

## EDUCATION

### *The Cooper Union for the Advancement of Science and Art*

09/02 – 05/05

Bachelor of Engineering, Civil Engineering, May 2005      Fields of interest: Environmental Engineering  
Cumulative GPA: 3.9      Major GPA: 4.0      Water Resources Engineering  
Summa Cum Laude

*Related Coursework:* Senior Experimental Project, Senior Design, Open Channel Flow, Steel and Concrete Design, Thermodynamics, Environmental Systems Engineering, Fluid Mechanics, Engineering Law and Ethics, Structural Engineering II, Soil Mechanics, Water Resource Mechanics, Water in the City: Design, Legal and Ethical Aspects of Engineering.

## WORK EXPERIENCE

### *Project Manager, eDesign Dynamics, 09/05-Present, (01/05-05/05 internship)*      West New York, NJ

- Managed watershed analysis projects including modeling, scheduling, and data analysis responsibilities
- Assisted in the research and drafting of proposals
- Worked with Architects and Landscape Architects on developing creative, project specific water management and harvesting plans
- Consulted with The Louis Berger Group Eco-Restoration group building and analyzing Hec-HMS and Hec-RAS models

### *Internship, The Louis Berger Group, 01/05-05/05*      Florham Park, NJ and NY, NY

- Worked with the Eco-restoration group in hydraulic modeling of wetland drainage
- Assisted in the compiling of the engineering and environmental reports and proposals for submission
- Participated in the frequent field work involving wetland site surveying and water sample collection and analysis

### *Internship, Arup: 2<sup>nd</sup> Avenue Subway Project, 06/04 – 08/04*      NY, NY

- Worked in the Structural Engineering department on the steel, composite, and concrete design of subway stations, tunnels, and ancillary buildings
- Coordinated with the electrical engineers, mechanical engineers and architects in the design of under platform structural walls
- Used the finite element analysis programs GSA and STAADPro to perform buckling analysis, one-dimensional and two-dimensional analyses
- Assisted in the planning of drainage systems for the mined-cavern stations

### *Recipient, Cooper Union Summer Abroad Research Fellowship, 06/03 – 08/03*      Florence, Italy

- Conducted research at Università degli Studi di Firenze under the direction of the head of the Civil Engineering Department, Dean Claudio Bori
- Modeled the Millennium Bridge of London in AutoCAD
- Utilized a Finite Element Analysis program (FERMIS) to observe the frequency readings of the Millennium Bridge of London prior to the installation of dampers

### *Internship, Sam Schwartz Company, 02/03 – 05/03*      NY, NY

- Assisted the traffic engineers with the analysis and entry of traffic flow data specific to the Ikea proposal for Red Hook, Brooklyn
- Performed field counts and observations pertaining to the shuttle buses in lower Manhattan that were installed post September 11<sup>th</sup>
- Developed Traffic Routing sequences
- Assisted in traffic modeling, simulation, and analysis

## RESEARCH

### Ghana Fluoride Filter Research: Ghana, Africa      06/05-08/05

- Conducted research based in Bongo (a village in Northeastern Ghana) on developing a sustainable filter to remove and/or lower fluoride from the community boreholes.
- Worked with the local District Water and Sanitation Agency (DWSA) to visit communities and discuss awareness of the fluoride problem and receptiveness to a possible filter.

Hydrological Study of Extensive Green Roofs      01/05-05/05

- Hydrologic tests performed on three green roofing plots of varying depths and one “control” plot. The designed tests were tailored to test the parameters used by the Department of Environmental Protection (DEP) when sizing drainage pipes. The results were compared to an impervious surface and through the calculation of the Runoff Coefficient, C, used in the Rational Formula. Research to be included in a publication.

Gowanus Canal Combined Sewer Overflow (CSO) Research

01/04-05/04

- Researched whether the installation of green roofing systems could significantly reduce Combined Sewer Overflow (CSO) events occurring within the Gowanus Canal watershed, concentrating on the sewershed contributing to a single specific discharge pipe (OH-007). The research tested whether green roofing could effectively be implemented in the Gowanus Canal watershed to serve the purpose of storm water mitigation with the consideration of how effective green roofing 100, 50, and 25% of available roof space could be on lowering the overall Runoff Coefficient of the watershed. This research led to being a co-developer of a LID Rapid Assessment process (LIDRA) to be published in Landscape and Urban Planning.

**SKILLS**

HEC-RAS, HEC-HMS, SWMM 5.0, Sap2000, AutoCAD, Microsoft Office.

Speak and Write Italian, Knowledge of spoken and written Spanish.

**HONORS**

<i>Fellow</i> , National Science Foundation Graduate Research Fellowship Program	06/05-Present
<i>Recipient</i> , American Society of Civil Engineers Metropolitan Section Scholar Award	06/05
<i>Recipient</i> , Willian C. and Esther Hoffman Beller Prize for Excellence in Civil Engineering	05/05
<i>Recipient</i> , The Cooper Union Full Tuition Scholarship	09/02-05/05
<i>Recipient</i> , The Society of American Military Engineers: Gowanus Canal Student Research Award with Distinction	06/09/04
<i>Secretary</i> , Chi Epsilon (Civil Engineering Honor Society)	03/04-05/05
<i>Member</i> , Tau Beta Pi (Engineering Honor Society)	03/04-05/05
<i>Member</i> , National Society of Collegiate Scholars	10/03-05/05

**PROFESSIONAL AFFILIATIONS**

American Society of Civil Engineers (Chapter President 2004/2005)	9/04-Present
New York Water and Environment Association (Chapter Vice President 2003/2004)	9/03-Present
Society for Women Engineers (Chapter Secretary 2003/2004)	9/02-Present
Engineers for a Sustainable World	9/04-Present