DEMETRA TSIAMIS

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EDUCATION

COLUMBIA UNIVERSITY, New York, NY
Master of Science, Chemical Engineering, Feb. 2013
Masters Thesis in Environmental Engineering, Feb. 2013
Cumulative GPA: 3.7/4.0

THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART, New York, NY
Bachelor of Engineering, Chemical Engineering, May 2011
Minor in Environmental Engineering, May 2011

RELEVANT COURSES

Adv. Chemical Engineering Thermodynamics, Adv. Chemical Kinetics
Alternative Energy Resources, Environmental Systems, Hazardous Waste Management, Process Design, Economics of Alternative Energy, Engineering Management,

PROJECT WORK

MS Thesis: Transforming the non-recycled plastics of New York City to synthetic oil, Columbia University — Sept. 2011-Dec. 2012

A study on the electrodeposition of iron in alkaline solutions at low temperatures, Columbia University — Summer 2009

A study on the removal of arsenic from water using ground clamshells, Columbia University — Summer 2007

EXPERIENCE

COLUMBIA UNIVERSITY, New York, NY

Research Associate, Earth Engineering Center, Columbia University — Jan. 2013-Present
- Independently design analytical spreadsheets to assess performance of a commercial gasification technology
- Collaborate with gasification company representatives and make site visits to gasification plant
- Design and run laboratory experiments to aid in analysis of technology
- Lead bi-weekly conference calls with client to provide project updates
- Coordinate with different disciplines to provide deliverables of project

Jr. Research Associate, Earth Engineering Center, Columbia University — Fall 2012, Spring 2012, Fall 2011
- Conducted literature survey to quantify and characterize NYC waste
- Conducted interviews with companies that have commercial pyrolysis processes
- Organized site visits to pyrolysis plants and material recovery facilities and wrote summary reports

Teaching Assistant, Gateway, Chemical Engineering section — Fall 2012, Spring 2012, Fall 2011
- Instructed a group of 25 undergraduates about renewable transport fuels
- Guided students through weekly in-class projects on basic thermodynamics
- Graded assignments on introductory engineering concepts

Visiting Research Student and Teaching Assistant — Summer 2009
- Tested the efficiency of electrodeposition of iron in alkaline solutions
- Analyzed the concentration of dissolved iron through the use of atomic absorption spectroscopy
- Independently designed environmental engineering applied lab activities
- Instructed a group of 18 students about environmentally-friendly processes

LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES INC., New York, NY
Intern, Environmental Group — Summer 2012, Summer 2011

- Went on site visits and assisted in Phase I and Phase II environmental site assessments (ESAs)
- Involved in Phase I and Phase II ESA reports for many sites in New York City
- Used AUTOCAD to make figures for Phase I and Phase II ESA reports

STUDY ABROAD AT UNIVERSIDAD PONTIFICIAL DE COMILLAS, Madrid, Spain
Visiting Research Student — Summer 2010

- Conducted a literature survey and presented a paper on financial incentives for renewable energy in Spain and in the US
- Assisted host of conference: VII Jornada Annual 2010 de la Catedra Rafael Marino de Nuevas Tecnologias Energeticas (May 26-28, 2010)

COOPER UNION, New York, NY
Teaching Assistant and Lab Assistant in Environmental Engineering Systems — Fall 2010, Fall 2009

- Prepared the lab set-ups, tested instrumentation, and kept record of chemicals
- Oversaw lab operation, supervised 10 students to ensure lab success
- Graded lab reports and guided students in improving lab reports

Assistant to Dean of Athletics — Summer 2009, Winter 2008

- Coordinated games, practices, and sports related events for teams
- Oversaw the organization of school-wide events and assisted in fundraising events

SKILLS

Programs: Polymath, Pro II, AUTOCAD, Microsoft Word, Excel, PowerPoint
Lab equipment: AAS, GFAAS, IR, GCMS, Turbidimeter, Colorimeter
Languages: conversant in Greek and Spanish

PUBLICATIONS

Transforming the Non-Recycled Plastics of New York City to Synthetic Oil, *NAWTEC21 Conference Proceedings,* Projected Apr. 2013. ASME.

Transforming the Non-Recycled Plastics of New York City to Synthetic Oil, *Earth Engineering Center MS Theses,* Mar. 2013. EEC, Columbia University.

Removal of Arsenic from Water Using Ground Clam Shells, *Clearwaters*, Summer 2007. New York Water Environment Association Inc.

Removal of Arsenic from Water Using Ground Clam Shells, *Journal of the U.S. SJWP For the Future, From the Future* Copyright 2007 Water Environment Federation.

CONFERENCE PRESENTATION

Presentation of thesis at 21st Annual NAWTEC Conference, April 2013
Presentation of research at WTERT 2012 Bi-Annual Conference , October 2012
Presentation of research at NYWEA 80th Annual Conference, February 2008

HONORS

WTERT Fellowship: Fall 2012; Spring 2012
Dean's List, Cooper Union: Spring 2011; Fall 2010; Fall 2007
Winner of Stockholm Junior Water Prize for New York State, 2007
The Cooper Union Full tuition scholarship, 2007-2011

CERTIFICATES

40-hr HAZWOPER Certified — Summer 2012

MEMBERSHIPS

AICHE
NYWEA

ACTIVITIES

Member of HB Studios Actors Ensemble — 2013
Cooper Union Acapella Group — 2010-2011
Founder and Captain, Cooper Union Women's Varsity Basketball Team — 2007-2011
Co-captain, Cooper Union Step Team — 2007-2009