**SUSHIL ADHIKARI, PH.D., P.E.**
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Department of Biosystems Engineering
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## EDUCATION

| | | |
|---|---|---|
| Mississippi State University, USA | Biological Engineering | Ph.D. (2008) |
| Asian Institute of Technology, Thailand | Energy Technology | M.S. (2003) |
| Tribhuvan University, Nepal | Mechanical Engineering | B.E. (2000) |

## ACADEMIC EXPERIENCE

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|---|---|---|
| Professor | Biosystems Engineering, Auburn University | Aug. 17-present |
| Director | The Center for Bioenergy and Bioproducts | Sep 17-present |
| Associate Director | The Center for Bioenergy and Bioproducts | July 16-Aug 17 |
| Interim Department Head | Biosystems Engineering, Auburn University | Aug. 16-April 17 |
| Associate Professor | Biosystems Engineering, Auburn University | Aug. 13-Aug. 17 |
| Assistant Professor | Biosystems Engineering, Auburn University | Aug. 08-Aug.13 |
| Graduate Research Assistant | Mississippi State University | Jan 05- Jan. 08 |
| Research Associate | Asian Institute of Technology, Thailand | Aug. 03-Dec.04 |
| Lecturer | Kantipur Engineering College, Nepal | Oct. 00-Nov.01 |

**PROFESSIONAL REGISTRATION:** P.E. (License No. 33958; registered in Alabama)

## ADMINISTRATIVE EXPERIENCE

### *Director/Associate Director of Center for Bioenergy and Bioproducts (July 2016-present)*

- Assisted in securing more than $26M extramural funding from various federal agencies in last three years.
- Hired Two Assistant Research Professors in the Center
- Maintain day-to-day operations of the Center and the research projects that are being carried out through the Center.
- Started College of Agriculture Monthly Research Colloquium for faculty.
- Present information about the Center at various meetings.
- Mentor and manage research staff in the Center.
- Interact with stakeholders that are interested in bioenergy and bioproducts activities, and develop connections for Auburn University (AU) faculty members with interested parties.
- Coordinate proposal-writing efforts among faculty members within AU and with outside parties.
- Organized 4$^{th}$ Thermal and Catalytic Symposium at AU (Oct 8-10, 2018) in which more than 150 people participated.

### *Graduate Program Coordinator (Aug 2015-April 2021)*

- Answered queries related to funding and admission criteria from prospective students.
- Initiated Graduate Students recruiting event in the College of Agriculture.
- Recruited graduate students in the Biosystems Engineering Department.
- Developed and implemented graduate students' policies.
- Recommended graduate students for awards & honors.

***Interim Head of Biosystems Engineering Department (Aug 2016-April 2017)***

- Successfully led the department through an ABET accreditation process in 2016 and reaccredited for six years (the maximum).
- Managed renovation of faculty and staff offices and two classrooms with a total budget of $407,000 (Aug. 2016-Jan 2017).
- Created and hired a new lecturer position in the department and hired administrative staff.
- Maintained the day-to-day operations of the department, which had a total budget of $2.5 million. This included oversight of space, teaching assignments, mentoring new faculty, administering budgets and grants, and other activities as needed to carry out the position's responsibilities.
- Performed faculty and staff annual evaluations. Nominated faculty, staff, and students for awards and honors.
- Participated in developing the College of Agriculture's Strategic Plan.
- Initiated Students' Recognition Reception for Biosystems Engineering students.
- Represented the Biosystems Engineering Department at the University level and to the various stakeholders.

**RESEARCH INTEREST**

Biomass Gasification; Biomass Pyrolysis; Hydrothermal Liquefaction, Torrefaction, Biodiesel Production, Hydrogen Production from Bio-Wastes, Anaerobic Digestion, Bio-oil Upgrading.

