

Dr. Kaushlendra Singh

School of Natural Resources

322 Percival Hall, PO: 6125

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SECTION A: PROFESSIONAL PREPARATION AND RECOGNITIONS

A1. Education

- Ph.D. 2008 Agricultural and Biological Systems Engineering, University of Georgia (UGA), Athens, United States
- M.Tech 1999 Agricultural Engineering, Indian Institute of Technology, Kharagpur, India
- B.Tech. 1997 Agricultural Engineering, G. B. Pant University of Agricultural & Technology, Pantnagar, Honors India

A2. Selected Professional Development Trainings

- 2016: Academic Leadership - A Systems Approach (ASABE Orlando, FL, July 17, 2016)
- 2015: Leadership Development Institute, West Virginia University (Spring semester)
- 2014: Faculty Success Bootcamp, West Virginia University (12 summer weeks)
- 2011: NSF- funded Faculty Summer Institute, West Virginia University (1 summer week)
- 2010: Grant Writers' Workshop, West Virginia University (6 months)
- 2000: Direct Trainer Skills, Academy of Administration, Uttar Pradesh, India (1 week)
- 2000: Design of Training, Academy of Administration, Uttar Pradesh, India (1 week)
- 1996: Tractor assembling and dismantling, tractor testing, and auto electrical, Tractor Training Institute, India (1 month)

A3. Work Experience

07/2016 – continuing: Associate Professor of Wood Science and Technology (Biofuels and Bioenergy), School of Natural Resources, West Virginia University (WVU)

Responsibilities:

- Teach graduate and undergraduate courses in bio-energy, woody biomass utilization
- Develop a graduate course related to the needs of the wood science and technology program
- Develop research program on bio-conversion methods,
- Provide service to program, college, university, and community

01/2010 – 06/30/2016: Assistant Professor of Wood Science and Technology (Biofuels and Bioenergy), School of Natural Resources, West Virginia University (WVU)

Responsibilities:

- Teach graduate and undergraduate courses in bio-energy, woody biomass utilization
- Develop a graduate course related to the needs of the wood science and technology program

- Develop research program on bio-conversion methods,
- Provide service to program, college, university, and community

09/2008 – 12/2009: Post-Doctoral Research Associate, Department of Biological and Agricultural Engineering, University of Georgia

Responsibilities:

- Worked (research) on hydrogen production from biomass using steam reforming and pyrolysis
- Worked (research) on effect of harvesting methods for forestry biomass on its fuel properties
- Estimated efficiency and emission from an industrial scale biomass combustion system

08/2004 – 08/2008: Graduate Research Assistant, Department of Biological and Agricultural Engineering, University of Georgia

Responsibilities:

- Worked on thermo-chemical conversion and densification of poultry litter (animal residue conversion and utilization)
- Studied co-firing of poultry litter char with standard coal emissions (bioenergy from animal waste)
- Prepared a Quality Assurance Project Plan for U. S. Environmental Protection Agency Project
- Developed an airboat mounted with a fish finder and GPS to measure sludge in lagoon
- Delivered several lectures for the undergraduate courses on Energetics and Introduction to Natural Resource Engineering

01/1999-08/2004: Extension Training Officer (Production Engineering), Ministry of Rural Development, Government of Uttar Pradesh, India

Responsibilities:

- Designed and organized several training programs for government officials and public workers
- Worked on extension of bioconversion of solid animal waste into biogas and fertilizer, bioconversion of solid waste into vermi-compost, safe water and sanitation by municipal waste management.

A4. Awards and Recognitions

- 2016: Leadership Citation Award, ASABE
- 2014: Presidential Citation Award, ASABE
- 2013: Mini-Grant Award, West Virginia Higher Education Policy Commission
- 2012: Mini-Grant Award, West Virginia Higher Education Policy Commission
- 2012: Third Place, Faculty Talent Show, West Virginia University
- 2010: Mini-Grant Award, West Virginia Higher Education Policy Commission
- 2010: Robert C. Anderson Memorial Award, University of Georgia Research Foundation

- 2009: Excellence in Research by Graduate Student, University of Georgia Research Foundation
- 2008: Graduate Student Research Award, American Society of Agricultural and Biological Engineers (ASABE)
- 2007 and 2008: Graduate School Travel Grant, UGA
- 2007: Solid Waste Association of North America (SWANA) SCS Engineers National Scholarship
- 2007: Graduate Student Research Award, ASABE
- 2007: Solid Waste Association of North America (SWANA) Georgia Chapter Graduate Scholarship
- 2007: Nominated for Who's Who Among Students in American Universities and College Competition
- 2007: Nominated by the Department for E. Browne outstanding PhD student research award
- 2006: Solid Waste Processing Division Scholarship American Society of Mechanical Engineering
- 2004 through 2008: Graduate Assistantship to pursue doctoral studies at UGA

SECTION B: TEACHING ACTIVITIES

B1. Instruction

- **WDSC 340 Physical Properties of Wood, 3 credit hours (Spring-undergraduate course)**

| | | | | | | |
|-----------------|------|------|------|------|------|------|
| Spring Semester | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Enrollment | 5 | 9 | 8 | 6 | 9 | 5 |

- **WDSC 540 Advanced Physical Properties of Wood, 3 credit hours (Spring- graduate course)**

| | | | | | | |
|-----------------|------|------|------|------|------|------|
| Spring Semester | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Enrollment | - | - | 3 | - | 2 | 4 |

- **WDSC 444 /644 (also taught as STTP WDSC 293/693): Introduction to Bio-based Energy Systems, 3-credits hours (Fall- undergraduate and graduate course)**

| | | | | | | |
|---------------|------|------|------|------|------|------|
| Fall Semester | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Enrollment | 7 | 7 | 5 | 5 | 4 | 12 |

- **WDSC 100 (GEC): Forest Resources in US History, 3 credits (Fall- Undergraduate)**

| | | | |
|---------------|------|------|------|
| Fall Semester | 2013 | 2014 | 2015 |
| Enrollment | 60 | 68 | 55 |

- **Online WDSC 100 (GEC): Forest Resources in US History, 3 credits (Fall/Spring/Summer- Undergraduate)**

| | |
|---------------|------|
| Fall Semester | 2015 |
| Enrollment | 9 |

- **WDSC 495: Independent Study, 1 to 3 credits**

| | | | |
|---------------|------|------|------|
| Fall Semester | 2012 | 2014 | 2015 |
| Enrollment | 1 | 1 | 1 |

B2. Curriculum Development

- WDSC 444: Bio-based Energy Systems (Proposed and approved course by the WVU-Faculty Senate)
- WDSC 644: Bio-based Energy Systems (Proposed and approved course by the WVU-Faculty Senate Curriculum Committee)
- WDSC 144 (online): Introduction to Bioenergy (Proposed and being reviewed)
- Non-Thesis Masters in Forestry on the concentration area of “Biofuels and Bioenergy” (Proposed and approved by the WVU-Faculty Senate)

B4. Guest Lectures

| | |
|------------|--|
| 04/07/2011 | “Clean Energy” in Global Forest Resources course taught by Dr. Kathryn G. Arano |
| 11/10/2011 | “Biomass Energy” in the Energy Resource Economics (ARE 187) taught by Dr. Wesley Burnett |
| 09/16/2011 | “Biomass Energy” in the Undergraduate Seminar in class taught by Dr. Ben Dawson |
| 06/14/2012 | 3-sessions on “Heat and Mass Transfer” for Elementary, middle, and high school teachers’ training during WVU- Agriculture Summer Institute |
| 05/30/2013 | “Making Food Business Green- Transforming Waste into Biofuels Bioenergy” during Food Drying Workshop at Kearneville, WV |
| 07/08/2013 | “Thermo-chemical Conversion Technologies” NEWBio Education Teacher Training Workshop, Morgantown, WV |
| 02/26/2013 | ”Biomass Energy, Biofuels, Bioenergy” during LAW-793T “Science & Technology of Energy” |
| 04/11/2013 | ”Biomass Energy, Biofuels, Bioenergy” during FOR-425 “Global Forest Resources” Class |
| 07/08/2014 | Guest lecture “Thermo-chemical Conversion Technologies” NEWBio Education Teacher Training Workshop, Morgantown, WV |
| 05/27/2015 | “Making Food Business Green- Transforming Waste into Biofuels Bioenergy” Food Drying Workshop at Marshall County Activities Authority |

| | |
|------------|---|
| | Service Barn Moundsville, WV |
| 04/14/2015 | A guest lecture on "Bioenergy" for Global Forest Resources course taught by Dr. Kathryn Arano Gazal |

