

John J. Degenhardt
Assistant Professor of Geography and Geology
Department of Geography and Geology
College of Arts and Sciences

Degrees Earned

Ph.D. in Geography, Texas A&M University, 2002

M.S. in Planetary Geology, University of Houston, 1994

B.S. in Geology, Texas A&M University, 1987

Professional Licensure and Certifications

Licensed Professional Geoscientist, State of Texas, License No. 4606

Peer-Review Publications and Artistic Performances/Exhibitions

Articles

Degenhardt, J. J. "Geomorphologic controls on the formation of layered permafrost rock glaciers in alpine environments," *Geomorphology*, (in review).

Degenhardt, J. J., Giardino, J. R., Pitty, A. F., and Marston, R. A., 2007. "Possible origin of the block stream in Tom Mays Canyon, Franklin Mountains, TX," *Zeitschrift für Geomorphologie*, 51(3), 377-396.

Degenhardt, J. J., Giardino, J. R., Isaksen, K., Ødegård, R. S., Berthling, I., Etzelmüller, B., and Sollid, J. L., 2004. "Using ground penetrating radar (GPR) to map the stratigraphic facies of rock glaciers: Svalbard Archipelago, Norway and Yankee Boy Basin, Colorado, USA," *Geological Society of America Special Paper 303*, 92-106.

Degenhardt, J. J. and Giardino, J. R., 2003. "Subsurface Investigation of a Rock Glacier Using Ground Penetrating Radar (GPR): Implications for Locating Stored Water on Mars," *The Journal of Geophysical Research*, 108(4), 17-1-17-17.

Burger, K., Degenhardt, J. J. and Giardino, J. R., 1999. "Engineering Geomorphology of Rock Glaciers," *Geomorphology*, Special Issue, 28th Annual Binghamton Symposium: Changing the Face of the Earth – Engineering Geomorphology, 93-132.

Degenhardt, J. J., Reid, A. M., Miller, R. McG., and Reimold, W. U., 1996. "Fine-grained Breccias from the Rim of the Roter Kamm Crater, Namibia," *Meteoritics and Planetary Science*, 31, 413-417.

Books

Baldwin, C., Cooper, B., Netoff, D. I., Solum, J. P., and Degenhardt, J. J., 2007. *Geologic Hazards and Resources Laboratory Manual*, second edition, The START Group, Huntsville, TX.

Netoff, D. I., Baldwin, C., Cooper, B., Degenhardt, J. J., and Solum, J. P., 2007. *Geologic Hazards and Resources* (eBook), first edition, The START Group, Huntsville, TX.

Chapters

Degenhardt, J. J., Giardino, J. R. and Junck, M. B., 2003. "GPR Survey of a Lobate Rock Glacier in Yankee Boy Basin, CO, USA," In: *Ground Penetrating Radar in Sediments* (C. S. Bristow and H. M. Jol, Eds.), *Geological Society of London, Special Publication*, 211, 167-179.

Degenhardt, J. J., 1999. "Directions, Compass Readings, and Field Mapping," In: *Planet Earth - An Introduction to Earth Systems Science Laboratory Manual*, Department of Geography and College of Geosciences, Texas A&M University, Pearson Custom Publishing, 11-18.

Degenhardt, J. J., 1999. "A Look at Soil Surveys: Their Use in Evaluating the Hazards of a Homesite," In: *Planet Earth - an Introduction to Earth Systems Science Laboratory Manual*, Department of Geography and College of Geosciences, Texas A&M University, Pearson Custom Publishing, 165-171.

Degenhardt, J. J., Buchanan, P. C., Reid, A. M., and Miller, R. McG., 1994. "Breccia Veins and Dykes Associated with The Roter Kamm Crater, Namibia," In: *Large Meteorite Impacts and Planetary Evolution* (B. O. Dressler, R. A. F. Grieve and V. L. Sharpton, Eds.), *Geological Society of America Special Paper 293*, 197-208.