**HONORS, AWARDS, AND RECOGNITION**

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| 2025 | AU SEC Faculty Achievement Award |
| 2024 | Cohort 20 (deferred to 21) Food Systems Leadership Institute |
| 2023 | AU College of Agriculture Dean Research Award |
| 2022 and 2023 | Selected in the Stanford's list of 2% scientists in the world |
| 2022 | Biosystems Engineering Outstanding Faculty Award |
| 2022 | Fred H. Pumphrey Teaching Award |
| 2022 | SGA Outstanding Engineering Faculty Award |
| 2020 | Listed in Stanford's list of 2% scientists in the world |
| 2020 | AU College of Agriculture Outstanding Publication Award-High Impact Factor |
| 2020 | AU College of Agriculture Outstanding Publication Award |
| 2020 | Lead 21 Participant, Class XV |
| 2019 | AU College of Agriculture Outstanding Publication Award |
| 2019 | AU Samuel Ginn College of Engineering Senior Researcher Award |
| 2017 | AU College of Agriculture Outstanding Publication Award |
| 2017 | AU Provost's Award for Faculty Excellence in Undergraduate Research Mentoring |
| 2017 | Gary Brown ePortfolio Faculty Cohort Award |
| 2015 | College of Agriculture High Impact Paper of the Year Award |
| 2015 | College of Agriculture Dean's Award for Advising Excellence |
| 2011-2015, 2021-2023 | College of Agriculture Dean's Grantsmanship Award |
| 2015-2020 | Alumni Associate Professor (2015-2020). Endowed Chair |
| 2015 | University Senate Departmental Award for Excellence in Education |
| 2014 | AU College of Agriculture Project Team Award |
| 2014 | World's Most Influential Mind. Recognized by Thomson Reuters |

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| 2013 | ASABE New Holland Young Researcher Award |
| 2013 | Biosystems Engineering Outstanding Faculty Award |
| 2012 | AU President's Outstanding Collaborative Units Award |
| 2011 | Alabama Agricultural Experiment Station Director's Research Award-Junior Researcher |
| 2010 | Alabama Distinguished Young Agricultural Engineer |
| 2010 | *"Nepal Vidhya Bhusan Ka"* |
| 2011 | "*Nepal Vidhya Bhusan Kha"* |
| 2003 | The Asian Institute of Technology Alumni Association Prize |
| 2003 | The Yoshiro Takasaki Prize |
| 2001 | The French Government Scholarship for Master's Degree Study (2002-2003) |
| 2001 | Outstanding Student Award (Gold Medal), Tribhuvan University |

**PUBLICATIONS**

Dr. Adhikari has published eight (8) book chapters, >170 refereed papers in leading biofuels and bioenergy engineering journals. His work has resulted in more than 235 presentations at national/international meetings, including 23 invited lectures. According to Google Scholar, his work has been cited >14,000 times resulting in an h-index of 57 and i10-index of 135.

**CONTRACTS AND GRANTS**

Dr. Adhikari has involved in over $60M extramural funding as Principal Investigator, Co-Principal Investigator or Senior Personnel from the National Science Foundation (NSF), Department of Energy (DOE), Department of Defense (DOD) and Department of Agriculture (USDA).

**SCHOLARSHIP AND RESEARCH ACTIVITIES**

The work performed by students, post-doc, and visiting scholars under the supervision of Dr. Adhikari is indicated with an asterisk (*).

***Patents/Invention Disclosure***

1. Biolubricant compositions and methods thereof (Patent App. No. PCT/US2022/076023)
2. Drabold, E., B.T Higgins, S. Shanmugam, S. Adhikari, M. Sakhakarmy. Hydrothermal Pretreatment of Dissolved Air Flotation Solids for Microbial Nutraceu**ti**cals. Filing date: 7/24/23. US Patent Office. Provisional patent No.63/528,561

