

**Dr. John F. Heinrichs**  
**Department of Geosciences, Fort Hays State University, Hays, KS 67601**  
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**a. Professional Preparation**

University of Wisconsin - Milwaukee	B. S. (Mathematics)	August 1983
University of Wisconsin - Milwaukee	M. S. (Mathematics)	August 1985
University of Colorado - Boulder	Ph. D. (Geography)	October 1996

**b. Appointments**

Fort Hays State University	Chair, Department of Geosciences	2006-
Fort Hays State University	Associate Professor	2004-
Fort Hays State University	Assistant Professor:	1998-2003
University of Colorado - Boulder (CIRES)	Research Scientist	1997-1998
Metropolitan State College of Denver	Instructor:	1997-1998
University of Colorado - Boulder	Instructor, Teaching Assistant:	1993-1998
Hughes Aircraft Company	Remote Sensing Specialist	1986-1992

**c. Publications**

(i) Most relevant publications

Taggart, G., P. Adams, E. Eltze, J. Heinrichs, J. Hohman, and K. Hickman, Fermi Questions, *Mathematics Teaching in the Middle School*, accepted.

Hohman, J., P. Adams, G. Taggart, J. Heinrichs, and K. Hickman, A "Nature of Science" Discussion: Connecting Mathematics and Science, *Journal of College Science Teaching*, 36(1), 18-21, 2006.

Heinrichs, J., *The Climate of Hays, Kansas from 1867 to 1999: Variability, Trends, and Influences*, Fort Hays Studies, Fourth Series, Number 2, Spring 2006, 60 pp.

Heinrichs, J., Baffin Bay, *Encyclopedia of the Arctic*, Taylor & Francis, Inc., London and New York, 2380 pp., 2004.

(ii) Other publications

Heinrichs, J., D. Cavalieri, and T. Markus, Assessment of the AMSR-E sea ice concentration product at the ice edge using RADARSAT-1 and MODIS imagery, *IEEE Trans. Geosci. Rem. Sens.*, 44(11), 3070-3080, 2006.

Stroeve, J., T. Markus, J. Maslanik, D. Cavalieri, A. Gasiewski, J. Heinrichs, J. Holmgren, D. Perovich, M. Sturm, Impact of Surface Roughness on AMSR-E Sea Ice Products, *IEEE Trans. Geosci. Rem. Sens.*, 44(11), 3103-3117, 2006.

Sturm, M., J. Maslanik, D. Perovich, J. Stroeve, J. Richter-Menge, T. Markus, J. Holmgren, J. Heinrichs, K. Tape, Snow Depth and Ice Thickness Measurements From the Beaufort and Chukchi Seas Collected During the AMSR-Ice03 Campaign, *IEEE Trans. Geosci. Rem. Sens.*, 44(11), 3009-3020, 2006.

Maslanik, J., M. Sturm, M. Rivas, A. Gasiewski, J. Heinrichs, U. Herzfeld, J. Holmgren, M. Klein, T. Markus, D. Perovich, J. Sonntag, Spatial Variability of Barrow-Area Shore-Fast Sea Ice and Its Relationships to Passive Microwave Emissivity, *IEEE Trans. Geosci. Rem. Sens.*, 44(11), 3021-3031, 2006.

Gilson, P., Aistrup, J., Heinrichs, J., and Zollinger, B., *The Value of Ogallala Aquifer Water in Southwest Kansas*, Docking Institute of Public Affairs, Hays, Kansas, 2001.

#### **d. Synergistic activities**

(i) Formal instruction: As a Fort Hays State faculty member, I teach between 6 and 12 credit hours of undergraduate and graduate classes per semester. My approach to these classes concentrates on the use of engaging collaborative methods and the use of distributed, mobile computing. One course in particular, Elements of Physical Geography, utilizes tools such as Google Earth and game-based pedagogy (“treasure hunts”, in particular) to involve students in finding and identifying the characteristics of tectonic, fluvial, aeolian, and glacial landforms.

(i) Participation in Second Life: I have been a very active resident of Second Life since I joined in October 2006. My focus in Second Life has been on education, including having taught one class (a graduate seminar) in SL with plans to teach a class on the Solar System in the coming academic year. I am a member of several SL groups related to education, including Real Life Educators in Second Life, SL Educators, and SL Open Courseware. I am also the chair of the Fort Hays State University Second Life planning committee, and led the effort to first acquire, and then develop, a SL island for FHSU. I am an experienced Second Life builder and scripter as well, having completed a number of educational and personal projects inworld – the latest of which has been to produce geologically correct rocks and boulders using a sculpted prim technique

(ii) National Science Foundation grant DUE-0088818 - “Integrating Exemplary Physical Science Teacher Enhancement Materials with Mathematics for Preservice Middle School Teachers”: This project was a collaboration with other FHSU faculty to develop a course to teach science skills to undergraduates planning to become middle-school science, math, or geography teachers. The approach to the project was to model science for the pre-service teachers by involving them in directed science investigations. The project was extremely successful and produced a course called “Science and Your World”, which is offered annually and which has engaged approximately 30 student teachers in learning both the practice and pedagogy of science.

#### **e. Collaborators & Other Affiliations**

##### (i) Collaborators

- Adams, Paul (Fort Hays State University)
- Hanna, Edward (University of Sheffield)
- Holt, Ben (NASA Jet Propulsion Lab)
- Long, David (Brigham Young University)
- Maslanik, James (University of Colorado at Boulder)
- Markus, Thorsten (NASA/GSFC)
- Meier, Walt (National Snow and Ice Data Center)
- Steffen, Konrad (University of Colorado - Boulder)
- Stroeve, Julienne (University of Colorado – Boulder)
- Tschudi, Mark (Fort Hays State University)
- Weaver, Ron (National Snow and Ice Data Center)
- Zollinger, Brett (Fort Hays State University)

##### (ii) Graduate and Postdoctoral Advisors

- Steffen, Konrad (University of Colorado - Boulder)

##### (iii) Thesis Advisor and Postgraduate Scholar Sponsor (total number of advisees: 6)

- Buchanan, Todd
- Coveney, Eamonn
- Ebbert, Darryl
- Englebert, Zane
- Lane, Samuel
- Pellowski, Chris (University of Idaho)