Proceedings

Burger, K., Degenhardt, J. J. and Giardino, J. R., 1999. "Engineering Geomorphology of Rock Glaciers," In: *Changing the Face of Earth - Engineering Geomorphology*, proceedings of the 28th Binghamton Symposium in geomorphology (J. R. Giardino, R. A. Marston and M. Morisawa, Eds.), Elsevier Science B. V., The Netherlands, 93-132.

Research Monographs and Technical Reports

Giardino, J. R. and Degenhardt, J. J., 2000. "Colorado Field Trip Guide," for Department of Geology and College of Geosciences, Texas A&M University.

Cairns, D., Klein, A. G., **Degenhardt J. J.**, and Heggie, T. R., 1999. "New Mexico Field Trip Guide," for Department of Geography, Texas A&M University.

Degenhardt, J. J. and Funk, J., 1995. "Texaco EPTD Internal Assessment of the Safety and Health Program, 1994, Briarpark and Bellaire Facilities," 276 pgs.

Degenhardt, J. J., 1993. "A Visual Study of the Steam/Liquid Interface Formed in Gravity Drainage Laboratory Experiments - Observations of the Steamflood Process," Texaco EPTD Report 93-156, September, 42 pgs.

Funded External Grants

Landmark Graphics Corporation, Strategic University Alliance Grant Agreement (No. 2007-CONT-003344); 3-year software grant valued at \$804,000.00, August 2007.

Chevron Technology Ventures, Proposal accepted for the donation of TEEMS and X-band radar systems to Texas A&M University; System material value estimated at \$750,000, August 2005.

Arkansas-Oklahoma Center for Space and Planetary Science, seed grant program award, \$10,000; funded through Mission to Mars Program, April 2001.

Washington Initiative for Remote Sensing and Data Fusion at Texas A&M; One of ten proposals selected university-wide, March 2002.

Sigma Xi Grant in Aid of Research, \$1000, awarded for summer fieldwork, November 2000.

NASA grant award, \$10,000; rock glacier fieldwork, funded through Mission To Planet Earth Program, May 2000.

NAG-9807, NASA-JSC, Combining Shuttle Photography and Landscape Ecology to Produce a Predictive Model of Landscape Response to Climate Change, \$5000 dissertation funding, May 2000 – Dec. 2002.

Meteoritical Society, Student Travel Award, \$2000, 62nd Annual Meteoritical Society Meeting, Johannesburg, S. Africa, July 1999.

NAGW-3623, NASA-Washington D. C., Melting in Impact Processes - Understanding Granophyres, Pseudotachylites and Related Phenomena in Medium and Large Meteorite Impact Structures, 1992-94, \$120,000 (Project 2165), *with Arch Reid and Roy Miller*.

Peer-Review Presentations/Posters

Degenhardt, J. J., Giardino, J. R., Marston, R. A. and Pitty, A. F., 2007. "Possible origin of the block stream in Tom Mays Canyon, Franklin Mountains, TX," SWAAG/Mid-South ASPRS annual meeting, Bryan, TX., Nov. 1-3.

Degenhardt, J. J., Giardino, J. R., and Vitek, J.D., 2007. "Detection of water pathways in the active layer: results of ground penetrating radar (GPR) and conductivity surveys at Gilpin Peak rock glacier, Yankee Boy Basin, Colorado, USA," Annual Meeting of the Geological Society of America, Denver, CO., GSA Abstracts with Programs, 39(6).

Zhuang, K., Regmi, N., Giardino, J. R., Sanchez, R., Degenhardt, J. J., and Vitek, J.D., 2007. "Impact of climate change on rock glacier dynamics: San Juan Mountains, Colorado, USA," Annual Meeting of the Geological Society of America, Denver, CO., GSA Abstracts with Programs, 39(6).

Degenhardt, J. J., Giardino, J. R., Berthling, I., Isaksen, K., Odegard, R., and Sollid, J. L., 2006. "Using ground penetrating radar (GPR) to map the stratigraphic facies of rock glaciers: Svalbard Archipelago, Norway and Yankee Boy Basin, Colorado, USA," Annual Meeting of the Geological Society of America, Philadelphia, PA., GSA Abstracts with Programs, 38(8).

