CURRICULUM VITAE
SOKHANSANJ, Shahabaddine

EDUCATION:

B.Sc., University of Tehran, Department of Agricultural Engineering, Power and Machinery (1966)
M.Sc., Michigan State University, Department of Agricultural Engineering, Bio-process Engineering (1974)
Ph.D., Michigan State University, Department of Agricultural Engineering, Bio-process Engineering (1977)

PROFESSIONAL EXPERIENCE

Distinguished Research Staff, Environmental Sciences Division, Oak Ridge National Laboratory (2001-)
Adjunct Professor, University of Tennessee (2001-)
Professor Emeritus, University of Saskatchewan (2002-)
Adjunct Professor, University of British Columbia (2002-)
Professor Agricultural & Bioresource Engineering, University of Saskatchewan 1979-2002
Post Doctoral Research Associate, Agricultural Engineering, University of Minnesota.
Registered Professional Engineer (P.Eng.) in the Province of Saskatchewan (1980-2002), Province of British Columbia (2002-)

PROFESSIONAL CONTRIBUTIONS

Logistics modeling

I have initiated and led an active research program on biomass harvesting, drying, and densification for the production of energy and bio-based products. This research has resulted in the development of a highly successful modeling environment IBSAL (Integrated Biomass Supply Analysis & Logistics). This dynamic modeling environment is constructed on spatial distribution of biomass crops (agriculture and forestry), engineering processes, operations research, and real time climate data. A supply chain that consists of a sequence of operations is constructed from an ensemble of operational modules. Each module is a mathematical simulation of a process or event representing harvest, densification, grinding, drying, storing, and transport. These modules have been continually updated with field data as they become available. The model and its application been published in peer reviewed journals and technical reports.

Standards and Engineering Practice

ASAE S269.5 (October 2012) Densified Products for Bulk Handling - Definitions and Method; ASAE D245.5 Moisture relations of plant-based agricultural products – leader, major revision; ASAE D269.4 Cubes, pellets, and crumbles – Definitions and methods for determining density, durability, and moisture content – leader, major revision; ASAE S319.3 Methods of determining and expressing fineness of feed materials by sieving – leader, revision; ASAE S448Thin Layer drying of grains and crops – leader, new standard development; ASAE S358.3 Moisture measurement – forages – participant, revision; ASAE S423.1 Thermal performance testing of solar ambient heaters – participant, new standard.; Chaired FPE03 Standards Committee of the ASAE- FPEI; Chaired T-13 ASAE International Standards Committee; Chaired Canadian Standards Council's CSC//CSA/ISO/TC23/SC7 "Harvesting and Preservation". ; Current member ASAE Standards Council ; Chair FPEI-ASABE.

PUBLICATIONS

Recent refereed journal publications (277 peer reviewed published journal papers since 1979):

Liu , Yuping; Yuping Liu, Jianghong Peng, Yasuki Kansha, Masanori Ishizuka, Atsushi Tsutsumi, Dening Jia, Xiaotao T. Bi, C.J. Lim, Shahab Sokhansanj. 2014. Novel fluidized bed dryer for biomass drying. Fuel Processing Technology 122(2014):170-175.

Webb, Erin, Shahab Sokhansanj, Anthony Turhollow. 2013. Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: FDC Enterprises. Oak Ridge national Laboratory Technical Memorandum ORNL/TM-2013/338. 13 pages.

Yazdanpanah, F, S. Sokhansanj, C.J. Lim. A.K. Lau, X.T. Bi, S. Melin. 2013. Potential for flammability of gases emitted from stored wood pellets. The Canadian Journal Chemical Engineering DOI: 10.1002/cjce.21909

Ebadian, M. Taraneh Sowlati, S. Sokhansanj, L. Townley-Smith, M. Stumborg. 2013. Development of an integrated tactical and operational planning model for optimal supply of feedstock to a commercial-scale bioethanol plant. Biofuels, Bioprod. Bioref. (2013); DOI: 10.1002/bbb

Webb, Erin, Shahab Sokhansanj, Anthony Turhollow. 2013. Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: Agco Corporation. Oak Ridge national Laboratory Technical Memorandum ORNL/TM-2013/323. 13 pages.

Peng, Jianghong, xiaotao Tony bi, Jim Lim, Shahab Sokhansanj. 2013. Torrefaction and densification of different species of softwood residues. Journal of Fuel 111(2013):411-421.

Webb, Erin, Shahab Sokhansanj, Anthony Turhollow. 2013. Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: TennEra LLC. Oak Ridge national Laboratory Technical Memorandum ORNL/TM-2013/375. 13 pages.

Mobini, M., T. Sowlati, S. Sokhansanj. 2013. A simulation model for the design and analysis of wood pellet supply chains. Applied Energy http://dx.doi.org/10.1016/j.apenergy.2013.06.026,

Naimi, Ladan, Shahab Sokhansanj, Xiaotao Bi, C. Jim Lim, Alvin R. Womac, Anthony Lau, Staffan Melin. 2013. Development of size reduction equations for calculating energy input for grinding lignocellulosic particles. Applied Engineering in Agriculture 29(1):93-100.

Kaushlendra Singh, Shahab Sokhansanj, James Dooley. 2013. Wood as an advanced feedstock for bioenergy: scale matters. *Biofuels* (2013) 4(1):13–16

Webb, Erin, Shahab Sokhansanj, Anthony Turhollow. 2013. Simulation of the DOE High-Tonnage Biomass Logistics Demonstration Projects: State University of New York College of Environmental Science and Forestry. Oak Ridge national Laboratory Technical Memorandum ORNL/TM-2013/376. 12 pages.

Kumar, Linoj , Zahra Tooyserkani, Shahab Sokhansanj, Jack Saddler. 2012. Does densification influence the steam pretreatment and enzymatic hydrolysis of softwoods to sugars? Bioresource Technology. 121(October2012):190-198. http://dx.doi.org/10.1016/j.biortech.2012.06.049.

Tumuluru, Jaya Shankar, Shahab Sokhansanj, ChristpoherT. Wright, Richard D. Boardman. 2010. Biomass Torrefaction process review and moving bed torrefaction system model development. Technical Report IN/EXT-10-19569: Idaho National Laboratory & Oak Ridge National Laboratory 43 pages.

HONORS

Elected Fellow Engineers of Canada (FEC) 2013, The ASABE President's Citation Award 2010. Maple Leaf Award, Canadian Society for Bioengineering, Fellow ASABE (American Society of Agricultural & Biological Engineers) 2009, Leadership Citation – Served as president of the Canadian Society for BioEngineering (2006-07). Fellow, Canadian Society of Agricultural Engineering (2003). Leadership Citation – ASAE Standards development & contribution (2002). Bioenergy Feedstock Development Program – Oak Ridge National Laboratory "For outstanding contributions and teamwork"(2002). Canadian Dehydrators Association & the Canadian Hay Association for contribution to forage engineering research (2000). Award of Merit, International Drying Technology Journal, original contribution to drying Science (1999). Team Award Polish Ministry of Education, for a contributing chapter in the published book: Thermal Processing of Bio material (1999). Honorary Professor, Jiangsu University of Science and Technology, Zhengjiang City, China (1994). John C. Clark Award. Canadian Society of Agricultural Engineering, research and teaching, electric power and processing (1991). Richard B. Russell Agricultural Research Center, ARS-USDA, Contribution to dielectric properties of grain. (1986)