Wan-Ting (Grace) Chen

Agricultural Engineering Sciences Building 310B, 1304 W. Pennsylvania Avenue, Urbana, Illinois, 61801
+1-217-721-5782, wchen58@illinois.edu

EDUCATION

Ph.D. in Agricultural & Biological Engineering, May 2017 (expected) **GPA: 3.90**
University of Illinois at Urbana-Champaign
Dissertation title: "Upgrading Biocrude Oil Converted from Wet Biowaste via Hydrothermal Liquefaction"

M.S. in Agricultural & Biological Engineering, Aug 2013 **GPA: 3.54**
University of Illinois at Urbana-Champaign

B.S. in Chemical Engineering, Jan 2011 **GPA: 3.70**
National Taiwan University, Taipei, Taiwan

RESEARCH/WORK EXPERIENCE

Graduate Research Assistant (Advisor: Prof. Yuanhui Zhang) **2011-Present**
Department of Agricultural & Biological Engineering, University of Illinois

- Upgrading biocrude oil converted from wet biowaste into transportation fuels by 1) ultrasonically-assisted solvent extraction, 2) Thermal cracking, hydrotreating, and hydrocracking with catalysts under sub/super-critical water, 3) distillation, 4) esterification, and 5) neutralization with alkaline solutions
- Conducting diesel engine tests to understand the combustion characteristics and emissions from HTL-biofuel through cooperation with Prof. Chia-Fon Lee's group at Department of Mechanical Engineering in UIUC
- Characterized the fuel specs of HTL-biofuels converted from wet biowastes and compared them to petro-fuels
- Operated hydrothermal reactors (micro, bench, and pilot scales) to produce biocrude oil and valuable bio-gas from algae, swine manure, food processing wastes, slaughtering waste, newspaper waste, waste plastics, egg waste, and human feces.
- Characterized biocrude oil, aqueous products, solid residue, gas products, and catalysts via elemental analysis, GC, GC-MS, TGA, FTIR, ICP-OES, SEM/EDS, and BET surface analysis
- Value-added chemical separation (e.g. fatty acids and nitrogen-containing compounds) from the biocrude oil converted from biowaste and algae by Soxhlet and ultrasonically-assisted extraction
- Pretreated mixed-cultured algal biomass with ultrasonication and centrifugation to reduce ash content
- Contributed to grant applications to NSF, USDA, DOE, Bill & Melinda Gates Foundation (BMGF), EBI (Energy Biosciences Institute), NPB (National Pork Board), USAID (United States Agency for International Development), ISTC (Illinois Sustainable Technology Center), NCR-SARE (North Central Sustainable Agriculture Research), CRB (Campus Research Board), and Focal Point Grant
- Led a team of 2 research engineers, 2 undergraduate and 6 graduate researchers on cooperative research projects with the Heritage Environmental Services *LLC.*, Snapshot Energy *LLC.*, Illinois Sustainable Technology Center (ISTC), and Illinois Center for Transportation (ICT)
- Managed the lab for more than 20 graduate students, undergraduate assistants, exchange PhD students, visiting scholars, and research engineers

Full-time Research Assistant (Advisor: Prof. Hung-Chi Kuo) **2011.04-07**
Department of Atmospheric science, National Taiwan University

- Programmed Fortran/MATLAB codes on sorting hundreds of thousands of weather data for extreme rainfall analysis on Unix workstations
- Analyzed shear vectors and shear forces on concentric eye-wall typhoon research

Undergraduate Research Intern (Advisor: Prof. Prasanta Kalita) **2010.07-09**
Department of Agriculture & Biological Engineering, University of Illinois

- Studied erosion prevention effects of blankets made from various biomaterials with a rainfall simulator
- Helped design test plots for the project of *Controlling Sediment at Its Source*

Undergraduate Research Assistant (Advisor: Prof. Wen-Lian Chang) **2009-2011**
Department of Bioenvironmental Systems Engineering, National Taiwan University

- Measure phosphate concentrations with a UV-Vis spectrometer; evaluated thermodynamic effects and kinetic mechanisms; compared results from laboratory to field experiments.