Degenhardt, J. J., Giardino, J. R., Jorgensen, W. R., Regmi, N. R., and Vitek, J. D., 2005. "Constructing the internal structure of rock glaciers using ground penetrating radar: Yankee Boy Basin and Blue

Lakes Valley, San Juan Mountains, Colorado, USA," 6th International Conference on Geomorphology, September 7-11, Zaragoza, Spain.

Jorgensen, W. R., Giardino, J. R., Degenhardt, J. J., Regmi, N. R., Stokes, R., and Vitek, J. D., 2005. "Internal structure of a rock glacier on Mount Mestas, CO, using ground penetrating radar (GPR): a preliminary assessment," Annual Meeting of the Geological Society of America, Salt Lake City, UT., GSA Abstracts with Programs, 37(7).

Degenhardt, J. J. and Giardino, J. R., 2004. "Mapping the stratigraphic facies of a rock glacier at Yankee Boy Basin, CO, USA: New results from a ground penetrating radar study," Annual Meeting of the Geological Society of America, Denver, CO., GSA Abstracts with Programs, 36(5).

Degenhardt, J. J. and Giardino, J. R., 2003. "Mapping the stratigraphic facies of a rock glacier using ground penetrating radar (GPR): Yankee Boy Basin, CO, USA," Annual Meeting of the Geological Society of America, Seattle, WA., GSA Abstracts with Programs, 35(6).

Giardino J. R., Degenhardt, J. J., Hermas, E., Marston, R. A., Melik, E., Rodriguez, D. and Vitek, J. D., 2003. "A geomorphic-landscape ecology approach to mapping an alpine landscape: Yankee Boy Basin, CO," Annual Meeting of the Geological Society of America, Seattle, WA., GSA Abstracts with Programs, 35(6).

Degenhardt, J. J., Giardino, J. R., Berthling, I., Isaksen, K., Odegard, R., and Sollid, J. L., 2002. "The internal structure of rock glaciers and geomorphologic interpretations: Yankee Boy Basin, CO, USA and Hiorthfjellet and Prins Karls Forland, Svalbard," Annual Meeting of the Geological Society of America, Denver, CO., GSA Abstracts with Programs, 34(6).

Neel C. R., Marston, R. A., Degenhardt, J. J., Giardino, J. R., Vitek, J. D., and Riley, S. D., 2002. "Rock glaciers on Mars," Annual Meeting of the Geological Society of America, Denver, CO., GSA Abstracts with Programs, 34(6).

Aly, M., Degenhardt, J. J. and Giardino, J. R., 2002. "An engineering geomorphology assessment of New Minia City, Egypt, using GIS," Annual Meeting of the Geological Society of America, Denver, CO., GSA Abstracts with Programs, 34(6).

Neel, C. R., Marston, R. A. and Degenhardt, J. J., 2002. "Rock glaciers on Mars, Presented at the 33rd Lunar and Planetary Science Conference, March Houston.

Degenhardt, J. J., Giardino, J. R. and Junck, M. B., 2001. "High alpine application of ground penetrating radar (GPR): Survey of an active rock glacier in Yankee Boy Basin, CO, USA," Ground Penetrating Radar (GPR) in Sediments: Applications and Interpretations, August 20-21, London.

Degenhardt, J. J., Giardino, J. R. and Pierce, C., 2001. "Longitudinal survey of a lobate rock glacier using ground penetrating radar (GPR), Yankee Boy Basin, CO, USA," Annual Meeting of the Geological Society of America, Boston, Massachusetts, GSA Abstracts with Programs, 33(6).

Herms, E. A., Giardino, J. R. and Degenhardt, J. J., 2000. " A geomorphic hazard investigation of Wadi Watir, southern Sinai, Egypt; an engineering geology approach using a new drainage basin

information system (DBIS)," Annual Meeting of the Geological Society of America, Reno, Nevada, GSA Abstracts with Programs, 32(7).

Degenhardt, J. J., Giardino, J. R., Junck, M. B., Quintana, M. P. and Marston, R. A., 2000. "Evaluating the internal structure of a rock glacier using ground penetrating radar (GPR): Yankee Boy Basin, CO, USA," Annual Meeting of the Geological Society of America, Reno, Nevada, Abstracts with Programs, 32(7).