B5. Mentoring

B5.1. Undergraduate Advising

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------|------|------|------|------|------|------|
| Advisee | - | 2 | 4 | 4 | 5 | 5 |

B5.2. Undergraduate Students Mentored

- Holliday, Jordan, B.S. Chemical Engineering, 2011, Summer Undergraduate Research Experience program, Project: *Fuel Properties of Co-Processed Woody Biomass with Bituminous Coal.*
- Halley, Bradley, B.S. Wood Science and Technology, 2011. Undergraduate Research, Project: *Evaluation of Fuel Qualities of Co-Processed Torrefied Wood and Coal.*
- Baker, Zach, B.S. Chemical Engineering, 2010, Summer Intern, Project- *Thermochemical characterization of biomass.*

B5.3. Current Graduate Students

- Oluwatosin, Oginni, PhD Student, Dissertation Title: *Highly Porous Activated Carbons from Bioenergy Crops Grown on Abandoned Mining Land of West Virginia.*
- Akharume, Felix, M.S. Student, Thesis Title: *Drying Characteristics of Biological Materials.*
- Rahimi, Sohrab, M.S. Student, Thesis Title: *Influence of Hydrothermal Treatment on Drying Behavior and Physical Properties.*

B5.4. Graduate Students Completing Degrees from 2010-2015

- Brar, Jagpinder Singh, M.S. 2012. Thesis Title: *Co-gasification of coal and biomass.*
- Kumar, Saurabh, M.S. 2012. Thesis Title: *Co-liquefaction of coal and biomass for liquid fuel synthesis.*
- Jin, Wenjia. M.S. 2013. Thesis Title: *Using bio-chars as potential catalysts for upgrading wood pyrolysis vapors.*

SECTION C: RESEARCH ACTIVITIES

C1. Funded Research

- Singh, K.** 2016. Enhancing Teaching Effectiveness through Technology Integration and Curriculum Development through Professional Networking, WVU- Davis Faculty Enrichment Grants (\$ 6,074)
- Singh, K.** 2015. Production and Application of Highly Porous Activated Carbon (HPAC) Materials from Bioenergy Crops. USDA McIntire-Stennis Program. (\$126, 136)

3. **Singh, K.** and E. Kugler. 2013. Comparing Bio-Char catalysis and FCC Catalysis for Cracking of Pyrolysis Vapors, WVU- Faculty Senate (\$25,429 of total \$26,429)
4. Sivanandan, L. 2013. Optimizing Integrated Fruit Drying Process and Improving Process Sustainability with Value-Added Products from Byproducts. WVU ADVANCE/Sponsorship Program, Research Award \$15,000 (**Project Support**)
5. Wang, J., H. Ghadimi, **K. Singh**, R. Jackson, W. Burnett. 2012. Co-PI- Economic and Environmental Impacts of Woody Biomass Utilization in the Central Appalachian Region, USDA-NIFA (\$35,750 of total 349,952)
6. **Singh, K.** 2013. Stability of Bio-Oils and Distribution of Feedstock-Energy & Carbon from Catalytic Upgrading of Pyrolysis Vapors using Bio-Chars and FCC catalysts. Research Proposal Mini-Grant Program (Mini-Grant) 2013, Division of Science & Research, West Virginia Higher Education Policy Commission (\$5,000)
7. **Singh, K.** 2013. Purchasing Booksfields Automatic Visco-meter for Liquid Biofuels Research & Education. WVU- Davis College of Agriculture, Natural Resources and Design Faculty Development Grants (\$7,500)
8. **Singh, K.** 2012. Fundamental Understanding of Lignin Behavior in the Wood Cell Wall during Thermal Treatment of Hardwood under Inert Conditions. Research Proposal Mini-Grant Program (Mini-Grant) 2012, Division of Science & Research, West Virginia Higher Education Policy Commission (\$5,000)
9. **Singh, K.** 2011. Fuel properties of co-processed woody biomass with bituminous coal. Summer Undergraduate Research Experience (SURE). WVU- Internal Grant (\$1,430)
10. **Singh, K.**, J. Wang, J. W. Zondlo. 2010. Co-liquefaction of coal and pre-treated biomass. WVU Energy Research Grant. (\$47,018)
11. **Singh, K.** 2010. Customizing Co-gasification System for Coal-Wood residues to Produce Syn-gas for Combined Heat and Power and Liquid Fuel Synthesis. Research Proposal Mini-Grant Program (Mini-Grant) 2012, Division of Science & Research, West Virginia Higher Education Policy Commission (\$5,000)
12. **Singh, K.**, J. Wang, and J. W. Zondlo. 2010. Co-gasification of Coal-Biomass. Department of Energy through Consortium of Fossil Fuel Science. (\$88,642 of total \$146,686)
13. Wang, J., J. Zondlo, S. Difazio, **K. Singh**, and D. DeVallance. 2011. Advancing an Interdisciplinary and Competitive Bioenergy Research Team at West Virginia University. WVU – Advanced Energy Initiative Program. (\$179,250)
14. Oporto, G., **K. Singh**, D. DeVallance, and Q. Cheng. 2011. Pre-Treatment of Appalachian Hardwood Residues for Improving its Further Thermochemical Conversion. WVU Energy research Grant. (\$49,500)

15. **Singh, K.**, J. Wang, and J. Zondlo. 2010. Studying Coal and Biomass Co-gasification to Produce Syngas for Liquid Fuel Production. In McNeel, J. F., Wang, J., Dawson-Andoh, B., DeVallance, D., and K. Singh. 2010. Promoting Appalachian Hardwood Utilization for Value-Added Wood Products and Biofuels. USDA/National Institute of Food and Agriculture. (\$39,976 for my task of \$458,367 total)
16. **Singh, K.** 2010. Material Handling and Co-Gasification Reactive Properties of Coal-Biomass Mixtures to Produce Syngas for Combined Heat and Power and Liquid Fuel Synthesis. USDA McIntire-Stennis Program. (\$166, 289)
17. **Singh, K.** 2011. Sustainable Wood Energy. USDA MultiState Hatch Program. (\$1000 per year)
18. **Singh, K.** 2011. The Science and Engineering for a Biobased Industry and Economy. USDA MultiState Hatch Program. (\$1,000 per year)
19. Risse, M. L., J. Worley, K. C. Das, S. Thompson, and **K. Singh**. 2006. Co-PI- Energy and Bio-oil Production from Poultry Litter using Fractionation and Pyrolysis. United States Environmental Protection Agency Region 4 (\$58,000)
20. Risse, M. L., J. Worley, K. C. Das, S. Thompson, and **K. Singh**. 2006. Fractionation and Pyrolysis to Produce Energy Efficient Value Added Products from Poultry Litter. 2006-2008. Animal and Poultry Waste Management Centre, NC, GA (\$40,000)

C2. Publications

C2.1. Peer-Reviewed

1. L.A. Poggi, **K. Singh**, Thermal degradation capabilities of modified bio-chars and fluid cracking catalyst (FCC) for acetic acid, *Biomass and Bioenergy*, 90 (2016) 243-251.
2. F.U. Akharume, **K. Singh**, L. Sivanandan, Characteristics of apple juice and sugar infused fresh and frozen blueberries, *LWT-Food Science and Technology*, 73 (2016) 448-457.
3. **K. Singh**, J. Zondlo, Co-processing coal and torrefied biomass during direct liquefaction, *Journal of the Energy Institute*, (2016). [doi:10.1016/j.joei.2016.05.012](https://doi.org/10.1016/j.joei.2016.05.012)
4. **K. Singh**, J. Zondlo, Characterization of Fuel Properties for Coal and Torrefied Biomass Mixtures, *Journal of the Energy Institute*, (2016). [doi:10.1016/j.joei.2016.05.012](https://doi.org/10.1016/j.joei.2016.05.012)
5. Oginni, O. and **K. Singh**. 2016. Pyrolysis of Energy Crops Grown on Reclaimed Mining Land in West Virginia. *Journal of Applied and Analytical Pyrolysis*. (Under Revision)
6. Jin, W., **K. Singh**, and J. Zondlo. 2015. Co-Processing of Pyrolysis Vapors with Bio-Chars for Ex-Situ Upgrading. *Renewable Energy* 83C: 638-645.