***Book-Chapters***

1. **Sushil Adhikari**, Hyungseok Nam* and Avanti Kulkarni*. 2018. *Effect of biomass particles size on gasification* in Biomass Preprocessing for Biofuels Production: Mechanical, Chemical, and Thermal Methods. Jaya Tumuluru and Richard Hess (Ed.). CRC Press.
2. **Sushil Adhikari**, Hyungseok Nam* and Jyoti P. Chakraborty*. 2018. *Conversion of solid waste to fuels and chemicals through pyrolysis* in Waste Biorefinery: Potential and Perspectives Bioenergy. Ashok Pandey, Thallada Bhaskar, Venkata Mohan, Samir Khanal, Duu-Jong Lee (Ed.). Elsevier. ISBN: 978-0-444-63992-9.
3. **Sushil Adhikari** and Nourredine Abdoulmoumine. 2017. *Syngas cleaning system for power generation* in Bioenergy Systems for the Future: Prospects for Biofuels and Biohydrogen. Francesco Dalena, Angelo Basile and Claudio Rossi (Ed.). Elsevier. ISBN-10: 978-0-08-101031-0.
4. Suchithra T. Gopakumar and **Sushil Adhikari**. 2016. *Fast pyrolysis of agriculture wastes for bio-fuel and bio-char* in Recycling of Solid Waste for Biofuels and Bio-chemicals. Obulisamy Parthiba Karthikeyan, Kristen Heimann and Subramanian Senthilkannan Muthu (Ed.). Springer, Singapore. ISBN-10: 978-1-100-148-2.

5. **Sushil Adhikari**, Avanti Kulkarni* and Nourredine Abdoulmoumine*. 2016. *Combustion* in Bioenergy: Principles and Applications. Yebo Li and Samir Khanal (Ed.). Wiley Blackwell. ISBN 1118568311.
6. **Sushil Adhikari**, Nourredine Abdoulmoumine* and Avanti Kulkarni*. 2016. G*asification* in Bioenergy: Principles and Applications. Yebo Li and Samir Khanal (Ed.). Wiley Blackwell. ISBN 1118568311.
7. **Sushil Adhikari** and Nourredine Abdoulmoumine. 2015. *Biomass Gasification and Pyrolysis* in Handbook of Clean Energy System. Jinyue Yan (Ed.). Vol. 1. Pp. 155-165. Wiley. ISBN 978-1-118-38858-7.
8. **Sushil Adhikari**, Suchithra T. Gopakumar* and Steven Taylor. 2012. *Gasification and pyrolysis for fuel and power production* in Integrated Forest Biorefineries: Challenges and Opportunities. Lew Christopher (Ed.). Royal Society of Chemistry, London. ISBN-10: 978-1-84973-321-2. pp. 211-255.

***Recent Peer-Reviewed Publications*** *[Undergraduate student is underlined]*

1. Rachel Day*, **Sushil Adhikari**, Yucheng Peng. 2024. Properties of polylactic acid and biochar-based composites for environment-friendly plant containers. *Cleaner Engineering and Technology*. Vol. 23. Pg. 100850.
2. Ashish Bhattarai*, Sagar Kafle*, Manish Sakhakarmy*, Surendar Moogi, **Sushil Adhikari**. 2024. Fluidized-bed gasification kinetics model development using genetic algorithm for biomass, coal, municipal plastic waste, and their blends. *Energy*. Vol. 313 (30). Pg. 133989.
3. Ayden Kemp*, Tawsif Rahman, Hossein Jahromi, **Sushil Adhikari**. 2024. Production of aviation fuel-range hydrocarbons through catalytic co-pyrolysis of polystyrene and southern pine. *Catalysts*. Vol. 14(11). Pg. 806
4. Nitchakul Hongloi*, Tawsif Rahman*, Bijoy Biswas*, Farshad Feyzbar-Khalkhali-Nejad*, Chaiwat Prapainainar, Peerawat Wongsurakul*, Pavlo Ivanchenko, Deb P Jaisi, Emmanuel Aransiola, Lihua Zhang, Mohamed Ammar, Jonas Baltrusaitis, Paweena Prapainainar, **Sushil Adhikari**. 2024. Biofuel production from palm oil deoxygenation using nickel-molybdenum on zirconia catalyst using glycerol as a hydrogen donor. *Energy Conversion and Management: X*. Vol. 24. Pg. 100781
5. Tawsif Rahman*, Hossein Jahromi, Poulami Roy*, Bijoy Biswas*, **Sushil Adhikari**. 2024. Hydrothermal liquefaction of southern yellow pine with downstream processing for improved fuel grade chemicals production. *Energy Conversion and Management: X.* Vol. 24. Pg. 100735
6. Dale Hartmann*, Tawsif Rahman*, Lucila Carias, Maria L Auad, **Sushil Adhikari**. 2024. Upcycling Polyurethane Plastics via Thermochemical Conversion Pathways: a comparison of hydrothermal liquefaction and pyrolysis processes. *ACS Sustainable Chemistry & Engineering*. Vol. 42, pg. 15515–15527.
7. Bijoy Biswas*, Tawsif Rahman* and **Sushil Adhikari**. 2024. Mono-and bi-metal catalytic hydrothermal liquefaction of food waste: Screening the process parameter on product yield and characterizations. *Journal of Cleaner Production*. Vol. 471, pg. 143398. https://doi.org/10.1016/j.jclepro.2024.143398.
8. Bryan Holt, Kyle Oswalt, Alexa England, Richard Murphy, Isabella Owens, Micaela Finney, Natalie Wong, **Sushil Adhikari**, James McCann, John Beckmann. 2024. Computer numerical control knitting of high-resolution mosquito bite blocking textiles. *Communications Engineering*. Vol. 3. Pg. 113.
9. Sagar Kafle, Manoj Gyawali, **Sushil Adhikari**, Jürgen P Kropp, Prajal Pradhan. 2024. Possibilities and challenges for converting waste biomass into fuel, feed, and fertilizer in Nepal. *Regional Environmental Change*. Vol. 24. Pg. 1-13

