

## **Chris J. Johannsen – Career Synopsis**

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Dr. Johannsen is Professor Emeritus of Agronomy and Director Emeritus of the Laboratory for Applications of Remote Sensing (LARS) at Purdue University. He received his Bachelor's and Master's Degrees from the University of Nebraska in Agronomy (1959 and 1961, respectively) and his Ph.D. in Soil Physics from Purdue University (1969). Johannsen's professional experience includes employment with the USDA Soil Conservation Service, Chevron Chemical Company, University of Missouri-Columbia, University of California-Davis, Space Imaging Inc and Purdue University. Currently he is working as a Consultant as an expert witness in agriculture and land use court cases as well as assisting in development of remote sensing facilities/centers.

Dr. Johannsen first joined the Agronomy faculty at Purdue University in 1963 developing a land use extension position and later teaching and conducting soil physics research relating to remote sensing applications of soil resources and land use. He served as a program leader of LARS from 1966 to 1972. From 1972 to 1985 he held research and extension positions at the University of Missouri and was a visiting scientist at the University of California (1980-81). In 1985 he returned to Purdue University as Director of the Agricultural Data Network (ADN) and was also appointed Director of LARS. From 1988-96 he served as Director of the Natural Resources Research Institute (renamed the Environmental Sciences and Engineering Institute in 1994), which had LARS within its structure. In 1996-97, he was a Visiting Chief Scientist with Space Imaging Inc developing agricultural applications of remote sensing.

He is Co-Editor of a book titled "Remote Sensing for Resource Management," contributor to 12 book chapters and author or co-author of over 260 papers and articles. He served as International President of the Soil and Water Conservation Society in 1982-83. He is currently active in many professional societies including SWCS, the American Society of Agronomy, the Soil Science Society of America, the World Association of Soil and Water Conservation, the American Society for Photogrammetry and Remote Sensing and the International Union of Soil Science.

He has served on many national and international committees and activities including:

- Earth Sciences Committee, National Research Council (2005-07)
- European Hyperspectral Committee (2001-05), Chair (2004-05)
- Agenda21 Committee, National Research Council, (2001-02)
- Space Studies Board, National Research Council (1998-01), SSB Exec. Committee (1998-01)
- Committee on Earth Sciences, National Research Council (1996-98), Committee on Remote Sensing Applications (2000-02)
- User Working Group, NASA Socioeconomic Data and Applications Center (SEDAC), Consortium of International Earth Science Information Network (CIESIN) (1996-03)
- ASA Organization, Policy and ByLaws (1994-96), Strategic Planning Committee (1995-97)
- SSSA Council on History (1989-2003), Vice Chair (1992-2003)
- USDA Blue Ribbon Panel on Natural Resources Inventories and Performance Measurement, Chair (1995-97)
- Board of Directors, Ecologistics Limited LLC (1994-2003), President (2001-2003)
- ASPRS Awards Committee, (1985-2003), Chairperson (1988-1993); EOSAT Award Committee, Chair, (1990-91), Fellow Committee (1992-Present)

His professional accomplishments and contributions are:

- Developed an extension and research program that has been recognized for emphasis in soil survey, remote sensing, resource data base development, strip mine reclamation, municipal waste utilization and precision farming.
- Principal Investigator for numerous research, educational and application grants from the National Aeronautics and Space Administration, U.S. Department of Agriculture, Corps of Engineers, Department of Energy, National Oceanic and Atmospheric Administration, Missouri Department of Natural Resources, Missouri Department of Conservation, Indiana Department of Natural Resources and the Indiana Humanities Council.
- Instrumental in organization of Missouri Geographic Resources Center (1980) at University of Missouri-Columbia. Served as the GRC Director from 1981-1984.
- Developed the first recognized Agronomy Extension land use program. (Purdue University, 1963-65).
- Assisted in the organization of the Laboratory for Applications of Remote Sensing (LARS) at Purdue University (1965). Appointed as LARS Director during its reorganization (1985-2003).
- Established Ecologistics Limited, LLC as an environmental consulting firm, Board of Directors (1994-2003).
- Developed and taught a course at Purdue University on contamination of air, soil and water. Taught the same course on educational TV live to nine different locations. Taught Agronomy 545, Remote Sensing of Land Resources (1989-2004) and AGRY 598G, Remote Sensing Seminar (1997-2004).
- Taught numerous workshops and short courses on soil surveys, municipal waste, precision agriculture and remote sensing topics. Served as key lecturer for FAO Training Course on "Remote Sensing for Improving Food Production" in Nairobi, Kenya (Nov. 28-Dec. 16, 1983); FAO/UNRO/WMO/ESA Training Course on "Remote Sensing Applications to Agricultural Drought and Desertification" in Rome, Italy (June 29 - July 10, 1987) and Ministry of Agriculture and Water Training Course on "Principles of Remote Sensing; FAO Training Course on "Remote Sensing for Improving Food Production." in Nairobi, Kenya (November 1987); "Use of Computers in Processing Remotely Sensed Derived Data" in Riyadh, Saudi Arabia (March 1988), "Exploring Precision Farming" in Buena Vista, FL, USA (1998, 2000) "Site Specific Farming," Cooperative Extension Service, Mississippi State University (2001) and the Diagnostic Training Center, Purdue (2001, 2002), and CCA Spatial Technology Training-Springfield, IL and Kendallville, IN (2003).
- Organized and led 4 exchanges of Indiana and French farmer exchanges called Agridays. This exchange provided the opportunity for farmers and their spouses to stay overnight with their foreign counterparts and learn about farming management and practices within another country. Agridays was supported by the Indiana Humanities Council and the French American Foundation.
- Recognized as a national and international authority in land use and agricultural applications of remote sensing technology and geographic information systems.