PEER-REVIEWED PUBLICATIONS (6 first –authored; H-factor: 10; Total Citations: 319; Google Scholar)

18. **Wan-Ting Chen**, Yuanhui Zhang, Timothy Lee, Zhenwei Wu, B.K. Sharma, and Chia-Fon Lee "Renewable Transportation Biofuel Production Converted from Wet Biowaste via Hydrothermal Liquefaction," *Energy & Environmental Science*, in preparation, Jan, 2017
17. **Wan-Ting Chen**, Wanyi Qian, Yuanhui Zhang, Zachary Mazur, Karalyn Scheppe, Chih-Ting Kuo, Lance Schideman, "Hydrothermal Liquefaction of High-Ash Algal Biomass: the Effect of Ash Contents in HTL Reactions," *Algal Research*, submitted, Dec 2016.
16. Jamison Watson, Yuanhui Zhang, Buchun Si, **Wan-Ting Chen**, Michael Stablein "Gasification of Biowaste: A Critical Review and Outlooks," Renewable and Sustainable Energy Reviews, submitted, Dec 2016
15. Peng Zhang, Yuanhui Zhang, **Wan-Ting Chen**, Lance Schideman, B.K. Sharma, " Hydrothermal Liquefaction of Diatom Skeletonema costatum and the Effect of Frustules on Biocrude Oil Production," *International Journal of Agricultural and Biological Engineering*, accepted, Dec, 2016
14. Mingxia Zheng, Lance Schideman, Giovana Tommaso, **Wan-Ting. Chen**, Yan Zhou, Ken Nair, Wanyi Qian, Yuanhui Zhang, Kaijun Wang, "Anaerobic Toxicity Assay and Detoxification of Wastewater Generated from Hydrothermal Liquefaction of *Spirulina* during Anaerobic Digestion," *Energy Conversion and Management*, in press, Dec, 2016.
13. **Wan-Ting Chen**, Liyin Tang, Wanyi Qian, Karalyn Scheppe, Ken Nair, Zhenwei Wu, Chao Gai, Peng Zhang, Yuanhui Zhang, "Extract Nitrogen-Containing Compounds in Biocrude Oil Converted from Wet Biowaste via Hydrothermal Liquefaction," *ACS Sustainable Chemistry & Engineering*, 4 (4): 2182-2190, 2016.
12. Heena Dhasmana, Hasan Ozer, Imad Al-Qadi, Yuanhui Zhang, Lance Schideman, B.K. Sharma, **Wan-Ting Chen**, Mitchell Minarick, Peng Zhang, "Rhelogical and Chemical Characterization of Biobinders from Different Biomass Resources," *Transportation Research Record Journal of the Transportation Research Board*, 2505:121-129, 2015.
11. Chao Gai, Yuanhui Zhang, **Wan-Ting Chen**, Peng Zhang, Yuping Dong, "An Investigation of Reaction Pathways of Hydrothermal Liquefaction Using *Chlorella pyrenoidosa* and *Spirulina platensis*," *Energy Conversion & Management*, 96:330-339, 2015.
