Andrew Fang
afang@umich.edu
(847) 922-5101

EDUCATION

University of Michigan, School of Natural Resources and Environment (Ann Arbor, MI)
- **Master of Science** - Natural Resources and Environment: Sustainable Systems
- **Master of Engineering** - Energy Systems Engineering – December 2012
- GPA: 3.8/4.0

Northwestern University (Evanston, IL)
- **Bachelor of Science** - Chemical Engineering - June 2009
- Engineer In Training (EIT) Certification - 2009

EXPERIENCE

University of Michigan - Center for Sustainable Systems, Research Assistant (Ann Arbor, MI) (09/2010 – Present)
- Investigating the life cycle emissions of algal biofuels using hydrothermal liquefaction
- Estimated the carbon footprint of urban water consumption in Southern California and presented results at the 2012 International Symposium on Sustainable Systems and Technology (ISSST)
- Worked with Argonne National Laboratory to update the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model
- Assessed energy and emissions data from life cycle inventories performed by the copper, nickel, and aluminum industries to determine how materials production affects the overall environmental impact of a vehicle
- Studied the impact of consumer driving patterns on the economic and environmental implications of the commercial adoption of plug-in hybrid electric vehicles

US Environmental Protection Agency, ORISE Intern (Ann Arbor, MI) (05/2012 – 01/2013)
- Modeled the economic impact of sulfur and Reid vapor pressure regulation on the US oil refining industry and determined how increased ethanol usage is altering US gasoline production

Michigan Green Communities, Master's Project - Consultant (Ann Arbor, MI) (04/2011 – 04/2012)
- Performed an economic energy analysis of a case study city to enable the local government to reassess energy efficiency practices based upon a valuation of city-wide energy consumption
- Distributed methodology to the 80+ member cities of the network, enabling them to evaluate their own energy consumption and find financial incentives for pursuing sustainable energy initiatives

EA Engineering, Science, and Technology, Intern (Providence, RI) (07/2008 – 08/2008)
- Performed economic analysis for the Federal Energy Regulatory Commission on mitigation measures for an 11-dam, 900 MW hydropower system in the southeastern United States
- Assisted in Air/Groundwater Quality measurements and Responsible Care® assessment

Procter & Gamble, R&D Intern (Cincinnati, OH) (06/2007 – 08/2007)
- Characterized and tested performance attributes of ThermaCare® competitive products
- Designed prototype implementing viable technologies to determine how product performance could be improved

SKILLS, ACTIVITIES AND INTERESTS

- Computer Skills: Microsoft Office (Word, Excel, PowerPoint), MATLAB, STELLA, SimaPro, Stata, GIS
- Languages: Basic German
- Interests include: renewable energy, climate change, life cycle assessment
- Publication: *Analysis of the Maximization of LEED Points for the Construction of a Mid-Rise Apartment Complex*, Agora 2011: The Urban Planning & Design Journal of the University of Michigan