10. Manish Sakhakarmy*, Sagar Kafle*, **Sushil Adhikari**. 2024. Upcycling of pine and sodium silicate composites through pyrolysis: Effects of pyrolysis temperature and sodium silicate content. *Energy Conversion and Management: X.* Vol. 23, pg. 100615
11. Sundar Sapkota, Rajan Ghimire, Prakriti Bista, Dale Hartmann, Tawsif Rahman, **Sushil Adhikari**. 2024. Greenhouse gas mitigation and soil carbon stabilization potential of forest biochar varied with biochar type and characteristics. *Science of The Total Environment*. Vol. 931, pg. 172942.
12. Farshad Feyzbar-Khalkhali-Nejad, Seyed Morteza Taghavi Kouzehkanan, Ehsan Hassani, Bahareh Hassani, Hossein Jahromi, **Sushil Adhikari**, Tae-Sik Oh. 2024. ZSM-5@ MOF-199 core-shell composite adsorbent: Rapid ambient synthesis and CO/$CO_2$ adsorption. *Chemical Engineering Science*. Vol. 292. pg. 119969.
13. Raziyeh Jokar, Hossein Jahromi, Ashish Bhattrai and **Sushil Adhikari**, 2024. Biocarbon-catalyzed methane decomposition towards clean hydrogen and enhanced biocarbon production. *Int. J. of Hydrogen Energy*. Vol. 70, pg. 105-117.
14. Manish Sakhakarmy*, Ayden Kemp, Bijoy Biswas, Sagar Kafle, **Sushil Adhikari**. 2024. A comparative analysis of bio-oil collected using an electrostatic precipitator from the pyrolysis of Douglas fir, eucalyptus, and poplar biomass. *Energies*. Vol. 17(12), 2800; https://doi.org/10.3390/en17122800
15. Bijoy Biswas*, **Sushil Adhikari**, Hossein Jahromi, Mohamed Ammar, Jonas Baltrusaitis, Allen Torbert, John Linhoss, Jasmeet Lamba. Magnesium-doped biochar for simultaneous adsorption of phosphate and nitrogen ions from aqueous solution. 2024. *Chemosphere*. https://doi.org/10.1016/j.chemosphere.2024.142130.
16. Bijoy Biswas, Putrakumar Balla, Bhavya B Krishna, **Sushil Adhikari**, Thallada Bhaskar. 2024. Physiochemical characteristics of bio-char derived from pyrolysis of rice straw under different temperatures. *Biomass Conversion and Biorefinery***. Vol. 14(12). Pg. 12775-12783**
17. Bijoy Biswas*, Manish Sakhakarmy*, Tawsif Rahman*, Hossein Jahromi, **Sushil Adhikari**, Bhavya B Krishna, Thallada Bhaskar, Jonas Baltrusaitis, Mohamed Eisa, Seyed Morteza Taghavi Kouzehkanan, Tae-Sik Oh. 2024. Selective production of phenolic monomer via catalytic depolymerization of lignin over cobalt-nickel-zirconium dioxide catalyst. *Bioresource Technology*, Vol. 398. Pg. 130517.
18. Juan C Acevedo-Paez*, Erika Arenas-Castiblanco, Fausto Posso, Edwin Alarcón, Aída Luz Villa, Hossein Jahromi, **Sushil Adhikari**. 2024. Effect of calcium and potassium on activity of mordenite-supported nickel catalyst for hydrogen production from biomass gasification. *Int. J. of Hydrogen Energy*. https://doi.org/10.1016/j.ijhydene.2023.07.123
19. Rohit Kalvakaalva, Mollie Smith, Stephen A Prior, G Brett Runion, Emmanuel Ayipio, Caroline Blanchard, Daniel Wells, David Blersch, **Sushil Adhikari**, Rishi Prasad, Terril R Hanson, Brendan T Higgins. 2023. Life cycle assessment of a decoupled biofloc aquaponics facility across seasons. *Journal of Cleaner Production*. Vol. 429. Pg. 139356
20. Ashish Bhattarai*, Ayden Kemp, Hossein Jahromi, Sagar Kafle*, **Sushil Adhikari**. 2023. Thermochemical characterization and kinetics of biomass, municipal plastic waste, and coal blends and their potential for energy generation via gasification. *ACS Omega*. Vol. 8(48). Pg. 45985-46001.

