CHUAN TANG

Institute for a Sustainable Environment
Clarkson University
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EDUCATION

2016 CLARKSON UNIVERSITY
Ph.D. in Environmental Science & Engineering, December 2016 (Expected)
Specialize in Environmental Economics and Valuation
Advisor: Dr. Martin Heintzelman

2015 CLARKSON UNIVERSITY
M.S. in Environmental Science & Engineering, June 2015

2011 WUHAN UNIVERSITY OF TECHNOLOGY (WHUT)
B.S. in Environmental Science, June 2011

PROFESSIONAL APPOINTMENT

2013– Research Assistant, School of Business, Clarkson University

2013 Environmental Engineering Intern, Ray Operations, ASARCO LLC

2012–13 Research Assistant, Department of Civil & Environmental Engineering, Clarkson University

2011–12 Research Assistant, Institute of Geochemistry, Chinese Academy of Sciences

2009–11 Research Assistant, School of Resources and Environmental Engineering, WHUT

RESEARCH EXPERIENCES & PROJECTS

2013–16 **Measuring the Value of Mitigating Mercury Pollution and Acidification in New York State**
Advisor: Dr. Martin Heintzelman and Dr. Thomas Holsen (Co-PI)
Designed and managed a geographical information database of water quality data for 500 + lakes and 10 years of property transaction data for all counties in New York State. Used hedonic analysis method to evaluate the values of mitigation strategies on mercury pollution and acidification in New York State.

2015–16 **Comparative Analysis on Methods for Standardizing Fish Mercury**
Advisor: Dr. Thomas Holsen and Dr. Tom Langen (Doctoral Degree Committee Members)
Analysis and evaluation on various statistical methods (e.g., General Linear Regression, Polynomial Regression, Multilevel Regression Model, ANCOVA, Factor Analysis and etc.) for standardizing fish mercury. Designed to dampen the effects of heterogeneity in sample characteristics during the process of interpreting and distinguishing the spatiotemporal trends in fish-mercury monitoring data.

2015–16 **Economic Valuation on Land Use Policy in the Adirondack Park**
Advisor: Dr. Martin Heintzelman
Developed mapping strategies to visualize the relationship between various environmental spatial factors and local property values. Presented complicated economic phenomena to general audiences. Evaluated the land use policies in the Adirondack Park through property values.

2013 **Environmental Compliance Projects on Ray Copper Mining Field in Arizona**
Supervisor: Mr. Duane Yantorno (Environmental Manager, ASARCO.LLC)
Maintained compliance with federal Spill Prevention, Control, and Countermeasure (SPCC) regulation; Assisted on inspections for the Title V Air Permit, Aquifer Protection Permit, and a Storm water Permit as part of Arizona Discharge Elimination System (AZPDES). Collaborated on environmental protection project management and compliance monitoring, sampling and reporting.

2012–13 **Investigation of Electrodialysis(ED) and Electrodialysis Reversal (EDR) Technology**
Advisor: Dr. Christopher Bellona (Assistant Professor, Colorado School of Mines)
Executed investigation independently on the performance of Electrodialysis (ED) and Electrodialysis Reversal (EDR) technologies for wastewater treatment processes in U.S, Canada and Europe.

2012–13 **Investigation of Water Quality from Sand Filter Backwash**
Advisor: Dr. Christopher Bellona
Conducted a comprehensive survey study independently on 50+ municipal and industrial water treatment facilities in 10+ states regarding the capacity and efficiency of various technologies used for backwash water treatment.

2012–13 **Testing and Evaluating of a Noval Filter Fracturing Technology**
Advisor: Dr. Christopher Bellona
Designed and performed experiments independently on Filter Fracturing to develop technologies providing the ability to physically treat hydraulic fracturing flow-backwater (HFFW).

2011–12 **Environmental & Human Health Risk Assessment on a Chromium Contaminated Site**
Supervisor: Dr. Jian Lin and Dr. Tangfu Xiao (Professors, Institute of Geochemistry)
Assisted on sample collecting and analysis of Cr6+ in soil and water for an environmental and human health risk assessment project on a chromium contaminated site in southern China; Participated in the preparing of risk analysis report as environment remediation and recovery plan for local government.

2009–11 **Synthesis and Application of Nano-size Porous Materials in Environmental Remediation**
Advisor: Dr. Jiabin Zhou (Professor, Wuhan University of Technology)
Synthesized and prepared a noval carbon-alumina core-shell sphere and applied it in the adsorption of organic dyes in polluted water.

RESEARCH PUBLICATION & REPORTS

2016 **Chuan Tang**; Martin Heintzelman; Thomas Holsen. *Measuring the Value of Mitigating Mercury Pollution and Acidification in New York State.* In Preparation for Submission.

