

David D. Jones, PhD, PE

Professor

Biological Systems Engineering Department

College of Engineering

Institute of Agriculture and Natural Resources

University of Nebraska – Lincoln | 211 Chase Hall, Lincoln, NE 68583-0726

Professional Summary:

Administrative Impact. Dr. Jones served as Associate Dean for Undergraduate Programs in the College of Engineering (CoE) at the University of Nebraska-Lincoln (UNL) from 2011-2017. In 2017, he transitioned to serve as the Head of the Biological Systems Engineering Department (BSE) and continued in that role until 2023. In each of the roles he has transformed organizational culture and climate and converted vision into strategic directions.

As Associate Dean for Undergraduate Programs he and his team adopted best practices in continuous improvement of courses and curricula that resulted in successful accreditation for each of the academic programs in the college. He led the increase in the number, diversity, and quality of engineering students. He initiated research related to engineering education such as serving as Co-PI on an NSF project, ‘Statewide Effort to Diversify Undergraduate Engineering Student Population’ intending to build student support programs for underrepresented students in the UNL CoE.

Dr. Jones aided in fund-raising and established external partnerships resulting in capital building projects (<https://engineering.unl.edu/construction-central/>). He and his team developed practices and administrative processes necessary for delivering engineering curricula on multiple campuses. He led the imagination and implementation of the *Complete Engineer* (<https://engineering.unl.edu/complete-engineer/>), a framework to enhance academic, professional, and personal development of engineering students. Beyond his formal role, he partnered with the dean to reform the college as UNL transitioned into the Big10.

The Department of Biological Systems Engineering is a medium sized (40+ faculty) but complex academic department with three undergraduate majors and three graduate programs that are administered across two different colleges. Dr. Jones fostered a departmental culture of ownership, responsibility, and reward; re-established academic priorities and operational strategies; provided strategy directed financial management and fund raising; and developed internal and constituent specific communication channels. He supported faculty and students in the creation of new technologies and launching new businesses while leveraging the recently formed Nebraska Innovation Campus (NIC). His faculty increased research productivity resulting in record research expenditures (approximately \$7 million per year) for the department, and enabled acquisition of research funding from federal (e.g., NIH, NSF, DOE, USDA-NIFA), state, local, and private sources.

Scholarly Contributions. Dr. Jones has worked in the fields of modeling, process analysis, food engineering, and risk assessment for over 35 years. He has made contributions in the areas of processing alternative crops, thermochemical conversions, modeling heat and mass transfer within complex systems, and developing models for risk-based decision making. In addition, Jones developed methods to use fuzzy set theory and soft computing techniques to capture

information about complex systems. He was instrumental in developing the Biological Systems Engineering curriculum. He has worked extensively to deliver course material and perform research to advance engineering education. He has developed courses at all levels of the curriculum. His most lasting contribution has been the development of a junior level course in heat and mass transport that incorporates considerations for biological systems. Further, he has published over 100 refereed papers and book chapters and advised numerous MS and PhD students.

He is a champion of global and interdisciplinary collaboration and leads an effort to define and advance the concept of circular bioeconomy systems across multiple professional societies. The effort is in conjunction with the American Society of Agricultural and Biological Engineers (ASABE). The purpose is to discover and create innovative solutions for practical use to progressively replace fossil-fuel by regenerative biomass for a new sustainable economy that utilizes resources to reach zero waste. His role is to lead researchers, thought leaders, and industry leaders from North America and Europe to foster communication and collaboration across professional societies, regulatory and non-government organizations, and industry to better define strategies, goals, and metrics for circular bioeconomy systems.

He is leading UNL's effort to investigate the feasibility of investment in space agriculture (<https://bse.unl.edu/space2>). The project recognizes that transdisciplinary research and development are essential for progress. Scholars from UNL's College of Engineering, Institute of Agriculture and Natural Resources, School of Law, and the Johnny Carson Center for Emerging Media Arts are intentionally included. The eclectic group of scholars are engaged with experts from NASA, NSF, DOE, USDA-NIFA, and universities from across the country to better define and leverage UNL's role in space agriculture.

