

CURRICULUM VITAE

SUDHAGAR MANI

Contact information:

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Education:

- Ph. D. - Chemical Engineering, University of British Columbia, Canada – 2005
- M. Tech. - Dairy and Food Engineering, Indian Institute of Technology, India – 2000
- B. E. - Agricultural Engineering, Tamil Nadu Agricultural University, India – 1998

Appointments:

- Assistant Professor, University of Georgia, 2007- present
- Postdoctoral Research Fellow, University of British Columbia, Canada, 2005-2006
- Lecturer, University of British Columbia, Canada, 2006

Selected publications:

1. **Mani, S., S. Sokhansanj, X. Bi and A. Turhollow.** 2006. Economics of producing fuel pellets from biomass. *Applied Engineering in Agriculture*, 22(3):1-6.
2. **Mani, S., L. G. Tabil and S. Sokhansanj.** 2006. Effects of compressive force, particle size and moisture content on mechanical properties of biomass pellets. *Biomass and Bioenergy*, 30(7): 648-654.
3. **Mani, S., L. G. Tabil and S. Sokhansanj.** 2006. Specific energy requirement for compacting corn stover. *Bioresource Technology*, 97(12):1420-1426
4. Sokhansanj, S., **S. Mani**, S. Stumborg, R. Samson and J. Fenton. 2006. Production and distribution of cereal straw on the Canadian prairies. *Canadian Biosystems Engineering*, 48: 3.39-3.46.
5. Sokhansanj, S and **S. Mani**. 2006. Modeling of biomass supply logistics. In: *Science in Thermal and Chemical Biomass Conversion*, A. V. Bridgewater and D. G. B. Bobcock (Eds.), Vol. 1, pp. 387-403, Newbury Perks, UK: CPL Press.
6. **Mani, S., L. G. Tabil and S. Sokhansanj.** 2003. An overview of compaction of biomass grinds. *Powder Handling and Processing* 15(2): 160-168.
7. **Mani, S., L. G. Tabil and S. Sokhansanj.** 2004. Mechanical properties of corn stover grind. *Transactions of the ASAE* 47(6): 1983-1990.
8. **Mani, S., L. G. Tabil and S. Sokhansanj.** 2004. Evaluation of compaction equations applied to four biomass species. *Canadian Biosystems Engineering* 46: 3.55-3.61
9. **Mani, S., L. G. Tabil and S. Sokhansanj.** 2004. Grinding performance and physical properties of wheat and barley straws, corn stover and switchgrass. *Biomass and Bioenergy* 27(4): 339-352.

10. Samson, R., **S. Mani**, R. Boddey, S. Sokhansanj, D. Quesada, S. Urquiaga, V. Reis, C.H. Lem and C. Carpio. 2005. The potential of C4 perennial grasses for developing a global bio-heat industry. *Critical Reviews in Plant Science*, 24(5-6):461-495.

Selected presentations:

1. **Mani, S.**, K.C. Das. 2007. Life Cycle Analysis of charcoal production from biomass. AIChE Annual Conference, Salt Lake City, UT, USA.
2. **Mani, S.**, K.C. Das, T. Adams. 2007. Pelleting characteristics of forest slash and understory materials. ASABE regional conference, Fletcher, NC, USA
3. **Mani, S.**, S. Sokhansanj, A. Turhollow. 2007. Environmental impact assessment of IBSAL model. 29th Symposium on Biofuels and Biotechnology, Denver, CO, USA
4. **Mani, S.**, S. Sokhansanj, S. Melin. 2007. An overview of biomass torrefaction process. ASABE paper presentation, 2007 ASABE/CSBE International Conference, Minneapolis, MN, USA
5. **Mani, S.**, J. Patterson, S. Sokhansanj. 2007. Moisture sorption isotherms for wood pellets. ASABE paper presentation, 2007 ASABE/CSBE International Conference, Minneapolis, MN, USA.
6. **S. Mani**, S. Sokhansanj and J. Fenton. 2006. Cost-benefit analysis of biomass supply and shift to new energy crops. Bioenergy Research Integration Forum, Biocap Canada Foundation, Ottawa, Canada (Invited).
7. **Mani, S.**, S. Sokhansanj, X. Bi and P. Zaini. 2006. Simulation of biomass densification system. Bioenergy Conference 2006, Prince George, BC, Canada (Invited).
8. **Mani, S.**, S. Sokhansanj and X. Bi. 2005. Application of multi-criteria ranking method for biomass pelleting plant. CSAE Paper No. 05-082. Winnipeg, MB: CSAE/SCGR.
9. **Mani, S.**, X. Bi and S. Sokhansanj. 2005. Environmental systems assessment of biomass densification process. CSAE Paper No. 05-081. Winnipeg, MB: CSAE/SCGR.

Selected honors, awards, recognitions:

- Lowry H. Gillespie, Jr., Engineering Curriculum Enhancement Award winner- 2007
- Best poster prize, University of British Columbia – 2006
- Travel Award, University of British Columbia – 2004
- Ph.D. Tuition Award, University of British Columbia – 2003-2005
- Best paper presentation award, Canadian Society of Bioengineering – 2003

Area of interest:

My research interests are in the area of biomass feedstock harvesting, collection, and transportation for a large scale biorefinery, preprocessing of biomass including pelletting, granulation, biomass drying, size reduction, thermo-chemical pretreatment and conversion of biomass including steam treatment, torrefaction and gasification processes, techno-economic assessment and life cycle assessment of bioenergy systems. Through my research, I have authored or coauthored 15 referred journal articles, 1 book chapter, 3 technical reports and 45 conference papers and presentations. I teach Engineering Thermodynamics, Physical Unit Operations, Biomass Feedstock Engineering courses and developing two new senior level graduate courses on Renewable Energy Engineering and Engineering Life Cycle Analysis at the University of Georgia.