Parker, M. A., Giardino, J. R., Degenhardt, J. J., Heggie, T., Mulligan, K. R., Junck, M. B., Quintana, M. P., Marston, R. A., and Vitek, J. D., 2000. "Surficial Geomorphic Processes and Engineering Geomorphology of the Yankee Boy Basin, CO, USA", Geological Society of America Annual Meeting, Reno, Nevada, Abstracts with Programs, 32(7).

Degenhardt, J. J. and Giardino, J. R., 1999. "Describing lobate Martian landforms using a terrestrial rock glacier kinematic wave model," Geological Society of America Annual Meeting, Denver, GSA Abstracts with Programs, 31(8).

Giardino, J. R., Marston, R. A., Degenhardt, J. J., Pitty, A., and Vitek, J. D., 1999. "Rock glacier vs. sturzstrom - a convergence of processes and landform morphology: fabric data from the Franklin Mountains, TX, and the San Juan Mountains, CO., USA," Geological Society of America Annual Meeting, Denver, GSA Abstracts with Programs, A-52.

Degenhardt, J. J. and Giardino, J. R., 1999. "Kinematic wave models for Martian landforms based on rock glacier analogs," 62nd Annual Meeting of the Meteoritical Society, Johannesburg, South Africa, Meteoritics and Planetary Science 34(4) Supplement, A31.

Degenhardt, J. J., 1999. "Constructing landform maps using a computer-based image processing system: an example from the San Juan Mountains, Colorado," Second Annual Student Research Week, Texas A&M University, Spring Proceedings, 32.

Giardino, J. R., Tenalio, S., Degenhardt, J. J., Djamaluddin, R., Guzman, M., Parker, M., Marston, R. A., and Vitek, J. D., 1998. "Constructing a geomorphic map using a microcomputer-based image processing system," Geological Society of America Annual Meeting, Toronto, Ontario, Canada, GSA Abstracts with Programs, A-287.

Degenhardt, J. J. and Briere, P. R., 1998. "Use of SPOT Multispectral Satellite Imagery to Identify Lithology and Geomorphology in the Hamersley Range, Western Australia," First Annual Student Research Week, Texas A&M University, Spring Proceedings, 57.

Degenhardt, J. J. and Briere, P. R., 1998. "Geomorphologic Interpretation of a SPOT Image in Western Australia," Texas Geomorphology Symposium, First Annual Meeting, January 29-30.

Buchanan, P. C. and Degenhardt, J. J., 1995. "Features Resembling Pseudotachylyte from Enchanted Rock Batholith, Texas." Presented at the Meteoritical Society Annual Meeting, Washington D.C., Meteoritics, Vol. 30, 492-493.

Degenhardt, J. J., Reid, A. M., Buchanan, P. C., and Miller, R. McG. , 1995. "'Melt' Breccias from the Roter Kamm Impact Crater, Namibia," Presented at the 26th Lunar and Planetary Science Conference, Proceedings of the 26th Lunar and Planetary Science Conference, 721-722.

Degenhardt, J. J., Buchanan, P. C., and Reid, A. M., 1993. "Impact metamorphic effects and formation of pseudotachylite at Roter Kamm Crater, Namibia," Proceedings of the Sigma Gamma Epsilon Sixth Annual Research Day, Department of Geosciences, University of Houston., 9-10.

Degenhardt, J. J., Buchanan, P. C., and Reid, A. M., 1992. "Impactite and Pseudotachylite from Roter Kamm Crater, Namibia.," International Conference on Large Meteorite Impacts and Planetary Evolution, Sudbury, Canada, Lunar and Planetary Institute Contribution No. 790, Houston, Texas, 20-21.

Work or Professional Experiences

2006 – Present, Assistant Professor, Department of Geography and Geology, Sam Houston State University.

2004 – 2006, Lecturer, Planet Earth System Science, Geomorphology, and Geography of the United States. Department of Geography, Aggie Access Faculty, Texas A&M University.