7. **Singh, K.** and L. Sivanandan. 2014. Hydrothermal carbonization of spent osmotic solution (SOS) generated from osmotic dehydration of blueberries. *Journal of Agriculture*, 4(3): 239-259.
8. **Singh, K.** and L. Sivanandan. 2014. Changes in wood during mild thermal decay and its detection using ATR-IR: A Review. *Journal of Agricultural Science and Applications*, 3(1) DOI: 10.14511/jasa.2014.030101.
9. **Singh, K.**, S. Sokhansanj, and J. Dooley. 2013. Wood as advanced feedstock?- Scale matters. *Biofuels* 4(1): 13-16 (**Invited**).
10. Jin, W., **K. Singh**, and J. Zondlo. 2013. Pyrolysis kinetics of physical components and wood polymers of wood using Isoconversion methods. *Journal of Agriculture* 1(2): 37-44. (**Invited**)
11. Brar, J. S., **K. Singh**, J. Zondlo, and J. Wang. 2013 Co-gasification of coal and hardwood pellets: A Case Study. *American Journal of Biomass and Bioenergy*. 1: 11-26.
12. Brar, J. S., **K. Singh**, J. W. Zondlo. 2013. Technical challenges and opportunities in co-gasification of coal and biomass. 2012 Central Hardwood Conference Proceedings, Available at: http://www.nrs.fs.fed.us/pubs/gtr/gtr-nrs-p-117papers/03-brar_2012-chfc.pdf
13. **Singh, K.**, M. Risse, K. C. Das, J. Worley, and S. Thompson. 2012. Pyrolysis of poultry litter fractions for bio-char and bio-oil production. *Journal of Agricultural Science and Applications*, 1(2): 37-44.
14. Brar, J. S., **K. Singh**, J. Zondlo, J. Wang, and S. Kumar. 2012. Co-gasification of coal and biomass- A review. *International Journal of Forestry Research* Article ID 363058, doi:10.1155/2012/36305.
15. **Singh, K.**, J. Zondlo, J. Wang, L. Sivanandan, J. S. Brar, and S. Kumar. 2012. Influence of environmental decomposition of logging residues on fuel properties. *Biological Engineering Transactions* 5(4): 163-176. (West Virginia University Agriculture and Forestry Experiment Station Scientific Article No. 3146)
16. Das, K. C., **K. Singh**, B. Bibens, R. Hilten, S. A. Baker, W. D. Greene, J. D. Peterson. 2011. Pyrolysis characteristics of forest residues obtained from different harvesting methods. *Applied Engineering in Agriculture* 27(1): 107-113.
17. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2010. Effect of fractionation and pyrolysis on fuel properties of poultry litter. *Journal of Air and Waste Management*, 60(7):875-83.
18. Das, K. C., **K. Singh**, R. Adolphson, B. Hawkins, R. Oglesby, D. Lakly, and D. Day. 2010. Steam pyrolysis and catalytic steam reforming of biomass for hydrogen and biochar production. *Applied Engineering in Agriculture*, 26(1): 137-146.

19. **Singh, K.**, K. Lee, J. Worley, M. Risse, and K. C. Das. 2010. Anaerobic digestion of poultry litter: A review. *Applied Engineering in Agriculture*, 26(4): 677-688.
20. **Singh, K.**, K.C. Das, M. Risse, and J. Worley. 2009. Determination of Composition of Cellulose and Lignin Mixture using Thermo Gravimetric Analysis (TGA). *Journal of Energy Resource Technology* 131(2): DOI: 10.1115/1.3120349.
21. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2009. Studying compaction behavior of fractionated poultry litter and use of pyrolysis condensate as a binder during pelletizing. *Transactions of ASABE* 52(3): 949- 956.
22. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2008. Effect of fractionation on fuel properties of poultry litter. *Applied Engineering in Agriculture* 24(4): 383-388.
23. **Singh, K.**, J. Worley, and M. Risse. 2008. Sludge Measurement Using GPS Enabled Sonar Equipped Airboat in a Lagoon. *Applied Engineering in Agriculture* 24(5): 603-609.
24. **Singh K.**, E. W. Tollner, S. Mani, L. M. Risse, K. C. Das, and J. Worley. 2008. Emergy analysis of a pyrolysis process. *Peer review proceedings*, Fifth Biennial Emergy Research Conference, University of Florida, Gainesville, Florida, January 31 - February 2, 2008.
25. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2008. Effect of fractionation and pyrolysis on fuel properties of poultry litter. *Peer reviewed proceedings*, Air and Waste Management Annual Meeting and Expo, Portland, Oregon.
26. **Singh, K.**, E. W. Tollner, S. Mani, L. M. Risse, K. C. Das, and John Worley. 2008. Transforming solid wastes into high quality bioenergy products: Entropy analysis. ASME Paper No. 1924. *Peer reviewed proceedings*, North American Waste to Energy Conference (NAWTEC-16), May 19-21, Philadelphia, PA.
27. **Singh, K.**, K. C. Das, M. Risse, and J. Worley. 2007. Determination of Composition of Cellulose and Lignin Mixture using Thermo Gravimetric Analysis (TGA). ASME Paper No. 32222. *Peer reviewed proceedings*, North American Waste to Energy Conference (NAWTEC-15). Three Park Avenue. NY: ASME.

C2.2. Intellectual Property Disclosures and Provisional Patent

1. **Singh, K.** 2011. Method for Co-Processing Biomass with Coal to Produce Hybrid Fuels. *Provisional Patent Application Filed on October 10, 2011*

C2.3. Popular Press

1. **Singh, K.**, J. Worley, G. Hawkins, and M. Risse. 2009. Bioenergy Extension Education: Challenges and Opportunities. *Resource Magazine*. March 2009: 31.
2. **Singh, K.**, J. Worley, and M. Risse. 2007. Remote Control Airboat Measures Lagoon Sludge. *Manure Manager Magazine*. May/June: 12- 15.

3. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2007. Poultry Litter as an Energy Source. Cover Page Article in *World Poultry Magazine*. 23 (4): 22-23.