## MENTORING AND TEACHING ACTIVITIES

### RECOGNITION OF GRADUATE AND UNDERGRADUATE STUDENTS SUPERVISED

| | |
|---|---|
| Ashish Bhattarai | 2024 College of Engineering Best Poster, AU Student Research Symposium |
| Ayden Kemp | 2024 1st Place. Three Minute Thesis (3MT®) Competition |
| Rachel Day | 2024 Top Ten Finalist. AU 3MT Thesis Competition |

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| Rachel Day, Vivian Usha, Raziyeh Jokar, Noor Fatima | 2024 2nd Place ASABE Bioprocess Startup Competition |
| Bipasyana Dhungana | 2024 Best Presenter Award (ASABE Energy Systems) |
| Ayden Kemp | 2024 1st Place, ASABE K. K. Barnes Student Paper Award |
| Ayden Kemp | 2023 Astronaut Scholar, Astronaut Scholarship Foundation |
| Ayden Kemp | 2023 Goldwater Scholar, Barry Goldwater Scholarship |
| Dale Hartmann | 2023 Honorable Mention, AU Samuel Ginn College of Engineering Graduate Engineering Research Showcase |
| Manish Sakhakarmy | 2023 Best Presenter Award (ASABE Energy Systems) |
| Poulami Roy | 2022 Best Presenter Award (ASABE Energy Systems) |
| Sanjita Wasti | 2021 AU Graduate School Outstanding MS Student Award |
| Vivek Patil | 2020 First Place in College of Agriculture Poster Presentation |
| Sanjita Wasti | 2020 AU Graduate School Master Thesis Award |
| Vivek Patil | 2019 Second Place in College of Agriculture Poster Presentation |
| Vivek Patil | 2019 Biosystems Engineering Departmental Award |
| Vivek Patil | 2018 First Place in College of Agriculture Poster Presentation |
| Vivek Patil | 2018 Biosystems Engineering Departmental Award |
| Khalida Harun | 2017 Biosystems Engineering Departmental Award |
| Sourov K Sajib | 2016 Second Place in College of Agriculture Poster Presentation |
| Ravi Mahadevan | 2016 Second Place in College of Agriculture Poster Presentation |
| Rajdeep Shakya | 2016 Third Place in CoA Poster Presentation |
| Ravi Mahadevan | 2016 Biosystems Engineering Departmental Award |
| Ravi Mahadevan | 2016 Honorable Mention, Master's Thesis Award |
| Narendra Sadhwani | 2016 ACS I&EC Division Graduate Student Award |
| Ravi Mahadevan | 2016 AABFEIO Graduate Student Research Award. |
| Rajdeep Shakya | 2016 AU Outstanding PhD Student. |
| Rajdeep Shakya | 2016 Alabama EPSCoR Graduate Research Scholarship |
| Ravi Mahadevan | 2016 Outstanding International Graduate Student. |
| Cassidy Laird | 2016 Roger R. & Laura M. Yoerger Preprofessional Engineer of the Year Award |
| Ravi Mahadevan | 2015 Biosystems Engineering Departmental Award |
| Narendra Sadhwani | 2013-15 Alabama EPSCoR Graduate Research Scholarship |
| Narendra Sadhwani | 2015 Frederick and Charlene Kam Outstanding International Graduate Student of the Year |
| Sneha Neupane | 2015 AU Outstanding MS Student |
| Ravi Mahadevan | 2014 Graduate School Travel Award. |
| Narendra Sadhwani | 2014 Three Minute Thesis (3MT®) Winner |
| Ravi Mahadevan | 2014 Three Minute Thesis (3MT) Finalist |
| Ravi Mahadevan | 2014 Biosystems Engineering Departmental Award |
| Phillip Cross | 2014 NSF IGERT Fellowship |
| Melanie McDonald | 2013 NSF IGERT Fellowship |
| Nourredine Abdoulmoumine | 2013 Outstanding International Graduate Student |
| Vaishnavi Srinivasan | 2012 Biosystems Engineering Departmental Award |
| Shyamsundar A Chattanathan | 2012 Third Place Poster Presentation Award |
| Nourredine Abdoulmoumine | 2012 Graduate Student Dissertation Research Award |
| Nourredine Abdoulmoumine | 2012 National Engineers New Faces of Engineering |
| Suchithra T. Gopakumar | 2011 Outstanding International Graduate Student |