Professional Service, Leadership, and Recognitions. During his career, he has earned honors and awards that attest to his skill, expertise, and passion for education and engineering research. An example of his contribution is the recognition of one of his journal articles with the "10th Anniversary Best Paper Award" in the journal *Energies*. He is recognized as a Fellow of the American Society of Agricultural and Biological Engineering (ASABE) and was awarded one of their highest honors, the Massey-Ferguson Educational Gold Medal. He is active professionally and has served as President for the Institute of Biological Engineering (IBE) and in many roles for ASABE. He also served as an EAC Commissioner for ABET, represents ASABE as an Engineering Area Delegate to ABET, and participates in the American Society of Engineering Education (ASEE), and Women in Engineering ProActive Network (WEPAN).

Education:

Ph.D. - Agricultural Engineering; Oklahoma State University - 1988

M.S. - Agricultural Engineering; Texas A&M University - 1986

B.S. - Agricultural Engineering; Texas A&M University - 1984

Professional Record:

University of Nebraska – Lincoln

Biological Systems Engineering Department; Department Head (2018 – 2023)

Biological Systems Engineering Department; Interim Department Head; (2017 – 2018)
College of Engineering; Associate Dean, Undergraduate Programs (2011 – 2017)
Department of Biological Systems Engineering (1989 – Present)
Professor 2004
Associate Professor (with tenure) 1995
Assistant Professor 1989
Department of Food Science and Technology; Courtesy Appointment
Oklahoma State University. USDA National Needs Ph.D. Fellow (1986 – 1988)
Texas A&M University. Research/Teaching Assistant (1984 – 1985)

Professional Registration:

Registered Professional Engineer, Nebraska E-8454

Scientific, Professional, and Honorary Societies:

ASABE - American Society of Agricultural and Biological Engineering
ASEE - American Society for Engineering Education
IBE - Institute of Biological Engineering
ASME – American Society of Mechanical Engineers
WEPAN – Women in Engineering ProActive Network
Tau Beta Pi – Engineering Honorary
Alpha Epsilon – Agricultural Engineering Honorary
Gamma Sigma Delta – Agricultural Honorary
Sigma Xi – Scientific Honorary

Selected Honors and Awards:

Caleb Lindhorst Inspire Award; Nebraska Section of ASABE – 2022
ASABE 10th Anniversary Best Paper Award, *Energies* – 2018
College of Engineering Distinguished Professor – 2016
ASABE Fellow – 2015
Massey-Ferguson Educational Gold Medal – ASABE 2014
Big Ten Academic Alliance (BTAA) - Academic Leadership Program (ALP) Fellow - 2011-2012
Recognition Award for Contributions to Students, UNL Parents Association and the Teaching Council; 1993, 1994, 1995, 1997, 1999, 2005, 2009, 2011, & 2012
Honorary Member of the Innocents Society (UNL Chancellor's Honor Society), 2011
eSAB Outstanding Faculty Award, UNL CoE Student Advisory Board (eSAB), 2011
IBE Presidential Citation, 2008 and 2009
Holling Family Master Teacher Award, 2008
Best Paper Award, ASEE, 2007
Advisor of the Year Finalist, 2006
College Distinguished Teaching Award, 2004
Recognition as an Outstanding Advisor, CoET - Student Advisor Board, 2004
Holling Family Master Teacher Award, 2003