C2.4. Thesis/Dissertations

1. Luigi Antonio Poggi. 2014. Ex-Situ upgrading of biomass pyrolysis vapors: Catalytic activity of switchgrass bio-char derived catalysts. M. S. Thesis, Laurea Magistrale in Ingegneria Energetica, Università degli Studi di Roma Tor Vergata
2. Jin, W. 2013. Using bio-chars as potential catalysts for upgrading wood pyrolysis vapors. M.S. Thesis, Division of Forestry and Natural Resources, West Virginia University.
3. Brar, J. S. 2012. Co-gasification of coal and biomass. M.S. Thesis, Division of Forestry and Natural Resources, West Virginia University.
4. Kumar, S. 2012. Co-liquefaction of coal and biomass for liquid fuel synthesis. M.S. Thesis, Division of Forestry and Natural Resources, West Virginia University.
5. Singh, K. 2008. Value added products from poultry litter using fractionation, pyrolysis, and pelletizing. Ph.D. Dissertation, Department of Biological and Agricultural Engineering, University of Georgia.
6. Singh, K. 1999. Computer simulated design of three-point linkage of tractor. M. Tech. Thesis. Indian Institute of Technology, Kharagpur, India.
7. Singh, K. 1997. Energy estimation and mechanization in tarai regions of Uttar Pradesh. B.Tech. Thesis. G. B. Pant University of Agriculture and Technology, Uttaranchal, India

C2.5. Proceedings/Conference Papers/Reports

1. Oluwatosin Jerry Oginni and **K. Singh**. 2015. Pyrolysis of Bioenergy Crops (Switchgrass and Miscanthus) Grown on Reclaimed Mining Land in West Virginia. 2015 ASABE Annual International Meeting, Paper no: 152164303.
2. **Singh, K.**, J. Wang, and J. Zondlo. 2013. Co-gasification of Coal-Biomass. *In the final report on "Sustainable Transportation Fuels from Natural Gas (H₂), Coal and Biomass"* Final report: DOE Contract No. DE-FC26-05NT42456. Available at: <http://www.osti.gov/scitech/servlets/purl/1097101>. Accessed on September 03, 2015. Pages 35-41.
3. **Singh, K.**, J. Wang, and J. Zondlo. 2013. Co-gasification of Coal-Biomass. *In the final report on "Sustainable Transportation Fuels from Natural Gas (H₂), Coal and Biomass"* Final report:

DOE Contract No. DE-FC26-05NT42456. Available at:

<http://www.osti.gov/scitech/servlets/purl/1097101>. Accessed on September 03, 2015.

4. Brar, J. S., **K. Singh**, J. Zondlo, W. Jin, and S. Kumar. 2012. Co-gasification of coal and Appalachian hardwood: Syngas composition, carbon efficiency and energy efficiency. ASABE Paper No. 121337402. St. Joseph, Mich.: ASABE.
5. Kumar, S., **K. Singh**, J. Zondlo, J. S. Brar, and W. Jin. 2012. Direct Co-liquefaction of Hardwood and Coal. ASABE Paper No. 121338188. St. Joseph, Mich.: ASABE.
6. Jin, W., **K. Singh**, J. W. Zondlo, J. Wang, J.S. Brar, S. Kumar. 2012. Pyrolysis and torrefaction behavior of hardwood components. ASABE Paper No. 121338353. St. Joseph, Mich.: ASABE.
7. **Singh, K.** J. Zondlo, and J. Wang. 2012. Studying Coal and Biomass Co-gasification to Produce Syngas for Liquid Fuel Production. *In the annual report for Biomaterials and Wood Utilization Research Center*. Available at: <http://bioenergy.wvu.edu/r/download/167222>. Accessed on September 03, 2015. Pages 33-39.
8. Kumar, S., **K. Singh**, J. Zondlo, J. Wang, and J. Brar. 2011. Co-liquefaction of Appalachian hardwood and coal for liquid fuel synthesis. ASABE Paper No. 1111097. St. Joseph, Mich.: ASABE.
9. **Singh, K.**, J. Zondlo, J. Wang, L. Sivanandan, J. S. Brar, and S. Kumar. 2011. Influence of environmental decomposition of logging residues on fuel properties. ASABE Paper No. 1110572. St. Joseph, Mich.: ASABE.
10. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2007. Adding value to the poultry litter using fractionation, pyrolysis, and pelleting. ASABE Paper No. 74064. St. Joseph, Mich.: ASABE.
11. **Singh, K.**, M. Risse, J. Worley, K. C. Das, and S. Thompson. 2007. Energy and bio-oil production from poultry litter using fractionation and pyrolysis: A Quality Assurance Project Plan. ASABE Paper No. 78021. St. Joseph, Mich.: ASABE.
12. Litha, S., Varghese, S., **K. Singh**, and George, S. 2001. Practices & quality Standards for safe food: A millennium perspective. Proceedings of National Conference on Strategies for Safe Food Production, 22nd November 2001, Thrissur, Kerala, India.

C2.6. Presentations

1. **Singh, K. E.** Ciftyurek E. Sabolsky, D. Bhattacharyya, and L. Sivanandan. 2016. Highly Activated Microporous Carbons (HAMC) from Fruit Dehydration Wastes- Characterization for Adsorption and Electrochemical Applications Presented at S1041 MultiState Project Meeting, Albany, California, August 08-09, 2016.
2. **Singh, K. E.** Sabolsky, D. Bhattacharyya, and L. Sivanandan. 2016. Highly Activated Microporous Carbons (HAMC) from Fruit Dehydration Wastes- Characterization for Adsorption and Electrochemical Applications. Presented at American Association of Agricultural and Biological Engineers' annual international meeting (ASABE). July 17th to 21nd. Orlando, FL.
3. Rahimi. S., **K. Singh**. 2016. Drying Behavior of Hydrothermally Pretreated Yellow-poplar Heartwood. Presented at Northeast Agricultural and Biological Engineering Conference (NABEC). July 31th to Aug 3rd. Orono, ME.
4. Rahimi. S., **K. Singh**. 2016. Drying Characteristics of Hardwood Components. Presented at American Association of Agricultural and Biological Engineers' annual international meeting (ASABE). July 17th to 21nd. Orlando, FL.
5. Rahimi. S., **K. Singh**. 2016. Drying Characteristics of Hardwood Components. Presented at Forest Product Society's International Convention (FPS). July 27th to 29th. Portland, OR.
6. Rahimi. S., **K. Singh**. 2016. Drying characteristics of Red Oak and Yellow-poplar. Presented at Annual Davis Student Research and Creative Scholarship Day. April 15th. Morgantown, WV.
7. Akharume, F., **K. Singh**, W. McGee and L. Sivanandan. 2016. Influence of Osmotic Solution Type on Osmotic De-hydration and Drying Characteristic of Fresh and Frozen Blueberries. Presented at American Society of Agricultural and Biological Engineers' annual international meeting, July 17- 21, 2016. Orlando FL.
8. Akharume, F., **K. Singh**, W. and L. Sivanandan. 2016. Desorption Isotherm of Frozen and Osmotic-dehydrated Blueberries. Presented at American Society of Agricultural and Biological Engineers' annual international meeting, July 17- 21, 2016. Orlando FL.
9. Akharume, F., **K. Singh**, W. and L. Sivanandan. 2016. Drying Characteristic of Wood and Wood Polymers Using TGA 701 (Proximate Analyzer). Presented at American Society of Agricultural and Biological Engineers' annual international meeting, July 17- 21, 2016. Orlando FL.
10. Akharume, F., **K. Singh**, W. and L. Sivanandan. 2016. Characteristic of Apple juice and Sugar-infused Fresh and Frozen Blueberries. Presented at Northeast Agricultural and Biological Engineering conference (NABEC), July 31- August 3, 2016. Orono ME.
11. Akharume, F., **K. Singh**, W. and L. Sivanandan. 2016. Drying Characteristic of Wood and Wood Polymers Using TGA 701 (Proximate Analyzer). Presented at Northeast Agricultural and Biological Engineering conference (NABEC), July 31- August 3, 2016. Orono ME.
12. Oginni, O. and **K. Singh**. 2016. Activated Carbons from Herbaceous Bioenergy Crops for Adsorption of Pharmaceutically Active Compounds. Presented at American Society of

