysis. Authored and co-authored several technical calculation reports with in-situ structural analysis and proposed modifications. Obtained security clearance for unescorted access to the plant.

Consulted for Wolf Creek Nuclear Operating Corporation to improve large piping systems. Analyzed stresses, displacements, and accelerations in the piping, pipe supports, anchors, and valves using ME101, GT STRUDL, and classical hand calculations. Prepared technical reports to present the analysis and proposed modifications.

Black and Veatch Corp.

Sacramento, CA

Staff Engineer: Sep 2000 - Apr 2001

Performed structural analysis of a 70-ft reinforced concrete bridge per AASHTO and UBC code. Designed reclaimed water pipeline by locating existing facilities, placing fittings, and calculating restrained pipe length.