Holling Family Award for Excellence in Teaching, Advising and Mentoring, CoET, 2002
Outstanding Teaching Award, CASNR Week 2002
Tau Beta Pi Outstanding Teaching Award, 2001
ASAE Educational Aids Blue Ribbon Award for MWPS-29, *Dry Grain Aeration Systems Design Handbook*, 1998
ASAE Mid-Central Conference Young Member of the Year, 1997
Excellence in Team Programming – “NUFACTS”, Uni. of Nebraska Cooperative Extension, IANR, 1997
Nominated for College of Engineering & Technology Associate Professor Teaching Award, 1997
ASAE Superior Paper Award, 1996
Nominated for College of Engineering & Technology Assistant Professor Teaching Award, 1995
Engineering Achievement A.W. Farrell Young Educator Award, ASAE, 1995
Engineer of the Year, Nebraska Section ASAE, 1995
Nominated for College of Engineering & Technology Assistant Professor Teaching Award, 1994
Nominated for Gamma Sigma Delta Teaching Award, 1994
Chapter Citation Award, Black Masque Chapter of Mortar Board, for displaying excellence in the areas of scholarship, leadership and service and for demonstrating a positive influence on students, 1994
Nominated for College of Engineering and Technology Assistant Professor Research Award, 1993
Excellence in Team Programming Award, University of Nebraska, 1991
Blue Ribbon Award for Extension Publication, Explosion Venting and Suppression of Bucket Elevator Legs, ASAE, 1990
Selected as one of the top six Ph.D. students at Oklahoma State University, 1988
USDA National Needs Fellowship for Ph.D. Study, 1986

Selected Institutional and Professional Service:

American Society of Agricultural and Biological Engineers (ASABE)
ASABE Board of Trustees
ASABE Nominating Committee
ASABE Membership Council
ASABE Publications Council
Various Committee and Session Chairs for ASABE
Institute of Biological Engineering (IBE)
IBE President
IBE Secretary
Various Committee and Session Chairs for IBE
ABET
ABET Engineering Area Delegate
ABET Program Evaluator (PEV)
ABET Engineering Accreditation Commission (EAC): Commissioner
ABET Team Chair (TC)
Oklahoma State University, Biosystems and Agricultural Engineering Departmental Advisory Board

University of Nebraska – Peter Kiewit Student Entrepreneurial Business Award and the Walter Scott Entrepreneurial Business Award Selection Committee

University of Nebraska – Lincoln (UNL)

- UNL – Enrollment Management Council
- UNL – University Wide Assessment Committee
- UNL – Peer Review of Teaching Fellowship Program
- UNL – Graduate College Fellowship Selection Committee
- UNL – College of Engineering (CoE)
 - CoE – Apportionment Appeals Committee (Chair)
 - CoE – Grade Appeals Committee
 - CoE – Faculty Advisor to the CoE Student Advisory Board
 - CoE – Various and numerous other committees and special assignments
- UNL – Biological Systems Engineering (BSE)
 - BSE – Department Promotion and Tenure Committee (Chair)
 - BSE – Curriculum Committee (Chair)
 - BSE – Department Assessment Coordinator
 - BSE – Student Services Coordinator
 - BSE - Various and numerous other committees and special assignments

Selected Professional Development Activities:

Committee on Institutional Cooperation (CIC) – Academic Leadership Program (ALP)

Assessment of the Microbial Risk of Leafy Greens from Farm to Consumption, Continuing Professional Development Workshop

Annual Meeting of the Society of Risk Analysis (SRA)

Decision Analysis for Risk Analysis, Continuing Professional Development Workshop

The Science and Engineering for a Biobased Industry – Research Symposium

NSF STEP Grantees Meeting

Annual Meeting of the *International Microwave Power Institute* (IMPI)

Project Lead the Way (PLTW) Planning Meeting

Axiomatic Design Seminar, Continuing Professional Development

Modeling with no Data, Continuing Professional Development Workshop

ABET PEV Training

Peer Review of Teaching

CASNR Winter Interim Workshop: Assessing Program Assessment

Thinking Differently: Using Analytics to Create Competitive Advantage, CSC Corporation

Energy Science Research Symposium

MATLAB workshop on data representation and interpretation.