- Agricultural and Biological Engineers' Annual International Meeting. July 17 – 20, 2016, Orlando FL.
13. Oginni, O. and **K. Singh**. 2016. Assessment of Soil Amendment and Carbon Sequestration Potential of Miscanthus and Switchgrass Biochars. Presented at American Society of Agricultural and Biological Engineers' Annual International Meeting. July 17 – 20, 2016, Orlando FL.
 14. Oginni, O. and **K. Singh**. 2016. Assessment of Soil Amendment and Carbon Sequestration Potential of Miscanthus and Switchgrass Biochars. Presented at Forest Products Society International Convention. June 27 – 29, 2016, Portland, OR.
 15. Oginni, O. and **K. Singh**. 2016. Activated Carbons from Herbaceous Bioenergy Crops for Adsorption of Pharmaceutically Active Compounds. Presented at Forest Products Society International Convention. June 27 – 29, 2016, Portland, OR.
 16. Oginni, O. and **K. Singh**. 2016. Activated Carbons from Herbaceous Bioenergy Crops for Adsorption of Pharmaceutically Active Compounds. Submitted to Forest Products Society 70th International Convention, Portland, Oregon, June 27 to 29, 2016.
 17. Oginni, O. and **K. Singh**. 2016. Activated Carbons from Herbaceous Bioenergy Crops for Adsorption of Pharmaceutically Active Compounds. ASABE Paper No. 2433897. Submitted to ASABE Annual International Meeting, Orlando, FL, July 17 to 20, 2016.
 18. **Singh, K.** and L. Sivanandan. 2016. Activated Hydrochars from Fruit Dehydration Wastes- Adsorption and Electrochemical Applications. ASABE Paper No. 2433998. Submitted to ASABE Annual International Meeting, Orlando, FL, July 17 to 20, 2016.
 19. Akharume, F. **K. Singh**, and L. Sivanandan. 2016. Influence of Osmotic Solution Type on Osmotic Dehydration and Drying Characteristics of Fresh and Frozen Blueberries. ASABE Paper No. 2434012. Submitted to ASABE Annual International Meeting, Orlando, FL, July 17 to 20, 2016.
 20. Rahimi, S. and **K. Singh**. 2016. Physical Characteristics and Drying Behavior of Red Oak and Yellow-poplar Components. Submitted to Forest Products Society 70th International Convention, Portland, Oregon, June 27 to 29, 2016.
 21. Rahimi, S. and **K. Singh**. 2016. Physical Characteristics and Drying Behavior of Red Oak and Yellow-poplar Components. ASABE Paper No. 2432857. Submitted to ASABE Annual International Meeting, Orlando, FL, July 17 to 20, 2016.
 22. **Singh, K.** 2015. Thermochemical Conversion of Biomass and Organic Wastes for Bioproducts, Biofuels, Bioenergy, and Biopower Production. 2015 TransTech Energy Business Development Conference, Morgantown, WV, November 05, 2015.

23. Oginni, O., and **K. Singh**. 2015. Pyrolysis of Lignocellulosic Biomass from Appalachian Region. 69th Forest Products Society International Convention, Atlanta, Georgia. June 10-12, 2015.
24. Oginni, O., and **K. Singh**. 2015. Biomass Pyrolysis for Bio-oil and Activated Carbon Production. Poster Presentation at 69th FPS International Convention, Atlanta, Georgia. June 10-12, 2015.
25. Oginni, O. and **K. Singh**. 2015. Pyrolysis of Bioenergy Crops (Switchgrass and Miscanthus) Grown on Reclaimed Mining Land in West Virginia, Presentation number 152164303, ASABE Annual International Meeting, New Orleans, LA July 25-29, 2015.
26. Rahimi, S. and **K. Singh**. 2015. Drying Characteristics of Wood and Herbaceous biomass. Presentation number 152189544, ASABE Annual International Meeting, New Orleans, LA July 25-29, 2015.
27. **Singh, K.** and L. Sivanandan. 2015. Making Food Business Green- Transforming Waste into Biofuels Bioenergy. Fruit Drying Workshop at Marshall County Activities Authority Service Barn, Moundsville, WV May 27, 2015.
28. Akharume, F., **K. Singh**, L. Sivanandan. 2015. Drying Characteristics of Wood and Wood Polymers using TGA 701 (Proximate Analyzer). S-1041 Multistate Project Meeting, Wooster, OH August 10, 2015.
29. Oginni, O. and **K. Singh**. 2015. Activated Carbons from Herbaceous Bioenergy Crops. S-1041 Multistate Project Meeting, Wooster, OH August 10, 2015.
30. **Singh, K.** and L. A. Poggi. 2015. Comparing Fluid Cracking Catalyst and Switchgrass Biochar derived Catalysts for Thermal Decomposition of Acetic Acid. S-1041 Multistate Project Meeting, Wooster, OH August 10, 2015.
31. **Singh, K.** and L. Sivanandan. 2015. Hydrothermal carbonization of Spent Osmotic Solution (SOS) generated from osmotic dehydration of blueberries. S-1041 Multistate Project Meeting, Wooster, OH August 10, 2015.
32. Jin, W., **K. Singh**, and J. Zondlo. 2015. Co-processing of Pyrolysis Vapors with Biochars for *exsitu* Upgrading. S-1041 Multistate Project Meeting, Wooster, OH August 10, 2015.

33. **Singh, K.** and L. Sivanandan. 2014. Hydrothermal treatment of spent osmotic solutions generated from osmotic dehydration of blueberries. Institute of Food Technologist Annual Meeting and Food Expo, New Orleans, LA, June 21-24, 2014.
34. **Singh, K.** and L. Sivanandan. 2014. Hydrothermal carbonization of Spent Osmotic Solution (SOS) generated from osmotic dehydration of blueberries. ASABE paper Number 142037750, ASABE Annual International Meeting, Montreal Canada, July 13-16, 2014.
35. **Singh, K.** and L. A. Poggi. 2014. Comparing catalytic activity of FCC and three switchgrass bio-char derived catalysts using acetic acid as model compound. ASABE paper Number 142037757, ASABE Annual International Meeting, Montreal Canada, July 13-16, 2014.
36. **Singh, K.** and L. Sivanandan. 2014. Hydrothermal carbonization of Spent Osmotic Solution (SOS) generated from osmotic dehydration of blueberries. tcs2014: Symposium on Thermal and Catalytic Sciences for Biofuels and Biobased Products, Denver, CO Sept. 2-5, 2014.
37. **Singh, K.** and L. A. Poggi. 2014. Comparing catalytic activity of FCC and three switchgrass bio-char derived catalysts using acetic acid as model compound. tcs2014: Symposium on Thermal and Catalytic Sciences for Biofuels and Biobased Products, Denver, CO Sept. 2-5, 2014.
38. **Singh, K.** and L. Sivanandan. 2014. Hydrothermal carbonization of Spent Osmotic Solution (SOS) generated from osmotic dehydration of blueberries. Smith-Lever Symposium, Morgantown, WV Sept. 24, 2014.
39. **Singh, K.** and L. Sivanandan. 2014. Making food business green- From waste to worth. Food Drying Workshop at Kearnevsville, WV, June 27, 2014.
40. Sivanandan, L., A. Smith, **K. Singh**, and W. McGee. 2014. Fruits value-addition and drying to increase food safety, process efficiency and yield, National Value Added/NERCRD What Works III, May 13-14, 2014
41. Sivanandan, L., A. Smith, **K. Singh**, W. McGee, B. Kenney, J. Jaczynski, J. Matlick, and B. Porter. 2014. Adding value to increase food safety, yield, efficiency and sustainability for West Virginia fruit operations. 2014 Women in Agriculture Educators National Conference, April 3-4, Indianapolis, IN.
42. **Singh, K.**, and J. Zondlo. 2013. Attenuated total reflectance infrared spectroscopy (ATR-IR) to detect mild hydrothermal decay of woody biomass. American Society of Agricultural and Biological Engineers' 2013 Annual International Meeting, Kansas City, MO, July 22-July 25, 2013.