Abstract: Atmospheric deposition of mercury and acid rain rank among the top ten most prevalent causes/sources of water quality impact in New York State. Impaired water quality in large lakes in New York State reduces their ecological services and value to homeowners and visitors. We collect approximate 180,000 residential property transaction data covering 34 counties of New York State between 2004 and 2013 and water quality data (i.e., pH and mercury in fish tissue) for 133 major lakes larger than 27 hectares across 10 years (2000~2009). Using a census block group-level hedonic analysis of property sales transactions, we found that property values are significantly negatively impacted by 2% to 4% when the fish mercury concentration of the nearest large lake is 2 times higher than EPA standards. Based on the average price of all transactions in our dataset, our result suggests that $6,494 (with a 95% confidence interval of $4,493 to $9,237) will be stored in value of a property if the fish mercury concentration of the nearest large lake can recover from the dangerous level (>0.6 ppm) to the safe level (< 0.3 ppm). The aggregate value gain under this hypothetical scenario is more than $1 billion.

2016 **Chuan Tang**; Martin Heintzelman. *Towards the Measurement of the Value of Public Land Designations in the Adirondack Park.* In Preparation for Submission.

Abstract: Based on more than 77,000 greater Adirondack real estate transaction price observations from 2004 to 2013, we conducted a hedonic analysis to investigate the economic impact of land designations on property values. Results confirm that private properties in the Adirondack Park have higher values than those outside the blue line. The results also suggest close proximity to protected land provides a positive impact on property values. We find that proximity to wilderness lands, from 0.5 miles to 6 miles away, generates up to a 25% premium on property values. This positive impact decreases as the distance to wilderness increases. Interestingly, being too close to wilderness, within 0.5 miles, provides no significant impact on property values. We do not find significant impact on property values adjacent to wild forest lands.

2013 **Chuan Tang**; Christopher Bellona; Shane Rogers; Thomas Holsen; Stefan Grimberg. *Investigation of Electrodialysis (ED) and Electrodialysis Reversal (EDR) Technology.* Internal Technical Report. Poll Corporation.

2013 **Chuan Tang**; Christopher Bellona; Shane Rogers; Thomas Holsen; Stefan Grimberg. *Investigation of Water Quality from Sand Filter Backwash*. Internal Technical Report. Poll Corporation.

2013 **Chuan Tang**. *A Comparative Analysis: Regulation of Hydraulic Fracturing in Wyoming and Pennsylvania.* Thesis for POL571 Energy Policy Class

2012 Jiabin Zhou; **Chuan Tang**; Bei Cheng; Jiaguo Yu; Mietek Jaroniec. *Rattle-type Carbon-Alumina Core-Shell Spheres: Synthesis and Application for Adsorption of Organic Dyes*. App. Mater. And Interfaces 2012, 4(4), 2174-2179

SELECTED PRESENTATIONS

2016 Chuan Tang, Martin Heintzelman, "Towards the Measurement of the Value of Public Land Designations in the Adirondack Park." Northeast Agricultural and Resource Economics Association (NAREA) Annual Conference, 2016

2014–15 Chuan Tang, Martin Heintzelman, Thomas Holsen. "Evaluating the value of mercury and acidification in NYS through property values."

9th International Conference on Acid Deposition, 2015; Camp Resources XXII, 2015; 5th Annual AERE Summer Conference, 2015; Northeast Agricultural and Resource Economics Association (NAREA) Annual Conference, 2015; Clarkson Graduate Research Symposium, 2015; 17th Annual Colorado University Environmental and Resource Economics Workshop, 2014; 1000 Island Energy Research Forum, 2014.

2013 Chuan Tang. "Advance Searching and Information Gathering Techniques for Science Research and Study" Institute for a Sustainable Environment Graduate Seminar, Clarkson University, (Podium)

2012 Chuan Tang. "The Application of nanomaterials in environmental pollution abatement and remediation." Institute for a Sustainable Environment Graduate Seminar, Clarkson University, 2012 (Podium)

TEACHING & MENTORING EXPERIENCE

2015–16 Design and Conduct EV610 – Graduate Level Interdisciplinary Seminar Course for Grad Students Majoring in Environmental Science and Engineering, and in Environmental Politics and Governance

2015 Research Mentor, REU (Research Experience for Undergraduates) Program of Clarkson University
Mentee: Virginia Wiltshire-Gordon(Middlebury Community College) and Aevalina Gwynne (Edgewood College).

HONORS & AWARDS

2015 Clarkson Graduate Research Symposium – Sustainable Research Awards, 1st Place

2013 Tau Chi Alpha (TXA) - the National Environmental Engineering Honorary, Clarkson University

2010 ESRI—Chinese College Student GIS Software Application Development Competition, the 1st Prize

2010 Student Innovation Achievement Award, Hubei, China ,the 3rd Prize

AFFILIATIONS

Northeast Agricultural and Resource Economics Association

Association of Environmental and Resource Economists

Chinese Environmental Scholars and Professionals Network (CESPN)