Modeling using Fuzzy Set Theory (Instructor) - ASABE Continuing Professional Development Workshop

Refereed Publications

Refereed Journal Articles

1. Tomasevicz, C.L., Woldstad, J.C., & Jones, D.D. 2021. Risk of injury analysis in depth jump and squat jump. *Journal of Human Sport and Exercise*, January 2021. ISSN 1988-5202. <https://doi.org/10.14198/jhse.2022.174.05>.
2. Chen L., Jung J., Chaves B.D., Jones D., Negahban M., Zhao Y., Subbiah J. (2021). Challenges of hazelnut shell surface for radio frequency pasteurization of inshell hazelnuts. *Food Control* 125 (2021) 107948. <https://doi.org/10.1016/j.foodcont.2021.107948>.
3. Chen, L., X. Wei, B. D. Chaves, D. Jones, M. A. Ponder, J. Subbiah. 2021. Inactivation of *Salmonella enterica* and *Enterococcus faecium* NRRL B2354 on cumin seeds using gaseous ethylene oxide. *Food Microbiology*, Volume 94, 103656. <https://doi.org/10.1016/j.fm.2020.103656>.
4. Chen, L., Subbiah, J., Jones, D., Zhao, Y., & Jung, J. 2020. Development of effective drying strategy with a combination of radio frequency (RF) and convective hot-air drying for inshell hazelnuts and enhancement of nut quality. *Innovative Food Science & Emerging Technologies*, 102555. <https://doi.org/10.1016/j.ifset.2020.102555>.
5. Tomasevicz, C.L, R. Hasenkamp, J. Ransone, and D. Jones. 2020. Optimal depth jump height quantified as percentage of athlete stature. *Journal of Human Sport and Exercise*. 2020, 15(3):682-691. <https://doi.org/10.14198/jhse.2020.153.17>.
6. Chen, J., R. Lentz, P. Pesheck, A. Guru, D. Jones, Y. Li, and J. Subbiah. 2016. Determination of thickness of microwavable multicompartments meals using dielectric, thermal, and physical properties. *Journal of Food Engineering* 189:17-28.
7. Naganathan, G.K., K. Cluff, A. Samal, C. R. Calkins, D. D. Jones, R. L. Wehling, and J. Subbiah. 2016. Identification and validation of key wavelengths for on-line beef tenderness forecasting. *Transactions of the ASABE* 59(3):769-783.
8. Brown-Brandl, T.M., and D.D. Jones. 2016. Characterizing feedlot heifer response to environmental temperature. *Transactions of the ASABE* 59(2):673-680.
9. Lau, S.K., H. Thippareddi, D. Jones, M. Negahban, and J. Subbiah. 2016. Challenges in Radiofrequency Pasteurization of Shell Eggs - Coagulation Rings. *Journal of Food Science* 81(10):E2492-E2502. <https://doi.org/10.1111/1750-3841.13440>.
10. Chen, J., K. Pitchai, S. Birla, D. Jones, M. Negahban, and J. Subbiah. 2016. Modeling heat and mass transport during microwave heating of frozen food rotating on a turntable. *Food and Bioprocess Technology* 99:116-127.
11. Pitchai, K., J. Chen, S. Birla, D. Jones, and J. Subbiah. 2016. Modeling microwave heating of frozen mashed potato in a domestic oven incorporating electromagnetic frequency spectrum. *Journal of Food Engineering* 173:124-131.
12. Naganathan, G. K., K. Cluff, A. Samal, C. R. Calkins, D. D. Jones, G. E. Meyer, and J. Subbiah. 2016. Three dimensional chemometric analyses of hyperspectral images for beef tenderness forecasting. *Journal of Food Engineering* 169:309-320.