43. **Singh, K.**, D. Dadyburjor, and E. Kugler. 2013. Pros and cons of pyrolysis vapor refining and *in situ* & *ex situ* catalytic pyrolysis. American Society of Agricultural and Biological Engineers' 2013 Annual International Meeting, Kansas City, MO, July 22-July 25, 2013.
44. Jin, W., **K. Singh**, and J. W. Zondlo. 2013. Pyrolysis Kinetics of Physical Components of Wood and Wood-Polymers using Isoconversion Method. American Society of Agricultural and Biological Engineers' 2013 Annual International Meeting, Kansas City, MO, July 22-July 25, 2013.
45. **Singh, K.** 2013. Introduction to the Bioenergy day. American Society of Agricultural and Biological Engineers' 2013 Annual International Meeting, Kansas City, MO, July 22-July 25, 2013
46. Jin, W., and **K. Singh**. 2013. Ex-situ catalytic upgrading of pyrolysis vapors using bio-chars as catalyst. WVU-LIINC Showcase for Life Sciences and Natural Resources-Graduate Student Research, Morgantown, WV, November 12, 2013.
47. **Singh, K.** and L. Sivanandan. 2013. WV-Experiment Station report on Science and Engineering of Bioenergy. Multi-State S-1041 project meeting, Maui, HI, June 16-19, 2013.
48. **Singh, K.** and L. Sivanandan. 2013. Making Food Business Green- Transforming Waste into Biofuels Bioenergy. Food Drying Workshop at Kearneville, WV, May 30, 2013.
49. **Singh, K.** 2013. Thermo-chemical Conversion Technologies. NEWBio Education Teacher Training Workshop, Morgantown, WV, July 08, 2013.
50. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2013. Effect of fractionation and pyrolysis on fuel properties of poultry litter. From Waste to Worth: "Spreading" Science and Solutions. 2013 National Conference from the Livestock and Poultry Environmental Learning Center, Denver, CO April 1-5, 2013
51. Kumar, S., **K. Singh**, J. Zondlo, J. S. Brar, and W. Jin. 2012. Co-liquefaction of coal and torrefied woody biomass. National SunGrant Conference 2012, New Orleans, LA, October 02-05, 2012.
52. Brar, J. S., **K. Singh**, J. Zondlo, W. Jin, and S. Kumar. 2012. Co-gasification of coal and Appalachian hardwood: Syngas composition, carbon efficiency and energy efficiency. Coal-Biomass Conference, September 19, 2012, Morgantown, WV (Poster Presentation).
53. Jin, W., **K. Singh**, J. W. Zondlo, J. Wang, J.S. Brar, S. Kumar. 2012. Pyrolysis and torrefaction behavior of hardwood components. Coal-Biomass Conference, September 19, 2012, Morgantown, WV (Poster Presentation).

54. Kumar, S., **K. Singh**, J. Zondloo, J. S. Brar, and W. Jin. 2012. Co-liquefaction of coal and torrefied woody biomass. Coal-Biomass Conference, September 19, 2012, Morgantown, WV (Poster Presentation).
55. **Singh, K.** 2012. Coal-biomass Liquefaction and gasification. WVU-LIINC Symposium on Energy and Environmental Research Showcase, Morgantown, WV, September 6, 2012.
56. **Singh, K.** 2012. Co-processing of biomass and coal to produce hybrid fuels. American Society of Agricultural and Biological Engineers' 2012 Annual International Meeting, Dallas, TX, July 28-August 1, 2012.
57. Brar, J. S., **K. Singh**, J. Zondlo, W. Jin, and S. Kumar. 2012. Co-gasification of coal and Appalachian hardwood: Syngas composition, carbon efficiency and energy efficiency. American Society of Agricultural and Biological Engineers' 2012 Annual International Meeting, Dallas, TX, July 28-August 1, 2012.
58. Jin, W., **K. Singh**, J. W. Zondlo, J. Wang, J.S. Brar, S. Kumar. 2012. Pyrolysis and torrefaction behavior of hardwood components. American Society of Agricultural and Biological Engineers' 2012 Annual International Meeting, Dallas, TX, July 28-August 1, 2012.
59. Jin, W., **K. Singh**, J. W. Zondlo, J. Wang, J.S. Brar, S. Kumar. 2012. Woody Biomass Torrefaction: A Review. American Society of Agricultural and Biological Engineers' 2012 Annual International Meeting, Dallas, TX, July 28-August 1, 2012.
60. Sivanandan, L., J. Jaczynski, **K. Singh**, W. Burnett, G. Lies, and H. N. Mishra. 2012. Global Food Security and Sustainability through Agricultural Education and Training. American Society of Agricultural and Biological Engineers' 2012 Annual International Meeting, Dallas, TX, July 28-August 1, 2012.
61. Kumar, S., **K. Singh**, J. Zondlo, J. S. Brar, and W. Jin. 2012. Co-liquefaction of coal and torrefied woody biomass. American Society of Agricultural and Biological Engineers' 2012 Annual International Meeting, Dallas, TX, July 28-August 1, 2012.
62. Brar, J. S., **K. Singh**, J. Zondlo, W. Jin, and S. Kumar. 2012. Co-gasification of coal and Appalachian hardwood: Syngas composition, carbon efficiency and energy efficiency. ASABE Paper No. 121337402. St. Joseph, Mich.: ASABE.
63. Jin, W., **K. Singh**, J. W. Zondlo, J. Wang, J.S. Brar, S. Kumar. 2012. Pyrolysis and torrefaction behavior of hardwood components. ASABE Paper No. 121338353. St. Joseph, Mich.: ASABE.

64. Kumar, S., **K. Singh**, J. Zondlo, J. S. Brar, and W. Jin. 2012. Co-liquefaction of coal and torrefied woody biomass. ASABE Paper No. 121338188. St. Joseph, Mich.: ASABE.
65. Sivanandan, L., J. Jaczynski, **K. Singh**, W. Burnett, G. Lies, and H. N. Mishra. 2012. Global Food Security and Sustainability through Agricultural Education and Training. ASABE Paper No. 121337685. St. Joseph, Mich.: ASABE.
66. Brar, J. S., **K. Singh**, J. Zondlo, J. Wang, and S. Kumar. 2011. Co-gasification of Appalachian hardwood residues and coal: Feedstock properties. ASABE Paper No. 1110685. St. Joseph, Mich.: ASABE.
67. **Singh, K.**, J. Zondlo, and J. Wang. 2011. Co-processing of coal and biomass to produce hybrid fuel with low carbon emissions. Northeast Biomass Expo and Trade Show, Pittsburgh, PA, October 11-13, 2011.
68. Holliday, J. and **K. Singh**. 2011. Fuel properties of co-processed woody biomass with bituminous coal. Summer Undergraduate Research Symposium 2011, Morgantown, WV, July 28, 2011.
69. Brar, J. S., **K. Singh**, J. Zondlo, J. Wang, and S. Kumar. 2011. Co-gasification of coal and biomass- A review. American Society of Agricultural and Biological Engineers' Annual International Meeting, Louisville, Kentucky, August 7-10, 2011.
70. Kumar, S., **K. Singh**, J. Zondlo, J. Wang, and J. Brar. 2011. Co-liquefaction of Appalachian hardwood and coal for liquid fuel synthesis. ASABE Paper No. 1111097. St. Joseph, Mich.: ASABE.
71. **Singh, K.**, J. Zondlo, J. Wang, L. Sivanandan, J. S. Brar, and S. Kumar. 2011. Influence of environmental decomposition of logging residues on fuel properties. ASABE Paper No. 1110572. St. Joseph, Mich.: ASABE.
72. **Singh, K.**, J. Zondlo, J. Wang, L. Sivanandan, J. S. Brar, and S. Kumar. 2011. Influence of environmental decomposition of logging residues on fuel properties. Forest Products Society's 65th Annual International Convention, Portland, Oregon, June 19-21, 2011.
73. **Singh, K.**, J. Zondlo, J. Wang, L. Sivanandan, J. S. Brar, and S. Kumar. 2011. Influence of environmental decomposition of logging residues on fuel properties. Northeast Agricultural and Biological Conference 2011, Burlington, Vermont, July 24-27, 2011.