2003 – 2006, Assistant Research Scientist and Business Development Coordinator, Boeing Technology Mentoring Program, Office of the Vice President for Research, Office of Sponsored Projects, Institute for Scientific Computation, Texas A&M University.

2002, Research Associate and Coordinator of Grantwriters' Workshop – Office of Proposal Development, Office of the Vice President of Research, Texas A&M University.

2002, Lecturer, Introduction to Physical Geology. Department of Geology & Geophysics, Texas A&M University.

1999 – 2002, Graduate Assistant to the Dean of Graduate Studies, Office of Graduate Studies, Texas A&M University.

1997 – 1999, Laboratory Coordinator, Department of Geography, Texas A&M University.

1997 – 1999, Graduate Teaching Assistant, Department of Geography, Texas A&M University.

1993 – 1998, Laboratory Technologist, Texaco Exploration and Production Technology Department, Houston, TX.

1993 – 1996, Internal Safety Auditor, Texaco EPTD Briarpark facility, Houston, TX.

1992 – 1996, Response Team Member, Fire and SCBA Rescue, Texaco EPTD Bellaire and Briarpark facilities, Houston, TX.

1991 – 1996, Director, H2S Safety and Awareness Training Program, Texaco Exploration and Production Technology Department, Houston, TX.

1988 – 1993, Laboratory Technician, Texaco Exploration and Production Technology Department, Bellaire, TX.

Honors and Awards

Phi Kappa Phi Honor Society, April 2001 to present

Sigma Xi, Scientific Research Society, October 2000 to present

Phi Beta Delta Honor Society for International Scholars, March 1999 to present

Outstanding Customer Service – Kern River Steamflood Mechanisms Team member, Texaco, 1996

Graduate student poster contest winner, Houston Geological Society Meeting, 1995

Publication Milestone Award - Texaco EPTD, 1994

Other Competencies

American Society of Photogrammetry and Remote Sensing (ASPRS), Member, 1999 - 2006

Geological Society of America (GSA), Member, 1998 to present

Association of Engineering Geologists (AEG), member, 1998 to present

Meteoritical Society, Member, 1993 to present

American Association of Petroleum Geologists (AAPG), Member, 1984 - 1995

Member, Career Services Advisory Committee, Sam Houston State University, 2007 to present.

Departmental liaison and Guest Lecturer for Webelos Scouts, Pack 1324, Den 9, Spring, TX, 2007 to present.

Sigma Gamma Epsilon Honor Society, Beta Iota Chapter, University of Houston, 1992-1994

Sigma Gamma Epsilon Honor Society, Beta Iota Chapter, Vice-President, 1993; Treasurer, 1992

Review Committee, Association of Former Students Distinguished Graduate Student Teaching Awards, Texas A&M University, 2002.

Co-Leader, Galveston Island and Upper Texas Gulf Coastal Zone Field Excursion, NASA Aerospace Education Services Program, *with R. Giardino, J. Vitek, J. McCloy, and S. Marks*, September 2001.

Committee for Student Recreation Center, Graduate Student Council, Texas A&M University, 1998-2000.

Parking and Transportation Committee, Graduate Student Council, Texas A&M University, 1998-2000.

Graduate Student Council, College of Geosciences Caucus Leader, Graduate Student Council, Texas A&M University, 1998-2000.

Graduate Student Council Representative, College of Geosciences, Texas A&M University, 1997-2000.

Co-Leader, Colorado Field Excursion, Department of Geography, week-long geomorphology methods, *with D. Cairns*, October 1999.

Co-Leader, New Mexico Field Excursion, Department of Geography, week-long geomorphology and field methods in southern New Mexico, *with V. Tchakerian*, September 1998.

Graduate Student Representative to the Faculty, Department of Geography, Texas A&M University, 1998-1999.

Head Teaching Assistant, Department of Geography, Texas A&M University, 1997 - 1998.

Doctoral Advisor, Department of Geology & Geophysics, two doctoral students working on remote sensing-related dissertations, 2003-2004.

Co-Leader, Colorado Field Excursion, Department of Geology & Geophysics, week-long geology and field methods in the Rocky Mountains, *with Dr. Rick Giardino*, 1999-2000.