10. Chao Gai, Yuanhui Zhang**, Wan-Ting Chen**, Lance Schideman, Peng Zhang, Yan Zhou, Giovana Tommaso, Chih-Ting Kuo, Yuping Dong**, "**Characterization of Aqueous Phase from the Hydrothermal Liquefaction of Chlorella Pyrenoidosa," *Bioresource Technology* , 184:328-335, 2015.
9. Giovana Tommaso, **Wan-Ting Chen**, Peng Li, Lance Schideman, Yuanhui Zhang, "Chemical Characterization and Anaerobic Biodegradability of Aqueous Products Generated from Hydrothermal Liquefaction of Mixed-Culture Algae from Wastewater Treatment System," *Bioresource Technology*, 178:139-146, 2015.
8. **Wan-Ting Chen,** Junchao Ma, Yuanhui Zhang, Gai Chao, Wanyi Qian, "Physical Pretreatments of Wastewater Algae to Reduce Ash Content and Improve Thermal Decomposition Characteristics," *Bioresource Technology*, 169: 816-820, 2014.
7. **Wan-Ting Chen,** Yuanhui Zhang, Jixiang Zhang, Lance Schideman, Guo Yu, Peng Zhang, Mitchell Minarick, "Co-liquefaction of Swine Manure and Mixed-culture Algal Biomass from a Wastewater Treatment System to Produce Bio-crude Oil," *Applied Energy*, 128: 209-216, 2014.
6. Chao Gai, Yuanhui Zhang, **Wan-Ting Chen**, Peng Zhang, Yuping Dong, "Energy and Nutrient Recovery Efficiencies in Biocrude Oil Produced via Hydrothermal Liquefaction of Chlorella Pyrenoidosa," *RSC Advances*, 33: 16958-16967, 2014.
5. **Wan-Ting Chen,** Yuanhui Zhang, Jixiang Zhang, Peng Zhang, Guo Yu, Lance Schideman, Mitchell Minarick, "Hydrothermal Liquefaction of Mixed-culture Algal Biomass from Wastewater Treatment System into Bio-crude Oil," *Bioresource Technology*, 152: 130-139, 2014.
4. Chao Gai, Yuanhui Zhang, **Wan-Ting Chen**, Peng Zhang, Yuping Dong, "Thermogravimetric and Kinetic Analysis of Thermal Decomposition Characteristics of Low-Lipid Microalgae," *Bioresource Technology*, 150: 139-148, 2013.
3. Mai Pham, Lance Schideman, Brajendra K Sharma, Yuanhui Zhang, **Wan-Ting Chen**, "Effects of Hydrothermal Liquefaction on the Fate of Bioactive Contaminants in Manure and Algal Feedstocks," *Bioresource Technology*, 149: 126-135, 2013.
2. Jixiang Zhang, **Wan-Ting Chen**, Peng Zhang, Yuanhui Zhang, Zhongyang Luo, "Hydrothermal Liquefaction of *Chlorella pyrenoidosa* in Sub- and Supercritical Ethanol with Heterogeneous Catalysts," *Bioresource Technology*, 133: 389-397, 2013.
1. **Wan-Ting Chen**, Chiao-Wen Lin, Po-Kong Shih, Wen-Lian Chang, "Adsorption of Phosphate into Waste Oyster shell: Thermodynamic Parameters and Reaction Kinetics," *Desalination and Water Treatment*, **47**: 86-95, 2012.

