Constantine Spanos
cs3006@columbia.edu

EDUCATION

Ph.D., Chemical/Earth Environmental Engineering, Columbia, Expected 2015/16
Cumulative GPA: 4.0/4.0
PhD. Advisors: Paul F. Duby, Earth and Environmental Engineering.
Alan C. West, Chemical Engineering.

M.S., Earth Resources Engineering, Columbia University May, 2013
Cumulative GPA: 4.0/4.0
M.S. Advisor: Vasilis M. Fthenakis

B.Eng., Civil Engineering: Eng. Mechanics, Macaulay Honors College at CCNY May, 2010
Cumulative GPA: 3.96/4.0

AWARDS

Bernard R. Queneau Fellow, Columbia University: *Fall 2011-2012*
Recipient of an NSF IGERT Urbanization Fellowship, Columbia University: *Fall 2011*
CCNY Engineering Alumni Award, Highest Departmental Distinction: *Fall 2010*
ASCE Met Section Scholarship: *Spring 2010*
Moles Foundation Scholarship for Civil Engineering: *Fall 2009.*
American Council of Engineering Companies (ACEC) Scholarship: *Spring 2009.*
American Society of Highway Engineers (ASHE) Scholarship: *Spring 2009.*
American Society of Civil Engineers (ASCE) Robert Ridgway Award: *Spring 2009.*
Walter Babich Foundation Scholarship for Civil Engineering: *Spring 2009.*
Society of American Military Engineers Scholarship: *Fall 2008.*
CUNY Chancellor's Award for Academic Excellence: *Spring 2008.*

WORK HISTORY/RESEARCH

Columbia University - Fu Foundation School of Engineering and Applied Science
Teaching Assistant: January 2011-May 2012
Course: EAEE E3800.001, *EARTH & ENVIR ENGIN LAB I.*
Led undergraduate laboratory segment for experiments on fuel cells, bomb calorimetry, gas turbine and wind turbine components. Prepared weekly quizzes, repaired equipment, facilitated group experimentation and graded laboratory reports for a class of 22 students in engineering.

Teaching Assistant: *August 2011-December 2011*
Course: EAIA W4200.001, *Alternative Energy Resources*
Assistant to: Drs. David Walker and Klaus Lackner
Class surveying current sources and methods for energy generation and energy conversion. Fundamentals of engineering analysis; practical methods of meeting future energy needs. Graded assignment, midterm exams, and held office hours and tutorials for a class of 76 students in policy and engineering.

Teaching Assistant: *August 2011-December 2011*

Course: EAEE E3103.001, *Energy, Minerals, Materials Systems.*
Assistant to: Drs. Klaus Lackner and Tuncel Yegulalp
Class on principles behind energy and mineral extraction, including: thermodynamics behind energy conversion; mineral and energy resource availability; mineral extraction and energy generation methods. Prepared solutions to homework assignments and exams; Graded assignments, midterm, and final exams; held office hours for a class of 27 students in engineering.

City College Environmental Engineering and Water Resources Laboratory
Employed under DEP Contract: *January 2011 – May 2011*

Participated in a number of studies to determine the effectiveness of installed equipment at the Wards Island WPCP, and on biological nitrogen removal (BNR) processes. Conducted experiments in a New York State certified laboratory and on the field at the facility.

University Transportation Research Center, Region II
Research Assistant : *January'09-February'10*
Faculty: Robert Paaswell, P.E, Ph. D

Looked at travel characteristics of the City College population – consisting of faculty, staff, and students – to identify the underlying reasons for travel mode selection. Developed and carried out a university-wide travel survey for City College. Utilized GIS and Excel software to analyze and visualize data. Study results published and available.

New York Metropolitan Transportation Council (NYMTC)
Summer Intern: *June'09 – August'09*

Worked in both the technical and planning units at the regional MPO of New York. As part of the technical unit, I worked with socioeconomic data and forecasted transportation patterns using the Best Practices Model (BPM). As part of the planning unit, I was involved in pushing for the development and incorporation of land use models (NYMTC-LUM) into the BPM.

City College Civil Engineering Air Quality Lab
Research Assistant: *June'07- June'08*
Faculty: Beth Wittig, P.E., Ph.D

Designed and built models of major subway stations. Tested mechanisms of dispersion of biochemical agents using particle image velocimetry (PIV). I tested/fixed equipment, and collected and analyzed data using Matlab and Insight software.

LEADERSHIP

Chi Epsilon Civil Engineering Honor Society

Chapter President: *May'08-May'10*

Invited outside speakers and alumni to hold seminars for students. Co-creator and contributing author to the new civil engineering newsletter (*The Grove Column*). Co-creator of a new website to assist in information dissemination to students. I directed meetings, scheduled events, and oversaw the club's peer mentoring program.

City College Chapter of Engineers Without Borders

Vice President/Assistant Project Manager: *January'07– January'08*

Helped with a project to construct water distribution and treatment facilities for the impoverished community of Nueva Suiza, Honduras. I scheduled meetings, invited speakers and helped with planning.

CONFERENCE PRESENTATIONS

Spanos, C. (2013, April). Life-cycle Analysis of Flow-Assisted Nickel Zinc-, Manganese Dioxide-, and Valve-Regulated-Lead Acid Batteries Used in Stationary Applications. Poster session presented at the annual meeting of the Materials Research Society, San Francisco, CA.

PUBLICATIONS

[In review] Spanos, C., Turney, D.E., and Fthenakis, V.M. (2013). Life-cycle Analysis of Flow-Assisted Nickel Zinc-, Manganese Dioxide-, and Valve-Regulated-Lead Acid Batteries Used in Stationary Applications. Submitted to Renewable and Sustainable Energy Reviews.

Spanos C., & Paaswell, R. 2009. *CCNY Transportation Study: An Investigation into the Transportation Characteristics of the CUNY City College Population*. University Transportation Research Center: Region 2. Available from: http://www.utrc2.org/sites/default/files/pubs/ccny_Transportation1.pdf