### **Awards and specific recognitions**

Dr. Johannsen is a Fellow of five societies: the American Society of Agronomy (1981), the Soil Science Society of America (1981), the Soil and Water Conservation Society (1985) the American Society of Photogrammetry of Remote Sensing (2000) and the Indiana Academy of Science (2002). Other honors and awards include the Agronomic Achievement Award, Purdue University (2009);

Certificate of Achievement, Purdue Agricultural Alumni Association (2006); Hugh Hammond Bennett Award, SWCS (2005); Global Facilitator Award (2004), International Service Award (2000, 1987), Certificate of Achievement, Epsilon Sigma Phi; Career Award, Purdue Cooperative Extension Specialist Association (2003); Alumni Merit Award, University of Nebraska (1995); Outstanding Service Award - ASPRS (1992), SWCS (1978); NASA Technology Innovation Award (1979); National President Citation - ASPRS (1991), SWCS (1990, 1981); and Distinguished Service Award, Missouri Association of Soil and Water Conservation Districts (1982); and National SWCS Commendation Award (1975). He is a member of Sigma Xi, Gamma Sigma Delta, and Sigma Gamma Epsilon honoraries. He is listed in Who's Who in American Men and Women of Science; Who's Who in the World, Who's Who in America; Who's Who in the Midwest; Who's Who in Technology Today; Who's Who in Environment and Energy Management; Who's Who in Science and Engineering; Men of Achievement, Lexington Who's Who and The International Directory of Distinguished Leadership.

### **SIGNIFICANT PUBLICATIONS SINCE RETIREMENT**

- Morris, D.K., C.J. **Johannsen**, S.M. Brouder, and G.C. Steinhardt. 2004. Remote Sensing. *In* Daniel Hillel, Editor, Encyclopedia of Soils in the Environment. Elsevier Ltd. Vol. III: 385-392.
- Johannsen**, C.J. and P.G. Carter. 2004. Site Specific Soil Management: Concepts and Prospects. *In* Daniel Hillel, Editor, Encyclopedia of Soils in the Environment. Elsevier Ltd. Vol. III: 497-503.
- Erickson, B. J., C. J. **Johannsen**, J. J. Vorst and L.L. Biehl, 2004. Using Remote Sensing to Assess Stand Loss and Defoliation in Maize, Photogram. Eng. & Remote Sensing, Vol. 70: (No.6): 717-722.
- Adam, S., I. Vitse, C. **Johannsen** and J. Monbaliu. 2006. Sediment Type Unsupervised Classification of the Molenplaat, Westerschelde Estuary, The Netherlands. European Association of Remote Sensing Laboratories, EARSeL eProceedings Vol. 5 (2): 146-160.
- Mercuri P. A., B.A. Engel and C. J. **Johannsen**. 2006. Evaluation and Accuracy Assessment of High-Resolution IFSAR DEMs in Low-Relief Areas. International Journal of Remote Sensing. Vol. 27 (13): 2767-2786, July.
- Pantaleoni, E., B.A. Engel and C.J. **Johannsen**. 2007. Identifying Agricultural Flood Damage Using Landsat Imagery. Precision Agriculture 8:27-36.
- Morris, D.K., K.W. Ross and C. J. **Johannsen**. 2008. The Characterization of Soil Properties to Develop "Soil Management/Mapping Units" Using High-Resolution Remotely Sensed Data Sets. Journal of Terrestrial Observation, Purdue University Press, Vol. 1:3-37.  
<http://docs.lib.purdue.edu/jto/vol1/iss1/art4/>
- Carter, P.G. C.J. **Johannsen** and B.A. Engel. 2008 Recognizing Patterns Within Cropland Vegetation: A Crop Anomaly Classification System, Journal of Terrestrial Observation, Purdue University Press, Vol. 1:38-49. <http://docs.lib.purdue.edu/jto/vol1/iss1/art5/>
- Getman, D, J. Harbor, C.J. **Johannsen**, B. Engel, and G. Shao. 2008. Improving the Accuracy of Historic Satellite Image Classification by Combining Low-Resolution Multispectral Data and High-Resolution Panchromatic Data. Journal of Terrestrial Observation. Purdue University Press. Vol. 1: 70-87.  
<http://docs.lib.purdue.edu/jto/vol1/iss1/art8/>
- Ross, K.W., D.K. Morris and C.J. **Johannsen**. 2008. "A Review of Intra-Field Yield Estimation from Yield Monitor Data," Applied Engineering in Agriculture. Vol. 24(3): 309-317.

- Johannsen**, C.J. and C.S.T. Daughtry. 2009. Surface Reference Data Collection, Chapter 17: 244-256, *In* Warner, T.A., M.D. Nellis and G. Foody, (Eds.), The Sage Handbook of Remote Sensing, Sage Publications, London, England.
- Hamilton, R.M., R.E. Foster, T.J. Gibb, C.J. **Johannsen** and J.B. Santini. 2009. "Pre-Visible Detection of Grub Feeding in Turf Grass Using Spectrometer Data and Multispectral Imagery: The Potential for Site-Specific Grub Management", *Journal of Photogrammetric Engineering and Remote Sensing*, Vol. 75 (No. 3) 1-11.
- Johannsen**, C.J. (2010) "Foreword: Lessons Learned in the Collection of Surface Reference Information," *Journal of Terrestrial Observation*: Vol. 2: Iss. 2, Article 3. Available at: <http://docs.lib.purdue.edu/jto/vol2/iss2/art3>