

Bio-Sketch of Co-Principal Investigator James C. Ascough II



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Areas of Expertise

Erosion and sediment transport theory, erosion control methodologies, erosion prediction technology development, surface and groundwater hydrologic/water quality modeling, stochastic methods in hydrology, GIS applications in natural resources.

Highlights of Relevant Accomplishments

- Over 20 years of research experience in water quality and soil erosion experimentation and modeling.
- Lead scientist on new national USDA project to develop a modular watershed model for prediction of conservation practice effects on water quality; developer of the WEPP Watershed model.
- Author or co-author of over 40 journal and refereed conference publications, 5 book chapters, and over 90 technical reports or software releases.

Professional Preparation

BACHELOR OF SCIENCE, AGRICULTURAL ENGINEERING, PURDUE UNIVERSITY, West Lafayette, Indiana, USA, 1982. (cum laude)

MASTER OF SCIENCE, AGRICULTURAL ENGINEERING, PURDUE UNIVERSITY, West Lafayette, Indiana, 1985 (GPA: 5.82/6.0). Thesis advisor: Professor Edwin J. Monke.

PH.D., AGRICULTURAL ENGINEERING, PURDUE UNIVERSITY, West Lafayette, IN, 1992 (GPA: 5.88/6.0). Thesis advisor: Professor Edwin J. Monke.

Appointments

RESEARCH HYDROLOGIC ENGINEER, USDA-Agricultural Research Service, Agricultural Systems Research Unit, Fort Collins, CO, 1994-present.

AGRICULTURAL ENGINEER, USDA-Agricultural Research Service, National Soil Erosion Research Laboratory, West Lafayette, IN, 1992-1994.

GRADUATE RESEARCH ASSISTANT, Department of Agricultural Engineering, Purdue University, West Lafayette, IN, 1986-1992.

GRADUATE RESEARCH ASSISTANT, Department of Agricultural Engineering, Purdue University, West Lafayette, IN, 1982-1985.

List of 5 Publications Relevant to the Proposed Research

- [1] *Ascough II, J.C.*, C. Baffaut, M.A. Nearing, and B.Y. Liu. 1997. The WEPP watershed model: I. Hydrology and erosion. *Transactions ASAE* 40(4): 921-933.
- [2] Baffaut, C., M.A. Nearing, *J.C. Ascough II*, and B.Y. Liu. 1997. The WEPP watershed model: II. Sensitivity analysis and discretization on small watersheds. *Transactions ASAE* 40(4): 935-943.
- [3] *Ascough II, J.C.*, L.A. Deer-Ascough, and G.A. Weesies. 1998. A plant parameter selection program for erosion prediction modeling. *Comp. Elect. Agric.* 20 (1998): 263-276.
- [4] *Ascough II, J.C.*, D.C. Flanagan, G.H. Leavesley, L.R. Ahuja, and O. David. 2001. Natural resource and erosion modeling using a modular systems approach. In: *Ascough II, J.C.* and Flanagan, D.C. (Eds.), *Symp. Proc. Soil Erosion Research for the 21st Century*, January 3-5, 2001, Honolulu, Hawaii. *Am. Soc. Agric. Eng., St. Joseph, Michigan.* p. 83-86.
- [5] D.C. Flanagan, *J.C. Ascough II*, M.A. Nearing and J.M. Lafflen. "Chapter 7: The Water Erosion Prediction Project (WEPP) Model". In (R.S. Harmon and W.W. Doe III, eds.): *Landscape Erosion and Evolution Modeling*. Kluwer Academic/Plenum Publishers, New York. pp. 145-199, 2001.

List of 5 Other Recent Publications

- [1] Ma, L., G. Hoogenboom, L.R. Ahuja, *J.C. Ascough II*, and S.A. Saseendran. 2004. Evaluation of the RZWQM-CERES-Maize hybrid model for maize production. *Agric. Sys.* 87(3): 274-295.
- [2] Ahuja, L.R., *J.C. Ascough II*, and O. David. 2005. Developing natural resource models using the Object Modeling System: feasibility and challenges. *Adv. Geos.* 2005(4): 29-36.
- [3] Hoag, D.L., C. Keske-Handley, *J.C. Ascough II*, and L. Koontz 2005. Decision Making with Environmental Indices. In: Burk, A.R (Ed.), *New Trends in Ecology Research*. Nova Science Publishers, Hauppauge, NY. p. 159-182. (Refereed Book Chapter).
- [4] Nelson, R.G., *J.C. Ascough II*, and M.R. Langemeier. 2006. Environmental and economic analysis of switchgrass production for water quality improvement in northeast Kansas. *J. Env. Manage.* 79 (2006): 336-347.
- [5] *Ascough II, J.C.*, L.A. Deer-Ascough, M.A. Nearing, D.C. Flanagan, B.A. Engel, and L. Ma. 2006. An approach to estimating uncertainties in modeling hillslope water erosion. *J. Am. Wat. Res. Assoc.* (In Press)

SYNERGISTIC ACTIVITIES

- Organizing Committee Member and Symposium/Workshop Chair, 2006 iEMSs (International Environmental Modelling and Software Society) Meeting, Burlington, VT, July 9-14, 2006.
- Program Committee Member and Book Editor, "Soil Erosion Research for the 21st Century" International Symposium and Exhibition, sponsored by the American Society of Agricultural Engineers, Honolulu, HI, January 3-5, 2001.
- Member of the Soil and Water Conservation Society (SWCS), 2002-present.
- Member of the American Geophysical Union (AGU), 1992-present.
- Member of the American Society of Agronomy (ASA) and the Soil Science Society of America (SSSA), 1998-present.

Collaborators and Other Affiliations

- (i) Collaborators: Dr. Dennis Flanagan (ARS-West Lafayette, IN), Dr. Larry Wagner (ARS-Manhattan, KS), Dr. Clint Truman (ARS-Tifton, GA), Dr. Neil Hansen (Colorado State University), Dr. Garret Hoogenboom (University of Georgia), Dr. Ted Yang (Colorado State

University), Dr. Dmitry Kurtener (AFI, St. Petersburg, Russia), Dr. Hugo Mendez Casariego (INTA, Bariloche, Argentina).

- (ii) Thesis Advisor: Dr. Ascough II is currently a member of two graduate advisory committees (1 M.S. and 1 Ph.D.) at Colorado State University.
- (iii) Dr. Ascough II is currently advisor to one federal ARS post-doctoral scientist, Dr. Eihab Fathelrahman.