

Utsav Shashvatt

116 South Prospect Ave, MD, 21228

(410)-844-2442
Email: utsavshashvatt@gmail.com

EDUCATION

Current- PhD (Environmental Engineering), University of Maryland Baltimore County, Maryland, USA (CGPA 3.68/4.0)

May 2012- BTech (Metallurgy and Material Science), Indian Institute of Technology Bombay, Maharashtra, India (CGPA 7.64/10.0)

WORK EXPERIENCE

Graduate Research Assistant Sep 2014- Current

Dr Lee Blaney, Chemical Bio-Chemical and Environ. Engg, UMBC, Maryland

- Working on developing nutrient recovery technologies. So far I have developed bench scale reactors for recovering phosphorus from agricultural waste streams. We employ aqueous chemistry principles and use ion exchange membranes to selectively concentrate ions to generate value added mineral such as struvite and potassium struvite.

Independent Research Assistant Oct 2013- May 2014

Dr Zia Shaikh, Biochemical Engineering and Biotech, IIT Delhi

- Fabricated lab scale sponge reactor capable of performing both of aerobic and anaerobic degradation. The challenge and innovation was in design of low cost materials and ensuring low energy footprint of the reactor

Farm Engineer Dec- May 2013

Saha Astitva Foundation, Maharashtra, India

- Constructed a solar dehydrator for a tribal village farm in India. I was involved in both the on paper design and fabrication involving welding, and wood working. The dehydrator was constructed using local recycled materials and needed low maintenance. Apart from I was also a worked as a language translator.

Undergraduate Research Assistant Aug-Jan 2012

Dr Anand Rao, Centre for Technology Alternatives for Rural Areas, IIT Bombay

- My research involved evaluating the economics of the supply chain of briquetting manufacturing in rural Maharashtra. Apart from statistical analysis, this project also involved extensive field work; interacting with stakeholders at different levels and collecting data.

Internship May- July 2011

Dr Marty Luckert, Department of Resource Economics, University of Alberta, Canada

- My job involved preliminary literature review and statistical analysis for understanding livelihood trends in rural India. In also assisted in data interpretation for Antiretroviral Drug Treatment Study Uganda, Africa.

HONORS, AWARDS

2016- First place, AEESP Student Video Competition (\$1000)

2015- UMBC inventors' recognition as a co-inventor for nutrient extraction and recovery technology.

2015 - First place, CWEA Student Design Competition (\$1000 prize with \$4000 travel to WEFTEC)

2009- International Climate Championship

PUBLICATIONS

1. **Shashvatt, U.**; Aris, H.; Blaney, L. Evaluation of animal manure composition for protection of sensitive water supplies through nutrient recovery processes. Book chapter, in “Chemistry and Water: The Science Behind Sustaining the World’s Most Crucial Resource” edited by Satinder Ahuja (Elsevier), 2016.

PRESENTATIONS

1. Aris, H.; **Shashvatt, U.**; Benoit, J.; Blaney, L. Recovery of nutrients from chicken litter to create a slow release fertilizer. 20th Undergraduate Research and Creative Achievement Day (Baltimore, MD), April 27, 2016.
2. **Shashvatt, U.**; Rogers, N.; Aris, H.; Benoit, J.; Blaney, L. Development of an automated nutrient recovery process for recovering phosphorus from poultry litter. 38th Graduate Research Conference (Baltimore, MD), March 14, 2016
3. **Shashvatt, U.**; Rogers, N.; Aris, H.; Blaney, L. Recovering phosphorus from poultry litter: A step towards improving food security and protecting ecologically sensitive water bodies. 251st American Chemical Society Annual Meeting (San Diego, CA), March 14, 2016
4. **Shashvatt, U.**; Blaney, L. Preventing nutrient influx in coastal watersheds by recovering the nutrients from poultry litter. Geological Society of America Annual Meeting (Baltimore, MD) Nov 3-4, 2015
5. Kemper, J.; **Shashvatt, U.**; Stapleton, E.; Hopanna, M. Design Proposal for the Broadwater Water Reclamation Facility Enhanced Nutrient Removal Upgrade and Expansion. Water Environment Federation Annual Technical Exhibition and Conference (Chicago, IL), Sept 26, 2015
6. **Shashvatt, U.**; Mangalgi, K.P.; Blaney, L. Recovering phosphorus from poultry litter: Impact of organic matter on recovery. 250th American Chemical Society Annual Meeting (Boston, MA), August 20, 2015.
7. Mangalgi, K.P.; **Shashvatt, U.**; Blaney, L. Phosphorus recovery from poultry litter using a two-stage treatment process. Association of Environmental Engineering and Science Professors Research and Education Conference (New Haven, CT), June 15, 2015.
8. Kemper, J.; **Shashvatt, U.**; Stapleton, E.; Hopanna, M.; Rogers, N.; Burton, R. Design Proposal for the Broadwater Water Reclamation Facility Enhanced Nutrient Removal Upgrade and Expansion. Chesapeake Water Environment Association Annual Meeting (Annapolis, MD), May 15, 2015.

MENTORSHIP

Nick Rogers (BS, Chemical Engineering)
Hannah Aris (BS, Chemical Engineering)
Josh Benoit (BS, Chemical Engineering)
Rima Abouzeid (Compliance Engineer, Maryland Department of Environment)
Mamadou Diallo, Alina Boyko, Alonso Navarro-Henry (Community College Interns)

DEPARTMENT SERVICE

- Social Chair, BioCheGS (Graduate Student Organization) 2015-Current

TEACHING SKILLS

- Teaching Assistant, Spring 2017, Bio-Chemical Engineering Lab
- Guest Lecturer, Fall 2016, Environmental Chemistry and Biology

CONFERENCES ATTENDED

1. 251st American Chemical Society Annual Meeting (San Diego, CA), March 14, 2016.
2. Geological Society of America Annual Meeting (Baltimore, MD) Nov 1-4, 2015.
3. Water Environment Federation Annual Technical Exhibition and Conference (Chicago, IL), Sept 25-27, 2015.