13. Pitchai, K., J. Chen, S. Birla, D. Jones, R. Gonzalez, and J. Subbiah. 2015. Multiphysics modeling of microwave heating of a frozen heterogenous meal rotating on a turntable. Institute of Food Technologists. *Journal of Food Science* 80(12):E2803-E2814. <https://doi.org/10.1111/1750-3841.13136>.
14. Naganathan, G.K., K. Cluff, A. Samal, C.R. Calkins, D.D. Jones, C.L. Lorenzen, and J. Subbiah. 2015. Hyperspectral imaging of ribeye muscle on hanging beef carcasses for tenderness assessment. *Computers and Electronics in Agriculture* 116:55-64.
15. Chiang, J., S. Birla, M. Bedoya, D. Jones, J. Subbiah, and C. Brace. 2015. Modeling and validation of microwave ablation with internal vaporization. *IEEE Transactions on Biomedical Engineering* 62(2):657-663.
16. Chen, J., K. Pitchai, S. Birla, R. Gonzalez, D. Jones, and J. Subbiah. 2015. Development of a multi-temperature calibration method for measuring dielectric properties of foods. *IEEE Transactions on Dielectrics and Electrical Insulation* 22(1):626-634.
17. Naganathan, G.K., K. Cluff, A. Samal, C.R. Calkins, D.D. Jones, C.L. Lorenzen, and J. Subbiah. 2015. A prototype on-line AOTF hyperspectral image acquisition system for tenderness assessment of beef carcasses. *Journal of Food Engineering* 154:1-9.
18. Chen, J., K. Pitchai, D. Jones, and J. Subbiah. 2015. Effect of decoupling electromagnetics from heat transfer analysis on prediction accuracy and computation time in modeling microwave heating of frozen and fresh mashed potato. *Journal of Food Engineering* 144:45-57.
19. Chen, J., K. Pitchai, S. Birla, M. Negahban, D. Jones, and J. Subbiah. 2014. Heat and mass transport during microwave heating of mashed potato in domestic oven – model development, validation, and sensitivity analysis. *Journal of Food Science* 79(10):E1991-E2004. (Featured as cover article.)
20. Kumar, A, D. Jones, G. and Hanna. 2014. A fuzzy inference system (FIS) and dimensional analysis for predicting energy consumption and mean residence time in a twin-screw extruder. *Journal of Food Process Engineering*, 38(2):125-134.
21. Pitchai, K., J. Chen, S. Birla, R. Gonzalez, D. Jones, and J. Subbiah. 2014. A microwave heat transfer model for a rotating multi-component meal in a domestic oven: development and validation. *Journal of Food Engineering* 128:60-71.
22. Chen, J., K. Pitchai, S. Birla, R. Gonzalez, D. Jones, and J. Subbiah. 2013. Temperature-dependent dielectric and thermal properties of whey protein gel and mashed potato. *Transactions of the ASABE* 56(6):1457-1467.
23. Wu, H., M.A. Hanna, and D.D. Jones. 2013. Life cycle assessment of greenhouse gas emissions of feedlot manure management practices: Land application versus gasification. *Biomass and Bioenergy*. 54:260-266
24. Bhandari, P.N., D. D. Jones and M.A. Hanna. 2013. Characterization of sodium starch glycolate prepared using reactive extrusion and its comparison with a commercial brand VIVASTAR®P. *Industrial Crops & Products*. 41:324-330
25. Pitchai, K., S.L. Birla, D. Jones, and J. Subbiah. 2012. Assessment of heating rate and non-uniform heating in domestic microwave ovens. *Journal of Microwave Power and Electromagnetic Energy* 46(4):229-240.