74. **Singh, K.**, K.C. Das, L.M. Risse, J. Worley, and S. Thompson. 2010. Creating Value Added Products from Poultry Litter Using Fractionation and Pyrolysis. International Symposium on Air Quality and Waste Management, Denver, Colorado, September 13-16, 2010. Presented by L. Mark Risse.
75. Das, K. C., **K. Singh**, B. Bibens, R. Hilten, S. A. Baker, W. D. Greene, J. D. Peterson. 2010. Effect of forest residue harvesting methods on char and bio-oil production using pyrolysis. ASABE Paper No. 1008846. St. Joseph, Mich.: ASABE.
76. Das, K. C., **K. Singh**, R. Adolphson, B. Hawkins, R. Oglesby, D. Lakly, and D. Day. 2009. Steam pyrolysis and catalytic steam reforming of biomass for hydrogen and biochar production. *Presented at Bioenergy Engineering conference 2009, Bellevue, WA, October 11-14, 2009.*
77. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2009. Studying compaction behavior of fractionated poultry litter and use of pyrolysis condensate as a binder during pelletizing. ASABE Paper No. 097456. St. Joseph, Mich.: ASABE.
78. **Singh, K.**, J. Worley, and M. Risse. 2009. Anaerobic digestion of poultry litter: A review. ASABE Paper No. 097455. St. Joseph, Mich.: ASABE.
79. Jarrett, E., K. C. Das, and **K. Singh**. 2009. Multi-phase packed-bed thermogravimetric analyzer. ASABE Paper No. 097006. St. Joseph, Mich.: ASABE.
80. **Singh, K.** 2008. Physical and thermal treatment of poultry litter. Southern Association of Agriculture Scientists Convention 2009, Atlanta, GA, February 2, 2009. **(Invited Speaker)**
81. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2007. Value added products from poultry litter using fractionation, pyrolysis, and pelleting. Poultry Litter Transport Workshop, Georgia Center, Athens, GA, August 20, 2008. **(Invited Speaker)**
82. **Singh, K.** 2008. Screening and pyrolysis of poultry litter. Graduate Student Research Award competition held at ASABE international annual meeting, Providence, RI, June 29- July 2, 2008.
83. **Singh, K.**, M. Risse, K. C. Das, J. Worley, and S. Thompson. 2008. Value added products from poultry litter using fraction and pyrolysis. Georgia Association of Water Professionals' Spring Conference and Expo, Columbus Georgia, April 22-24, 2008. **(Invited Speaker)**

84. **Singh, K.**, M. Risse, K. C. Das, J. Worley, and S. Thompson. 2008. Effect of fractionation and pyrolysis on fuel properties of poultry litter. Air and Waste Management Association's annual conference and exhibition, Portland Oregon, June 24-27, 2008.
85. **Singh, K.**, E. W. Tollner, S. Mani, L. M. Risse, K. C. Das, and J. Worley. 2008. Emergy analysis of a pyrolysis process. Fifth Biennial Emergy Research Conference, University of Florida, Gainesville, Florida, January 31 - February 2, 2008.
86. **Singh, K.**, E. W. Tollner, S. Mani, L. M. Risse, K. C. Das, and John Worley. 2008. Transforming solid wastes into high quality bioenergy products: Entropy analysis. North American Waste to Energy Conference (NAWTEC-16), May 19-21, Philadelphia, PA.
87. **Singh, K.**, M. Risse, J. Worley, K. C. Das, and S. Thompson. 2007. Poultry Litter as an Energy Source: Business, Sustainability, and Research. SWANA Georgia Chapter's Annual Business Meeting, Savannah, GA, November 29, 2007. **(Invited Speaker)**
88. **Singh, K.**, M. Risse, J. Worley, K. C. Das, and S. Thompson. 2007. Poultry Litter as an Energy Source: Business, Sustainability, Research, and Technology. 2nd Southeast Diesel Collaborative Partner's Annual Meeting, Environmental Protection Agency, Atlanta, GA, June 26-27, 2007. **(Invited Speaker)**
89. **Singh, K.** 2007. Effect of fractionation on fuel properties of poultry litter. Presented for Graduate Student Research Award competition held at ASABE international annual meeting 2007.
90. **Singh, K.**, J. Worley, and M. Risse. 2007. Sludge measurement using GPS enabled sonar equipped airboat in a lagoon. International Symposium on Air Quality and Waste Management, Denver, Colorado, September 15-19, 2007.
91. **Singh, K.**, M. Risse, J. Worley, K. C. Das, and S. Thompson. 2006. Poultry litter as an energy Source. Emerging Fuel Workshop, Environmental Protection Agency at Atlanta, GA, December 5-6, 2006. **(Invited Speaker)**
92. **Singh, K.**, J. Worley, and M. Risse. 2006. Sludge measurement using GPS enabled sonar equipped airboat in a lagoon. UGA Academy of Environment Symposium, Athens, GA, October 23-24, 2006.
93. **Singh, K.**, M. Risse, J. Worley, K. C. Das, S. Thompson. 2007. Adding value to the poultry litter using fractionation, pyrolysis, and pelleting. ASABE Paper No. 74064. St. Joseph, Mich.: ASABE.

94. **Singh, K.**, M. Risse, J. Worley, K. C. Das, and S. Thompson. 2007. Energy and bio-oil production from poultry litter using fractionation and pyrolysis: A Quality Assurance Project Plan. ASABE Paper No. 78021. St. Joseph, Mich.: ASABE.
95. Litha, S., Varghese, S., **K. Singh**, and George, S. 2001. Practices & quality Standards for safe food: A millennium perspective. Proceedings of National Conference on Strategies for Safe Food Production, 22nd November 2001, Thrissur, Kerala, India.

C3. Scholarly Activities

1. 2012-2014: Led development of ASABE Standard ASABE/ANSI S516. Terminology for Forest Operations and Equipment.
2. ISO Technical Committee-238 member (Working Committee 1-terminology, 3-Physical and Mechanical Test Methods, 5-Chemical Test methods): ISO Standard Project X564. Determining Properties of Combustible Solid Fuels of Plant Origin (Biomass). International Solid Fuel Standard.
3. 2010, 2011, and 2012: Reviewed research articles submitted to the Boyd-Scott Graduate Student Research Award written competition (PhD Category)
4. Provided technical input to the development of ASABE Standard ASABE S593.1. Terminology and Definitions for Biomass Production, Harvesting and Collection, Storage, Processing, Conversion and Utilization.
5. Proposal Reviewer for U. S. Department of Agriculture- Higher Education Challenge Grant Program, National Science Foundation, U.S. Department of Agriculture- AFRI Foundational Programs, Virginia Commonwealth R&D Commercialization program, and FCT - Fundação para a Ciência e a Tecnologia (Lisboa, Portugal)
6. Peer-Reviewed more than 57 journal articles for a number of journals
7. Reviewed abstracts and papers for the Information Systems Division, American Society of Engineering Education

SECTION D. SERVICE ACTIVITIES

D1. Service to West Virginia University

D1.1. Service to School of Natural Resources

- 2015- Student recruitment activities during college open house
- 2014-
 - Wood Science and Technology, Wood Science display at the Science library on the Davis College open house on November 08, 2014
 - Wood Science and Technology, Freshman Orientation and Advising on June 13, 2014
 - Student recruitment activities
- 2013- Student recruitment activities
- 2012-

- Wood Science and Technology, Prepared recruitment flyer for engineering freshman students
- Student recruitment activities
- 2011- Continuing: Serving on the Forest Planning Committee of the School of Natural Resources, West Virginia University

D1.2. Service to Davis College of Agriculture, Natural Resources, and Design

- 2015- Continuing: Serving on the Diversity Committee of the Davis College of Agriculture, Natural Resources, and Design, West Virginia University
- 2013-2015: Served on the Students Grants and Aid Committee of the Davis College of Agriculture, Natural Resources, and Design, West Virginia University (2013- 2015)
- 2012-
 - WVU Farm Day, Participated in WVU Farm day on October 5, 2012
 - WVU- Agriculture Summer Institute, Co-lectured on heat and mass transfer in Popcorn Science on June 14, 2012
- 2011-
 - Judged PhD oral presentations during 15th annual Davis College Graduate Research Day Conference on April 6, 2011
 - Contributed to a section on “Greener World” on page 09 for Davis College Recruitment book
 - Contributed to a article on “Researchers hope a coal-wood combo.....” on page 5 for the Davis magazine