BOOK CHAPTER

1. Yuanhui Zhang and **Wan-Ting Chen**, "Hydrothermal liquefaction of protein-containing feedstocks," Direct Thermochemical Liquefaction of Biomass for Energy Applications, Elsevier S&T Books, L. Rosendahl ed., (Summer 2017-expected).

SELECTED CONFERENCE PRESENTATIONS (6 of 33)

6. **Wan-Ting Chen**, Yuanhui Zhang, Lance Schideman, Brajendra Sharma, "Integrated Bio-Refineries of Biocrude Oil Converted from Wet Bio-Waste Via Hydrothermal Liquefaction into Drop-in Fuel and Value-Added Chemical" **Oral Presentation** in American Institute of Chemical Engineers (AICHE) Annual Meeting, Nov 2015, Salt Lake City, UT.

5. **Wan-Ting Chen,** Liying Tang, Ken Nair, Yuanhui Zhang, Guo Yu, Chao Gai, "Mitigation of Nitrogen-containing compounds in Bio-crude Oils by Serial Extraction," **Oral Presentation** in American Society of Agricultural & Biological Engineers (ASABE) Annual Meeting, Jul 2014, Montreal, Canada.

4. **Wan-Ting Chen,** Wanyi Qian, Yuanhui Zhang, Lance C. Schideman, "Screen Pretreatment for Improvement of Bio-crude oil Quality Converted from Mixed-culture Algal Biomass from Wastewater Treatment System," **Oral Presentation** in American Society of Agricultural & Biological Engineers (ASABE) Annual Meeting, Jul 2014, Montreal, Canada.

3. **Wan-Ting Chen,** Jixiang Zhang, Yuanhui Zhang, Peng Zhang, "Hydrothermal Liquefaction of Wastewater Algae Mixtures into Bio-crude Oil," Preprint Paper, Division of Energy & Fuels, American Chemical Society, 58 (2): 416-417 2013, Indianapolis, IN.

2. **Wan-Ting Chen,** Yuanhui Zhang, Jixiang Zhang, Peng Zhang, "Assessment of Converting Waste-fed Algae into Biocrude Oil via Hydrothermal Liquefaction: Product Distribution, Composition and Characterization," **Oral Presentation** in American Society of Agricultural & Biological Engineers (ASABE) Annual Meeting, Jul 2013, Kansas City, MO.

1. **Wan-Ting Chen,** Jixiang Zhang, Yuanhui Zhang, Peng Zhang, Yu Guo, Mitchell Minarick, "Product Distribution of Hydrothermal Conversion for Two Types of Algae and Mixtures with Swine Manure," **Oral Presentation** in American Society of Agricultural & Biological Engineers (ASABE) Annual Meeting, Aug 2012, Dallas, TX.

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant, Introduction to Bioenvironmental Engineering (ABE 225) **2017 Spring**

Lectured topics covering heat transfer; led lab activities for a class of 40 students; host office hours

Graduate Mentor, Undergraduate Research **2016-Present**

- Mentored undergraduate student, Patrick Dziura, in distillation of biocrude oils converted from swine manure and food processing waste.
- Trained the student to characterize biofuel samples through acidity measurement and viscometer
- Trained the student to conduct phase separation with a funnel separator

Graduate Mentor, Undergraduate Research **2015-Present**

- Mentoring undergraduate student, Zhenwei Wu, in ultrasonication-assisted extraction of algal biocrude oil to remove nitrogen-containing compounds for bio-crude oil upgradation processes
- Training the student to characterize biofuel samples through TGA, pH meter, and viscometer
- Guided the student in preparation and presentation of research findings in a regional conference (8^{th} Midwest AICHE) and peer-reviewed journals
- *Zhenwei got an internship in Wuxi Apptec Company as a program operation assistant (2016 summer).*
- *Zhenwei is currently in the James Scholar Honors program (GPA>3.5 every semester)*

Team Leader of Engineering and Technology for Research Apprentice Program (RAP) **2016 Summer**

- Designed a three-week research/teaching educational program for a group of 4 high school sophomore students (Ahmed Abbas, Ashley Arroyo, Briana Green, and Erinn Thomas)
- Invited more than 20 speakers, including UIUC alumni, faculties, staffs, industrial partners/sponsors, engineers and graduate students, from different companies and research institutions
- Coordinated field trips with other team leaders from different departments in ACES college
- Communicated with the Assistant Dean, Dr. Jesse Thompson, in the college of ACES and staffs in department of ABE
- Guided the students in preparation and presentation of research findings in a symposium for a group of 100 people
- The group got *the Best Team Award* (3 teams were awarded out of 9 groups).