26. Wu, Hanjing, M.A. Hanna, and D.D. Jones. 2012. Thermogravimetric characterization of dairy manure as pyrolysis and combustion feedstocks. *Waste Management & Research* 30(10):1066–1071.
27. Pitchai, K., S.L. Birla, J. Subbiah, D. Jones, and H. Thippareddi. 2012. Coupled electromagnetic and heat transfer model for microwave heating in domestic ovens. *Journal of Food Engineering* 112(1-2):100-111.
28. Wu, Hanjing, M.A. Hanna, and D.D. Jones. 2012. Fluidized-bed gasification of dairy manure by Box–Behnken design. *Waste Management & Research* 30(5):506–511.
29. Bhandari, P.N., D.D. Jones, and M.A. Hanna. 2012. Carboxymethylation of cellulose using reactive extrusion. *Carbohydrate Polymers* 87(3):2246-2254.
30. Brown-Brandl, T.M. and D.D. Jones. 2011. Feedlot cattle susceptibility to heat stress: an animal specific model. *Transactions of the ASABE* 54(2):583-598.
31. Kumar, A., Y. Demirel, D. D. Jones, and M. A. Hanna. 2010. Optimization and economic evaluation of industrial gas production and combined heat and power generation from gasification of corn stover and distillers grains. *Bioresource Technology* 101(2010):3696-3701.
32. Lee, S., M.A. Hanna, and D.D. Jones. 2009. Residence time distribution and modeling of mechanical properties of extruded nanocomposite foams using adaptive neuro-fuzzy inference system. *Starch* 61(6):326-333.
33. Kumar, A., Y. Demirel, H. Noureddini, D. D. Jones, and M. A. Hanna. 2009. Simulation of corn stover and distillers grains gasification with Aspen Plus. *Transactions of the ASABE* 52(6):1989-1995.
34. Lee, S., M.A. Hanna, and D.D. Jones. 2009. Residence time distribution determination using on-line digital image processing. *Starch* 61(3-4):146-153.
35. ***Kumar, A., D. Jones, and M. Hanna. 2009. Thermochemical biomass gasification: a review of Current status of technology. *Energies* 2(3):556-581.
 *** Recognized as the “10th Anniversary Best Paper” from the Journal editors in 2018.
36. Wang, L., M. A. Hanna, C. and Jones. 2009. Technical and economical analyses of combined heat and power generation from distillers grains and corn stover in ethanol plants. *Energy Conversion and Management* 50(7):1704-1713.
37. Kumar, A., K. Eskridge, D. Jones and M. A. Hanna. 2009. Steam-air fluidized bed gasification of distillers grains: effects of steam to biomass ratio, equivalence ratio and gasification temperature, *Bioresource Technology* 100(6):2062-2068.
38. Wang, L., A. Kumar, C. L. Weller, M. A. Hanna, and D. D. Jones. 2009. Thermal degradation kinetics of distillers grains in nitrogen and air. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 31(10):797-806.
39. Wang, L., C. Weller, M. Hanna, and D. Jones. 2008. Contemporary issues in thermal gasification of biomass and its application to electricity and fuel production. *Biomass and Bioenergy* 32(7):573-581.