D1.3. Service to West Virginia University

- 2015- Continuing: Serving on the Faculty Senate General Education Curriculum Oversight Committee for the 2015-16 year
- 2015- Continuing: Serving on the West Virginia University Faculty Senate Curriculum committee
- 2015-
 - MLA-Leadership Development Institute: Finding you leadership style, Jan 28, 2015, Identify your leadership style and identify activities (departmental and college) for leadership roles.
 - MLA- Leadership Development Institute: Effective Leadership Modes, Feb 11, 2015, Identify you leadership functioning mode and find out how effectively you can contribute to various leadership roles.
 - MLA- Leadership Development Institute: Note-Taking Skills, Feb 25, 2015, Strategies for taking effective notes during meeting
 - MLA- Leadership Development Institute: Communication Skills, Mar 04, 2015, Effective communication for efficient workplace management

- MLA– Leadership Development Institute: Observation Skills, Mar 25, 2015, Strategies to carefully observing visual, written, and verbal communication without judgement and bias
- MLA– Leadership Development Institute: Developing Partnerships and Networking, April 15, 2015, Strategies to develop effective and productive network
- 2014-
 - WVU Faculty and Staff Talent Show, won second place at the 2014 Faculty and Staff Talent Show on February 08, 2014
 - WVU Harassment & Hostile Workplace Training 2014, Jan 10. 2014, WVU Harassment and Hostile Work Environment Prevention Training
 - Title IX- EDU Eliminate Sexual Violence (WV) Oct 1, 2014 WVU Title IX training
- 2012- WVU- Faculty Talent Show, Performed in WVU Faculty/Staff Talent show and WON Third Place Award
- 2011-
 - Gasifier Demonstration Demonstrated electricity production using Gasifier during Family Day at WVU-Farm for celebrating 150th anniversary of the land grant mission on October 15, 2011
 - Meeting with Polish Delegation Represented WVU- Davis College of Agriculture, Natural Resources, and Design to the Polish Delegation on 09/14/2011

D2. Service to Professional Society

- 2015- Organizing team member for 2015 Bioenergy Day held on July 25, 2015 in New Orleans, LA
- 2014 and 2015- Hosted Boyd-Scott Graduate Student Research Award competition
- 2013-
 - Proposed, Organized, and chaired Bioenergy Day events
 - Recruited 17 federal agency, university, and industry partners to promote the Bioenergy Day
 - Secured \$5,000 sponsorship from AGCO Corporation
 - Co-ordinated with other ASABE divisions for Energy related activities
 - Led organization ASABE Bioenergy Day on July 24, 2013 at Kansas City, MO
- American Society of Agriculture and Biological Engineers' committee-
 - 2011-2013 Chair: T-12 Forest Engineering,
 - 2013-2015 Chair: M-165 Global Learning Award Committee,
 - 2012-2014 Chair: ES 100 (former T-11) Energy Systems Community,
 - 2013-2015 Chair: P-122 Graduate Student Research Award, and
 - Member: ES-220 Biomass Energy & Industrial Products
- 2010, 2011, 2012- Judged Boyd-Scott Graduate Student Research Award written research articles and oral presentation competition (PhD Category) at ASABE annual international meeting 2010, 2011, and 2012

- 2012-
 - Society of American Foresters, contributed to the letter written to Massachusetts Department of Energy Resources for woody biomass utilization
 - Biomass Power Association, Contributed to the letter written to Massachusetts Department of Energy Resources for woody biomass utilization
 - Organized three sessions: 1. Co-processing of Biomass with Coal or Other Waste Material (tires,MSW, plastics, industrial/agricultural waste), 2. Energy Policy, Greenhouse Gas Emissions (GHG), Carbon Value Estimation, Carbon Credits, and Carbon Trading, and 3. Leaders in Thermo-Chemical Conversion Industry (Gasification to Fuel/Electricity and Combined Heat and Power (CHP)) at ASABE annual international meeting 2012, July 29-August 1, 2012.
 - Judged 15 research articles for written part and 3 presentations for oral part of the ASABE's- Boyd-Scott Graduate Student Research Award
- 2011-
 - Judged 14 research articles and three oral presentations for Byod Scott Graduate Research Award Competition 2011
 - Organized three sessions 1. Coal-biomass clean energy, 2. Carbon trading and sequestration, and 3. Preparing students for faculty and industry jobs at ASABE annual international meeting 2011, August 7-11, 2011.
- 2009-
 - Session chair for two technical sessions for American Society of Agricultural and Biological Engineers (ASABE) annual international meeting 2009, Reno (NV), June 21-24, 2009
 - Workshop organizer and chair during ASABE's Bioenergy Engineering 2009, Bellevue, Washington, October 11-14, 2009 (Workshop title: Bioenergy Engineering Extension and Workforce Development)

D3. Service to Community

- 2014-
 - Cheat Lake Sailors 4H Club, volunteered during the "Breakfast with Santa" fundraiser event held on December 13, 2014 at Morgantown airport.
 - Suncrest Middle School, volunteered for Haunted house Event on October , 2014
 - Mountaineer Club Aquatics, volunteered as 'Timer-Runner' during the Fall Classic Meet on November 08, 2014
- 2013-
 - Girl Scouts, volunteered for Troop 54520 Volunteer Registration ID# 000020785226
 - Cheat Lake Sailors 4H Club, volunteer during the "Breakfast with Santa" fundraiser event held on December 07, 2013 at Morgantown airport.
 - Suncrest Middle School, volunteered for Pumpkin Drop Event
- 2012-

- Indian Community of Greater Morgantown, Prepared flyer for Diwali celebration and Performed (Three dances and Co-hosted show for vote of thanks) during TARANG EVENT on November 03, 2012
- Girl Scouts, Volunteered for Troop 54520 Volunteer Registration ID# 000020785226 – Attended Community service training at St. Mary's Church- Peace Hall Fairmont on Nov. 08, 2012 (6-8 pm)
- Suncrest Sealz Robotics (Suncrest Middle School), Taught robotics team about basics of programming (Fall 2012)
- North Elementary School- Art Beyond Borders, Arranged Bollywood dancing show on April 25, 2012 (6-7:30 pm)
- Dominion Post Newspaper, Submitted an article on "Celebrate Diwali with the Indian Community" published on October 31, 2012
- West Virginia Aquatics, Volunteered as timer for swim meet on June 12, July 3, and July 5, 2012 from 4:30 to 7:00 PM
- 2011-
 - WVU Diversity and Indian Community of Greater Morgantown area, Performed during Indian Fashion Show
 - West Virginia Aquatics, Volunteered as Head Timer during West Virginia Swimming Championship, March 11 and 12, 2011 at Marshall University, Huntington, WV
 - West Virginia Aquatics, Volunteered as Timer during West Virginia Swimming Championship, November 19 and 20, 2011 at WVU, WV
 - Cheat Lake Sailors 4H Club, Made a video for the Breakfast with Santa event on Dec 10, 2011
 - Girl Scout, Volunteered as Grasshopper group assistant from 9:00 AM to 3:30 PM during July 15-17, 2011 at Roy Miller camp.
- 2010-
 - Cheat Lake 4-H Sailors, West Virginia University Extension- Volunteered during a fundraiser event "Breakfast With Santa" and prepared the event video.
 - West Virginia Aquatics- Volunteered during home swim meets as a timer

D4. Other Services

- 2009-
 - Judged Georgia Science and Humanities Symposium 2009
 - Judged Georgia Junior Science Fair 2009
- 2006-2007- Student Member (2006-2007), Advisory Committee, Department of Biological and Agricultural Engineering, UGA
- 2006-2008- Selected as a Board Member, Student Alumni Council, UGA Alumni Association
- January 2007- December 2007: Advisory Member, Graduate Club, Department of Biological and Agricultural Engineering, UGA
- 2005-2006- Elected Secretary Graduate Club, Department of Biological and Agricultural Engineering, UGA

- 2005- Served as World Leader for International Students Life, University of Georgia