Graduate Mentor, Undergraduate Research **2016 Spring**

- Mentored two undergraduate students, Alice Lin and Bianca Chan in distillation of HTL biocrude oil converted from swine manure and food processing waste.
- Guided the students in presentation of research findings in a campus-wide undergraduate research symposium
- *Alice got an internship in Anheuser–Busch InBev. at St. Loius, MI (2016 summer).*
- *Bianca got an internship in Ballast Shop at Cleveland/Akron, OH (2016 summer).*

Graduate Mentor, Introduction of Agricultural and Biological Engineering 2015 Fall

- Mentored four undergraduate students, Alice Lin, Bianca Chan, Tarik Hunt, Sergej Radovanovic, in distillation of biocrude oils converted from different biowastes and data collection
- Guided the students in the experimental design and presentation of research findings
- The group got the *Second place* in the Challenging Project in the class of 40 students

Graduate Mentor, Undergraduate Research 2015-2016

- Mentoring undergraduate student, Karalyn Scheppe, in literature review of separation processes for biocrude oil converted from swine manure via a continuous hydrothermal liquefaction reactor
- Trained the student to conduct the ultrasonication-assisted extraction of algal biocrude oil to separate nitrogen-containing compounds for bio-crude oil upgradation processes
- Trained the student to characterize biocrude oil and aqueous product samples converted from swine manure and microalgae through GC-MS, TGA, SEM, and bomb calorimeter
- Guided the student in preparation and presentation of research findings in a regional conference (8^{th} Midwest AICHE) and peer-reviewed journals
- *Karalyn is now an associate Energy Efficiency Consultant in Eversource Energy (starting Sep, 2016 at CT, USA)*

Graduate Mentor, Independent Study in Technical Systems Management 2015 Spring

- Mentored graduate student, Nathan Wells, in literature review and operation of hydrothermal liquefaction/gasification of plastic waste (e.g. PVC, PP, and ABS) and microalgae with catalysts
- Guided the students in the experimental design, feedstock preparation, and data collection

Graduate Mentor, Independent Study in Agricultural and Biological Engineering 2013-2015

- Mentored undergraduate student, Wanyi Qian, in literature review of hydrothermal liquefaction of ash-rich algal biomass and thermogravimetric analysis of different kinds of biomass
- Trained the student to conduct GC-MS, TGA, FTIR and SEM analyses on bio-crude oil and aqueous products converted from swine manure and algae via hydrothermal liquefaction
- Guided the student in preparation and presentation of research findings in an international conference (ASABE) and peer-reviewed journals
- *Wanyi is now a graduate student in department of Chemical Engineering at Stanford University*

Graduate Mentor, Undergraduate Summer Research 2014 Summer

- Mentored undergraduate student, Zachary Mazur, in literature review of hydrothermal liquefaction of swine manure and egg waste
- Trained the student to operate Parr reactors to **1)** convert swine manure into bio-crude oil at 300 ℃/1500-1700 psi**, 2)** separate products after hydrothermal liquefaction and **3)** measure heating values of bio-crude oil through bomb calorimeters
- *Zach Mazur is now a master student in department of Agricultural & Biological Engineering in UIUC*

Graduate Mentor, Undergraduate Research 2013-2014

- Mentored undergraduate student, Ken Nair, in literature review of extraction methods for bio-crude oil converted from different bio-wastes via hydrothermal liquefaction
- Trained the student to conduct GC-MS analysis on bio-crude oil and aqueous products converted from swine manure and algae via hydrothermal liquefaction
- Guided the student in presentation of research findings in publications for peer-reviewed journals
- *Ken got an internship in Ecolab (2015 Summer) and continued working at Ecolab (starting 2016 Aug at MN, USA).*

Graduate Mentor, Special Topics in Civil and Environmental Engineering (CEE 398) 2013 Fall

- Mentored two undergraduate students, Ferisca Putri and Brian Lai, in literature review of bio-asphalt production and analysis of the viscosity of bio-binder converted from different feedstock
- *Ferisca Putri is now a graduate student in the program of Aquaculture Engineering at University of California, Davis (Starting 2016 Aug)*

Graduate Mentor, Introduction of Agricultural and Biological Engineering (ABE 100) 2013 Fall

- Mentored four undergraduate students, Karina Barrios, Morgan Fuehne, Nikou Pishevar, Camille Ruiz-Funes, in data collection and analysis of heating values of different biofuels
- Guided the students in the experimental design and presentation of research findings
- *Nikou Pishevar got an internship in department of Chemistry in UIUC (2014 summer)*