40. Lee, S.Y., M.A. Hanna, and D. Jones. 2008. An adaptive neuro-fuzzy inference system for modeling mechanical properties of tapioca starch-poly (lactic acid) nanocomposite foams. *Starch* 60:159-164.
41. Kumar, A., L. Wang, D. Yuris, D. Jones and M. A. Hanna. 2008. Thermogravimetric characterization of corn stover as gasification/pyrolysis feedstock, *Biomass and Bioenergy* 32(5):460-467.
42. Miller, D., C. Nelson, D. Oleynikov, and D. Jones. 2008. Pre-operative ordering of minimally invasive surgical tools: a fuzzy inference system approach. *Artificial Intelligence in Medicine* 43:35-45.
43. Kumar, A., G. M. Ganjyal, D. Jones and M. A. Hanna. 2008. Modeling residence time distribution in a twin-extruder as a series of ideal steady-state flow reactors, *Journal of Food Engineering* 84:441-448.
44. Keshwani, D.R., D. Jones, G.E. Meyer, and R.M. Brand. 2008. Rule-based Mamdani-type fuzzy modeling of skin permeability. *Applied Soft Computing* 8:285-294.
45. Sethuramasamyraja, B., V. I. Adamchuk, D. B. Marx, A. Dobermann, G. E. Meyer, and D. Jones. 2008. Analysis of an ion selective electrode based methodology for integrated on the go mapping of soil pH, potassium, and nitrate contents. *Transactions of the ASABE* 50(6):1927-1935.
46. Sethuramasamyraja, B., V. I. Adamchuk, D. B. Marx, A. Dobermann, G. E. Meyer, and D. Jones. 2007. Agitated soil measurement method for integrated on-the-go mapping of soil pH, potassium and nitrate contents. *Computers and Electronics in Agricultural* 60:212-225.
47. Kumar, A., G.M. Ganjyal, D. Jones, and M.A. Hanna. 2007. Experimental determination of longitudinal expansion during extrusion of starches. *Cereal Chemistry* 84(5):480-484.
48. Kumar, A., G. M. Ganjyal, D. Jones and M. A. Hanna. 2006. Digital image processing for measurement of residence time distribution in a laboratory extruder. *Journal of Food Engineering* 75(2):237-244.
49. Brand, R.M., D. Jones, H.T. Lynch, and R.E. Brand, P. Watson, R. Ashwathnayan, and H.K. Roy. 2006. Risk of colon cancer in hereditary non-polyposis colorectal cancer patients as predicted by fuzzy modeling: Influence of smoking. *World Journal of Gastroenterology* 12(28):4485-4491.
50. Ganjyal, G., M.A. Hanna, P. Supprung, A. Noomhorm, and D. Jones. 2006. Modeling selected properties of extruded rice flour and rice starch by neural networks and statistics. *Cereal Chemistry* 83(3):223-227.
51. Wang, L., D. Jones, C. Weller, and M. Hanna. 2006. Modeling of transport phenomena and melting kinetics of starch in a co-rotating twin-screw extruder. *Advances in Polymer Technology* 25(1):22-40.
52. Neto, J.C., G.E. Meyer, and D. Jones. 2006. Individual leaf extractions from young canopy images using Gustafson-Kessel clustering and a genetic algorithm. *Computers and Electronics in Agriculture* 51:66-85.

53. Neto, J.C., G.E. Meyer, D. Jones, and A.K. Samal. 2005. Plant species identification using Elliptic Fourier leaf shape analysis. *Computers and Electronics in Agriculture* 50:121-134.
54. Keshwani, D. R., D. Jones, and R.M. Brand. 2005. Takagi-Sugeno Fuzzy Modeling of skin permeability. *Cutaneous and Ocular Toxicology* 24(1):149-163.
55. Brown-Brandl, T.M., D. Jones, and W.E. Woldt. 2005. Evaluating modeling techniques for livestock heat stress. *Biosystems Engineering* 91(4):513-524.
56. Wang, L., G. Ganjyal, D. Jones, C. Weller, and M. Hanna. 2005. Modeling of bubble growth dynamics and nonisothermal expansion in starch-based forms during extrusion. *Advances in Polymer Technology* 24(1):29-45.
57. Wang, L. G.M. Ganjyal, D.D. Jones, C.L. Weller, and M.A. Hanna. 2004. Finite element modeling of fluid flow, heat transfer and melting of biomaterials in a single-screw extruder. *Journal of Food Science* 69(5):212-223.
58. Meyer, G.E., T.W. Hindman, D.D. Jones and D.A. Mortensen. 2004. Digital camera operation and fuzzy logic classification of plant, soil, and residue color images. *Applied Engineering in Agriculture* 20(4):519-529.
59. Meyer, G.E., J. Camargo Neto, D. Jones and T.W. Hindman. 2004. Intensified fuzzy clusters for determining plant, soil, and residue regions of interest from color images. *Computers and Electronics in Agriculture* 42:161-180.
60. Pannier, A., R. Brand, and D. Jones. 2003. Fuzzy modeling of skin permeability coefficients. *Pharmaceutical Research* 20(2):143-148.
61. Merino, G.G., D. Jones, L.D. Clements, and D. Miller. 2003. Fuzzy compromise programming with precedence order in the criteria. *Applied Mathematics and Computation* 134(1):184-205.
62. Arumi, J.L. and D. Jones. 2001. Methodology for the analysis of risk analysis of irrigation structures. *Hydraulic Engineering in Mexico Volume XVI* (3):67-74, July - Sept 2001 (in Spanish).
63. Merino, G.G., D. Jones, D. Stooksbury, and K.G. Hubbard. 2001. Determination of semivariogram models to kriging hourly and daily solar irradiance in Western Nebraska. *Journal of Applied Meteorology* 40(6):1085-1094.
64. Jones, D., and E.M. Barnes. 2000. Fuzzy composite programming to combine remote sensing and crop models for decision support in precision crop management. *Agricultural Systems* 65(3):137-158.
65. Merino, G.G., D. Jones, and L.E. Stetson. 2000. Performance of a grid-connected photovoltaic system using actual and kriged hourly solar radiation. *Transactions of the ASAE* 43(4):1011-1018.
66. Jones, D., R. Chinnaswamy, Y. Tan, and M. Hanna. 2000. Physiochemical properties of ready-to-eat breakfast cereals. *Cereal Foods World* 45(4):164-168.
67. Vietor, D.M., P.B. Thompson, M.L. Wolfe and D. Jones. 1999. UD-R-ALL Dairy: a decision case about dairy expansion. *J. Nat. Resour. Life Sci. Edu.* Volume 28:9-16.

