

Chi-hua Huang, Research Soil Scientist

Education

National Chung-Hsing University, Taiwan	Soil Science	BS, 1973
Washington State University	Soil Science	MS, 1977
Purdue University	Agronomy (Soil Science)	Ph.D., 1982

Research Experience:

2004 – present	Research Leader, USDA-ARS National Soil Erosion Research Lab, W. Lafayette, IN
1998 – present	Soil Scientist, USDA-ARS National Soil Erosion Research Lab, W. Lafayette, IN
1998 – present	Adjunct Professor, Agronomy Department, Purdue Univ., W. Lafayette, IN
1988 – 1998	Research Scientist, Agronomy Department, Purdue Univ., W. Lafayette, IN
1984 – 1987	Research Scientist, Division of Environmental Mechanics, CSIRO, Australia.
1982 – 1984	Research Associate, Hydrology and Water Resources Department, University of Arizona, Tucson, AZ.

Professional Activities and Development:

- Soil Science Society of America: International Soil Science Award Committee (S479), 1996-97; Associate Editor, 2001-2003.
- Association of Chinese Soil & Plant Scientists in North America: Vice President 1993, President 1994-95, Board of Directors, 1996-2000.
- National Association of Conservation Districts (NACD), Great Lakes Committee, ARS Agency appointed Technical Advisor, 2001-2010
- Co-Editor, with John Laflen and Junliang Tian, “Soil Erosion and Dryland Farming”, a 720-page book published by CRC Press and Soil and Water Conservation Society, 2000.
- Co-Topical Editor (With Dennis Flanagan) for Soil Erosion, Encyclopedia of Soil Science, Published by Marcel Dekker, 2002.
- Served 60-day detail as Acting National Program Leader – Soil Erosion at USDA-ARS National Program Staff, Beltsville, 2003.
- Served as a member of the Scientific Advisory Committee for International Soil Management Conference, delivered a keynote speech and chaired sessions (Turkey, May 2006).
- Served as Co-Chair of the International Conference for Soil Erosion and Dryland Farming at Yangling, China (October 2006),
- Served as a member of the Scientific Advisory Committee for International Gully Erosion Conference, organized and chaired sessions (Spain, Sept 2007). Currently is the Co-Chair for the 2016 International Gully Erosion Conference to be held at W. Lafayette, IN.
- Served as a member of the Scientific Advisory Committee for Agro-Environment (2008, Turkey; 2010, Mexico; and 2014, Brazil, 2016 USA, 2018 China, 2021 Mexico). Invited as a keynote speaker at the 2014 and 2018 meeting.
- Served 60-day detail as Acting Associate Area Director, USDA-ARS Mid South Area at Stoneville, MS, 2011
- Served 60-day detail at USDA-ARS Office for National Programs at Beltsville, MD, 2012.
- Served 120-day detail as Acting Associate Area Director, USDA-ARS Midwest Area at Peoria, IL, 2018.

Served 120-day detail as Acting Associate Area Director, USDA-ARS Midwest Area at Peoria, IL, 2019.

Currently, serving as the US coordinator for the Sino-US Joint Centers for Soil Erosion and Environmental Protection between USDA and Chinese Ministry of Science and Technology.

Selected Journal Publications:

- Nouwakpo, K., C. Huang, P. Owens and L. Bowling. 2010. Impact of vertical hydraulic gradient on rill erodibility and critical shear stress. *Soil Sci. Soc. Am. J.* 74:1914-1921.
- De-Campos, A.B., C. Huang, and C.T. Johnston. 2012. Biogeochemistry of terrestrial soils as influenced by short-term flooding. *Biogeochemistry.* 111:239-252.
- Nouwakpo, S.K., and C. Huang. 2012. A simplified close range photogrammetric technique for soil erosion assessment. *Soil Science Soc. Am. J.* 76:70-84.
- Nouwakpo, S.K., and C. Huang. 2012. The role of subsurface hydrology in soil erosion and channel network development on a laboratory hillslope. *Soil Science Soc. Am. J.* 76(4):1197-1211.
- Nouwakpo, S.K., C. Huang, M.A. Weltz, F. Pimenta, I. Chagas, and L. Lima. 2014. Using fluidized bed and flume experiments to quantify cohesion development from aging and drainage. *Earth Surface Processes and Landforms*, 39(6):749-757.
- Zhao, L., C. Huang, and F. Wu. 2015. Effect of microrelief on water erosion and their changes during rainfall. *Earth Surface Processes and Landforms* 41:579-586.
- Mamedov, A.I, C. Huang, E.A. Aliev, and G.J. Levy. 2016. Aggregate stability and water retention near saturation characteristics as affected by soil texture, aggregate size and polyacrylamide application. *Land Degradation and Development.* 28(2):543-552. <https://doi.org/10.1002/ldr.2509>.
- Selen, D.S., C. Huang, D.C. Flanagan, and G. Erpul. 2017. Functional relationships for soil erodibility factors of two different soil erosion prediction models (USLE/RUSLE/and WEPP). *Journal of Hydraulic Research.* 56(2):181-195.
- Ding, W., and C. Huang. 2017. Effects of soil surface roughness on interrill erosion processes and sediment particle size distribution. *Geomorphology.* 295:801-810.
- Wei, X., C. Huang, N. Wei, H. Zhao, and T. Wang. 2018. Reducing soil loss using surface application of stem juices. *Land Degradation and Development.* 29:1705-1713.
- Botero-Acosta, A., M.L. Chu, and C. Huang. 2019. Impacts of environmental stressors on nonpoint source pollution in intensively managed hydrologic systems. *Journal of Hydrology.* 579:124056. <https://doi.org/10.1016/j.jhydrol.2019.124056>.
- Scott, Isis S.P.C., C. Huang, and L.C. Bowling. 2020. The use of electrical conductivity to develop temporally precise breakthrough curves in tracer injection experiments. *Journal of Hydrology.* 588:124998. <https://doi.org/10.1016/j.jhydrol.2020.124998>.
- Weltz, M.A., C. Huang, B.A. Newingham, J. Tatarko, S.K. Nouwakpo, and T. Tsegaye. 2020. A strategic plan for future USDA Agricultural Research Service erosion research and model development. *Journal of Soil Water Conservation.* 75(6):137A-143A.
- Nouwakpo, S.K, C. Huang, L.C. Bowling, P. Owens, and M.A. Weltz. 2021 Inferring sediment transport capacity from soil microtopography changes on a laboratory hillslope. *Water.* 13(7):929. <https://doi.org/10.3390/w13070929>.