Graduate Mentor, Undergraduate Summer Research **2013 Summer**

- Mentored two undergraduate students, Junchao Ma and Liying Tang, in literature review of pretreatment of ash-rich biomass and removal of nitrogen-containing compounds in bio-crude oil
- Trained the students to operate the laser scattering particle size distribution analyzer and conduct TGA and SEM analyses on ash-rich algal biomass with different pretreatment methods
- Guided the students in the experimental design and presentations of research findings in an international conference (ASABE) and peer-reviewed journals
- *Junchao Ma is now a PhD student in department of Chemical Engineering at Melbourne University*

Teaching Assistant, Transport Process in Agricultural and Biological Engineering **2011-2012**

Lectured; demonstrated example problems; designed weekly worksheets; led lab activities for a class of 30 students

SKILLS & CERTIFICATES

Instruments for Biofuel Production and Physicochemical Characterization

Hydrothermal liquefaction reactors. Ultraviolet-visible spectroscopy (UV-VIS). Atomic absorption spectrophotometry (AA). Gas chromatography (GC). Gas chromatography-mass spectrometry (GC-MS). Fourier-transform spectroscopy (FTIR). Thermogravimetry analysis (TGA). Raman spectroscopy. X-ray diffraction (XRD). Scanning electron microscope (SEM). Laser scattering particle size distribution analyzer. Viscometer. Hydrometer. Pyconometer. Adsorption/Desorption for surface area/pore size measurement.

Programming languages

Fortran 90. MATLAB. Simulink. LabVIEW (basic).

Software

R. Origin. Image J. Stella®. SPSS. AutoCAD. ASPEN Plus (basic). COMSOL (basic).

Certificates

Energy and Sustainability Engineering Certificate; Graduate Teaching Certificate (on-going)

HONORS/AWARDS

AIChE's Women's Initiatives Committee (WIC) Travel Award	2016
Third prize of Research Presentation held by Chinese American Chemical Society	2016
Dissertation Completion Fellowship, UIUC	2016-2017
Mavis Future Faculty Fellowship (MF3 Fellowship), UIUC	2016-2017
Selected participants of Purdue Prospective Faculty Workshop (Invited two-day workshop)	2016
First place of Collegiate Technical Poster Competition in SWE Region H Conference 2016	2016
Ben & Georgeann Jones Graduate Student Teaching Scholarship, ABE, UIUC	2015
First place of Collegiate Technical Poster Competition in SWE14 Annual Conference	2014
Scholarship Awarded by Phi Tau Phi Scholastic Honor Society of America	2014
Second place of Boyd-Scott Graduate Research Award (MS category), ASABE	2014
Second prize of Research Presentation held by Chinese American Chemical Society	2014
Studying Abroad Scholarship Awarded by Republic of China (Taiwan)	2013-2015
ACES' Office of Research Travel Grants, UIUC	2012-2016
Graduate College Travel Grant, UIUC	2013,2015
ERM Sustainable Fellowship	2013
Undergraduate Research Scholarship, National Science Council, Taiwan.	2010-2011
Undergraduate Research Scholarship, National Taiwan University, Taiwan	2007-2008

PROFESSIONAL ASSOCIATIONS

1. American Society of Agricultural and Biological Engineers (ASABE), 2011-present
2. American Institute of Chemical Engineers (AIChE), 2012-present
3. American Chemical Society (ACS), 2013-present
4. Gamma Sigma Delta (the Honor Society of Agriculture), University of Illinois Chapter, 2013-present
5. Society of Women Engineers, 2011-present

PROFESSIONAL SERVICE

Guest Peer-Reviewer 2011-present

- Served as peer-reviewers for journals of *Green Chemistry, ACS Sustainable Chemistry & Engineering*, *Fuel*,

Energy & Fuels, Algal Research, Applied Energy, Bioresource Technology, Biochemical Engineering, Frontiers in Energy Research, Desalination and Water Treatment

Coordinator for iFEAT (Illinois Female Engineering Students in Academia Training) 2015 -present

- Facilitated peer-review session; Led discussion for 15-20 participants; Invited and hosted speakers from different departments and universities; Distributed meeting information to UIUC campus
- Planned tentative schedules for a year-round program; Submitted proposals to related research grants; Applied presentation opportunities in the Society of Women Engineering National Meetings and ASEE annual conference.