**COURSES TAUGHT**

| | |
|---|---|
| BSEN 7970 | Manuscript Writing[§] |
| ENGR 1110 | Introduction to Engineering |
| BSEN 2240 | Biological and Bioenvironmental Heat and Mass Transfer[§] |
| BSEN 5230 | Waste Management and Utilization for Biosystems |
| BSEN 5540 | Biomass and Biofuels[§] |
| BSEN 6250 | Renewable Energy |

[§]course developed by Adhikari

**GRADUATE STUDENTS SUPERVISED/COMPLETED**

***As a Major/Co-Major Advisor (Ph.D.: 15; M.S.: 17)***

1. Ashish Bhattarai. Ph.D. Biosystems Engineering. Oxy-Steam fluidized bed gasification of southern pine biomass, lignite coal, plastic wastes, and their blends for hydrogen production. December 2024.
2. Manish Sakhakarmy, Ph.D. Biosystems Engineering. Pyrolysis of woody biomass and waste from additive manufacturing for the synthesis of chemicals and transportation fuels. December 2024.
3. Alexa England, M.S. Biosystems Engineering. Engineering comfort for micro-resolution mosquito bite blocking textiles. May 2023.
4. Tawsif Rahman, Ph.D. Biosystems Engineering. Biocrude production from biomass and plastics via hydrothermal liquefaction for fuel and chemicals. December 2022.
5. Poulami Roy, Ph.D. Biosystems Engineering. Hydrotreatment of biomass and waste derived hydrothermal and pyrolysis liquid intermediates to produce fuels and lubricants. December 2022.
6. Bryan Holt, M.S. Biosystems Engineering. Developing and optimizing micro-resolution mosquito bite blocking textiles. Spring 2022.
7. Vivek Patil, Ph.D. Biosystems Engineering. Stabilization strategies for preventing secondary reactions during lignin depolymerization and valorization. May 2021.
8. Sanjita Wasti, M.S. Biosystems Engineering. Production of bio-composite filament using lignin, polylactic acid and high impact polystyrene for additive manufacturing (3D printing). August 2020.
9. Temitope Soneye, M.S. Biosystems Engineering. Hydrothermal liquefaction of municipal sludge and biocrude upgrading using carinata oil. August 2020.
10. Nikhil Jain. M.S. Biosystems Engineering. Characterization of biofuels produced from hydrothermal liquefaction of algae, its subsequent upgrading and fractional distillation. December 2018.
11. Phillip Cross, Ph.D. Biosystems Engineering. Gasification and pyrolysis of eucalyptus, prickly pear, gumweed, and lignin for biofuels and chemical intermediates. August 2018.
12. Khalida Harun. M.S. Biosystems Engineering. Hydrogen production via thermocatalytic decomposition of methane using carbon supported materials. December 2017.
13. Rajdeep Shakya. P.D. Biosystems Engineering. Biofuel production from hydrothermal liquefaction of algae and its subsequent upgrading. December 2017.
14. Sourov Sajib. M.S. Biosystems Engineering. Preparation and characterization of activated biochar for lithium-sulfur battery application. December 2017.
15. Sanjeev K.C. M.S. Biosystems Engineering. Understanding the effect of catalytic pyrolysis bio-oil produced using CaO during hydrotreatment. December 2017.

