

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Arts, Sciences, and Letters
Department of Natural Sciences

Jacob A. Napieralski, assistant professor of geology, Department of Natural Sciences, College of Arts, Sciences, and Letters, is recommended for promotion to associate professor of geology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Academic Degrees

Ph.D.	2005	Earth and Atmospheric Sciences, Purdue University, West Lafayette, IN
M.S.	2001	Environmental Research and Education, Buffalo State College, Buffalo, NY
B.S.	1999	Earth Science, Buffalo State College, Buffalo, NY

Professional Record

2005 - present	Assistant professor of geology, Department of Natural Sciences, University of Michigan-Dearborn, MI
2002 - 2005	United States GAANN Fellow, Earth and Atmospheric Sciences, Purdue University, West Lafayette, IN

Summary of Evaluation

Teaching: The review committee rated Professor Napieralski's teaching as excellent. He has taught a wide variety of courses, ranging from introductory geology lecture and laboratory to upper level and graduate courses in geology. He has taught physical geology, lecture and laboratory, Introduction to Environmental Science, Introduction to Geographic Information System (GIS), lecture and discussion, as well as the laboratory, remote sensing, geomorphology lecture and laboratory, field methods, including the planning and development of three international trips, one to Puerto Rico and two to Iceland. He has also taught the Advanced Applications course in GIS, and two graduate courses, one in Glacial Geology and a graduate-level course in Spatial Analysis and GIS. Professor Napieralski has developed six of these courses. He has played a key role in the development of undergraduate certificate program in GIS, and because of the interest in GIS across the College, and indeed the University, he has hosted several GIS applications workshops for faculty, outside of the Department of Natural Sciences. He has been instrumental in the growth of the geology (earth science) major over the past five years.

Research: Professor Napieralski's research is rated excellent. His research in the area of glacial geology, geomorphology and remote sensing and spatial analysis is on the cutting edge, as indicated by invited requests to publish in Earth Science Reviews and the Encyclopedia of Snow and Ice. Professor Napieralski has established a state-of-the-art GIS laboratory and this has attracted some of the finest science students in the department to his research projects. Two of his students have received prestigious internships with NASA and DOE and seven of his research students have made presentations at national and regional conferences, including the Geological Society of America, the American Association of Geographers, and the American Geophysical Union. His research has been funded by grants from the Office of the Vice

President for Research, Rackham, and UM-Dearborn campus grants. He has served as senior personnel on National Science Foundation grants and has developed collaborations outside the Department and College that have led to several grant proposal submissions. Since joining the Department, Professor Napieralski has published ten articles in peer-reviewed journals, including some of the top journals in his field. He has also been invited to give presentations of his research at Michigan State University and Wayne State University and has organized and hosted sessions at annual meetings of the Association of American Geographers. He and his students have made more than thirty conference presentations since his arrival at UM-Dearborn.

Recent and Significant Publications

- Napieralski, J. GIS in Glaciology. In *Encyclopedia of Snow, Ice and Glaciers*, Springer Publishing (Eds): Singh, V. P., Singh, P., and Haritashya, U. Springer Publishing, in press.
- Napieralski, J., and Fraser, G. 2010. Visualizing the Impact of Storm Events on the Quality of the Buffalo and Niagara Rivers (NY). *Open Geography Journal* 3, 131-146.
- Napieralski, J., and Nalepa, N. 2010. The application of control charts to determine the effect of grid cell size on landform morphometry. *Computers & Geosciences* 36, 220-230.
- Li, Y., Napieralski, J., and Harbor, J. A. 2008. A revised Automated Proximity and Conformity Analysis method to compare predicted and observed spatial boundaries of geologic phenomena. *Computers & Geoscience* 34, 1806-1814.
- Swinehart, T., Napieralski, J., and Geist, N. 2008. Middle-Wisconsinan diamicton and wood from a well-drilling in west-central Indiana. *American Midland Naturalist* 159, 445-456.
- Napieralski, J., Harbor, J., and Li, Y. K. 2008. Geographic Information Systems and glacial geomorphology, *Earth Science Reviews* 85, 1-22.
- Li, Y., Napieralski, J., Harbor, J., and Hubbard, A. 2007. Identifying temporal patterns of correspondence between modeled flow orientations and field evidence: an automated flow orientation analysis. *Computers & Geosciences* 33, 141-150.
- Napieralski, J., Hubbard, A., Li, Y., Harbor, J., Stroeven, A. P., Kleman, J., Alm, G., and Jansson, K. N. 2007. Towards a GIS assessment of numerical ice-sheet model performance using geomorphological data. *Journal of Glaciology* 53, 71-83.
- (undergraduate student co-authors are underlined)

Service: Professor Napieralski's service is rated excellent. He has provided exemplary service to the Department as well as to his profession. Under his leadership as chair of the Natural Sciences Department's Colloquium Committee, the Department has witnessed many exciting presentations by experts in current areas of active research. He has served as chair of the Earth Sciences Program for the last three years, and he was elected to serve as program representative on the Department's Executive Committee in 2009. His collegiality and insightful contributions to the Department's programs have been highly valued by members of the Committee. He currently serves on several Department committees, including the Master of Science in Environmental Science Program Committee. He serves his profession as a reviewer for numerous journals, and as a program and grant reviewer for the National Science Foundation.

External Reviewers:

Reviewer A: "This is truly a new approach and so represents a significant step forward in spatial and temporal analysis of the 'fit' between model and field data."

Reviewer B: “Dr. Napieralski’s first authorship of an Earth Science Review article indicates ... that he is recognized by that community as someone with valuable insights into directions for future work.”

Reviewer C: “I would judge Napieralski’s scholarship as very good, yet extremely specialized.”

Reviewer D: “This demonstrates to me that Dr. Napieralski’s research activities are of value ...”

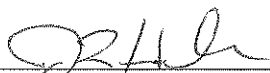
Reviewer E: “I find Jake’s papers to be very well researched, organized and written. In short, he does rigorous, quality scientific work ...”

Reviewer F: “I am particularly impressed by the paper published in 2007 in the *Journal of Glaciology*. This paper which developed two new GIS based techniques to quantify correspondence between models and field data is a landmark paper in my opinion.”

Reviewer G: “... one noteworthy paper is *Earth Science Reviews* – this is a journal that mostly focuses on reviews on different topics in Earth Sciences.”

Summary of Recommendation:

Professor Napieralski has demonstrated excellence in teaching and in his research, and has rendered valuable service to the Department of Natural Sciences, and the campus. We are very pleased to recommend, with the strong support of the College of Arts, Sciences, and Letters Executive Committee, Jacob A. Napieralski for promotion to associate professor of geology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.



Jerold L. Hale
Dean
College of Arts, Sciences, and Letters



Daniel Little
Chancellor
University of Michigan-Dearborn

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