Coordinator for Algal Renewable Energy Literature Study Club 2015-present

- Facilitated discussion session for literature study in biocrude oil upgrading and algal wastewater treatment area every other week; Distributed meeting information; Coordinated meeting for a group of about 10 graduate students and visiting scholars

Co-chair for catalysis session in MRC-AICHE Conference, Chicago, Illinois 2017 Spring

- Worked with another co-chair to facilitate presentation, lead discussion, and coordinate Q&A for the catalysis session in Midwest-regional Conference (MRC); Distributed meeting information to UIUC campus

Volunteer, weSTEM (Women Empowered in STEM) conference, University of Illinois 2017 Spring

- Helped set up and test the computer/projector; handled the microphones for speakers and audience during Q&A sessions; organized table and chairs for break-out sessions; put together the swag bags and program booklets.

Panelist, Women Undergraduate Workshop, American Institutes of Chemical Engineers Annual Meeting 2016 Fall

- Shared experience in applying to graduate schools, selecting advisors, conducing graduate research, and applying fellowships with a group of 30 prospective graduate students in 2016 annual AICHE conference

Judge, Undergraduate Research Symposium, University of Illinois 2016 Apr

- Served as a judge in the campus-wide undergraduate research poster presentations

Facilitator for Microteaching Training in Graduate Academy, University of Illinois 2015 Aug

- Facilitated the microteaching training for new teaching assistants (TA) from 10 different departments; led discussion and coordinated everyone's feedback in the training session

Committee at GLCACS(Chinese American Chemical Society, Great Lake Chapter) Annual Meeting 2015-2016

- Distributed meeting information to different departments at UIUC; communicated with departmental secretaries and other committee at GLCACS

Volunteer for "Introduce a Girl to Engineering Day", Society of Women Engineers 2015 Feb

- Served as a "role-model" to help high school students bond with each other to create a design project

Volunteer at EOH (Engineering open house), University of Illinois 2014 Mar

- Introduced undergraduate programs for perspective students/parents

Coordinator of Research Seminar, University of Illinois 2013 Fall

- Invited speakers and coordinated seminars for more than 40 graduate students and visiting scholars in the division of Bioenvironmental Engineering

Volunteer Consultant, Illni Algae Club, University of Illinois 2012 Fall

- Involved and helped with "*Processing of Food Waste Materials for Sustainable Energy Production at UIUC*," for EPA P3-project competition

Judge, Department of Agricultural & Biological Engineering, University of Illinois 2012-2014, 2016

- Served as a judge in ABE 100 Challenge Project Presentations

General Chemistry peer tutor, National Taiwan University 2008 Fall

- Tutored students in the subject of General Chemistry weekly

References

- Prof. Yuanhui Zhang (PhD Dissertation Advisor), University of Illinois, yzhang1@illinois.edu;
- Prof. K.C. Ting (Career mentor, Department head of ABE), University of Illinois, kcting@illinois.edu;
- Prof. Jesse Thompson (Supervisor for RAP program), University of Illinois, jthomps5@illinois.edu;
- Prof. Giovana Tommaso (Cooperator), University of Sao Paulo, Brazil, tommaso@usp.br;
- Prof. Rohit Bhargava (Supervisor for iFEAT program), University of Illinois, rxb@illinois.edu;
- Prof. Chia-Fon Lee (Committee members), University of Illinois, cflee@illinois.edu;