16. Narendra Sadhwani, Ph.D. Chemical Engineering. Conversion of carbon dioxide and biomass for fuels and chemicals precursor through gasification: experimental and modeling approach. Auburn University. May 2017.
17. Ravishankar Mahadevan, Ph.D. Biosystems Engineering. Effect of biomass structure on catalytic fast pyrolysis process for the production of fuels. Auburn University. December 2016.
18. Jing Li, Ph.D. Biosystems Engineering. Inhibition study in biofuels and biochemicals production from lignocellulosic biomass. Auburn University. December 2016.
19. Ujjain Pradhan, M.S. Biosystems Engineering. Physical treatments for reducing biomass ash and effect of ash content on pyrolysis products. Auburn University. May 2016.
20. Avanti Kulkarni, Ph.D. Biosystems Engineering. Biomass gasification for fuels and power production using a bench-scale bubbling fluidized bed gasifier. Auburn University. May 2015.
21. Shaima Nahreen, Ph.D. Chemical Engineering. Catalytic upgrading of biomass fermentation products and bio-methane to energy dense hydrocarbon fuels. Auburn University. May 2015.
22. Sneha Neupane, M.S. Biosystems Engineering. Effect of torrefaction on biomass structure and product distribution from fast pyrolysis. Auburn University. May 2015.
23. Ravishankar Mahadevan, M.S. Biosystems Engineering. Experimental study of biomass pyrolysis in a fluidized bed reactor: effect of biomass blending and in-situ catalysis. Auburn University. May 2015.
24. Rajdeep Shakya, M.S. Biosystems Engineering. Hydrothermal liquefaction of algae for bio-oils production. Auburn University. December 2014.
25. Ravindra Shrestha, M.S. Biosystems Engineering. Experimental analysis and modeling of biomass gasification using a downdraft gasifier. Auburn University. May 2014.
26. Nourredine Abdoulmoumine, Ph.D. Biosystems Engineering. Fate and remediation of pine gasification syngas contaminants. Auburn University. August 2014.
27. Shyamsundar Ayalur Chattanathan, Ph.D. Biosystems Engineering. Hydrogen production from different renewable resources. Auburn University. May 2014
28. Vaishnavi Srinivasan, M.S. Biosystems Engineering. Catalytic pyrolysis of pre-treated biomass for hydrocarbon yields. Auburn University. May 2013.
29. Suchithra Gopakumar, Ph.D. Chemical Engineering. Bio-oil production through fast pyrolysis and upgrading to “green” transportation fuels. Auburn University. May 2012.
30. Chad Carter, M.S. Biosystems Engineering. Physicochemical properties and thermal decomposition of torrefied woody biomass and energy crop. Auburn University. May 2012.
31. Harideepan Ravindran, M.S. Mechanical Engineering. Production of high pH value and stable bio-oil from woody biomass and poultry litter. Auburn University. May 2011.
32. Gopal Gautam, M.S. Mechanical Engineering. Parametric study of a commercial-scale biomass downdraft gasifier: experiments and equilibrium modeling. Auburn University. August 2010

### *Society Membership*

- Member. American Society of Agricultural and Biological Engineers (ASABE). 2005-present.
- Member. American Institute of Chemical Engineers (AIChE) – 2007-present.
- Member. American Society of Engineering Education (ASEE). 2016-present.
- Member. American Chemical Society (ACS). 2005-2013.