68. Burr, M.S., M.F. Kocher and D.D. Jones. 1998. Design of tapered augers for uniform unloading of granular material from rectangular cross-section containers. *Transactions of the ASAE* 41(5):1415-1421.
69. Woldt, W.E., M.E. Hagemeister and D.D. Jones. 1998. Characterization of an unregulated landfill using surface based geophysics and geostatistics. *Ground Water* 36(6):1123-1131.
70. Hubbard, C.M., C.L. Weller and D.D. Jones. 1997. Selected physical properties of jointed goatgrass (*Aegilops cylindrica* Host.). *Applied Engineering in Agriculture* 13(6):747-750.
71. Hagemeister, M.E., D.D. Jones and W.E. Woldt. 1996. Risk assessment of landfills using fuzzy composite programming. *Journal of Environmental Engineering* 122(4):248-258.
72. ***Jones, D.D. and M.F. Kocher. 1995. I. Auger design for uniform unloading of granular material: rectangular cross section containers. *Transactions of the ASAE* 38(4):1157-1162.

*** Recognized with a "Superior Paper Award" by the journal editors.
73. Kocher, M.F. and D.D. Jones. 1995. II. Auger design for uniform unloading of granular material: rectangular cross section containers: cylinder containers. *Transactions of the ASAE* 38(4):1163-1166.
74. Brown, T.M., M.M. Beck, D.D. Schulte, D.D. Jones, J.H. Douglas and S.E. Scheideler. 1995. Nipple waterers for chick batteries: design, efficiency, cost analysis. *Poultry Science* 74:457-462.
75. Simons, B.A., W.E. Woldt, and D.D. Jones. 1995. A non-intrusive screening methodology for environmental hazard assessment at waste disposal sites for water resources protection. *Water Resources and Environmental Hazards: Emphasis on Hydrologic and Cultural Insight in the Pacific Rim*; American Water Resources Association. June 1995, pages 443-452.
76. Kuhn, G.N., W.E. Woldt, D.D. Jones and D.D. Schulte. 1995. Solid waste disposal site characterization using non-intrusive electromagnetic survey techniques and geostatistics. *Geostatistics for Environmental and Geotechnical Applications*, ASTM STP 1283 R.Mohan Srivastava, Shahrokh Rouhani, Marc V. Cromer, A. Ivan Johnson, Ed., American Society for Testing and Materials. Philadelphia.
77. Lyon, D.J., J.A. Smith and D.D. Jones. 1994. Sampling wheat at the elevator for jointed goatgrass. *Weed Technology* 8:64-68.
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