Gillian E. Noonan
Staff Engineer II

Summary

7 years Geophysical experience.

Education

B.S., Geological Engineering. University of Arizona. Tucson, Arizona.

Experience

2004 — Present. Staff Engineer II. hydroGEOPHYSICS, Inc. Tucson, Arizona.

Associate of Surface Geophysical Exploration (SGE) team, responsible for quality control, data reduction and inversion modeling, 2D and 3D data visualization for imaging underground waste plumes using electrical resistivity at the Hanford nuclear facility in eastern Washington. Provides support for site characterization and utility detection studies using magnetics, electromagnetics and ground penetrating radar. Responsible for quality control, processing and presentation of geophysical data for various projects within the United States, South and Central America in the areas of environmental monitoring, mineral exploration and recovery, and geotechnical analysis. Previous experience includes data processing and managing of HRR LDM systems at the Hanford facility.

2004. NSF REU Student Research Grant. SPLIT Engineering. Tucson, Arizona.

Collected case studies using a LIDAR laser scanner for testing of beta-version Split-FX software. Performed 3-D point cloud rock fracture and orientation analyses using Split-FX. Culmination of research presented in "Automatic Acquisition and Determination of Rock Discontinuity Properties Using Three-Dimensional Laser Scanning", APCOM 2005- The 32nd International Symposium on Computer Applications in the Minerals Industry.

2004. Data Collection and Research. Zonge Engineering. Tucson, Arizona.

Aided in the testing of a specialized TEM configuration for unexploded ordnance (UXO) characterization and classification. Culmination of research presented in "TEM Investigations for UXO Characterization and Classification", Geological Engineering Senior Design Project 2004- U of A.

2003 — 2004. G.R.O.W. Project. University of Arizona. Tucson, Arizona.

Collected material in the area of Rock Mechanics and Engineering for an NSF/NSDL Civil Engineering Geotechnical, Rock and Water Digital Library (www.grow.arizona.edu). Spoke at NSDL presentation to members of Congress and Senate, Washington D.C. Participated in G.R.O.W presentations to W.I.S.E. and Daughters on Campus, U of A.

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Publications

Rucker, D.F., D.A. Myers, B.D. Cubbage, M.T. Levitt, G.E. Noonan, M. McNeill, C. Henderson, and R.W. Lober, 2011. Surface Geophysical Exploration: Developing Noninvasive Tools to Monitor Past Leaks around Hanford's Tank Farms. Environmental Monitoring and Assessment (in review).

Rucker, D.F., and G.E. Noonan, 2011. Using marine resistivity to map geotechnical properties: A case study in support of dredging the Panama Canal. Journal of Environmental and Engineering Geophysics (in review).

Rucker, D.F., G.E. Noonan, and W.J. Greenwood, 2011. Electrical resistivity in support of geologic mapping along the Panama Canal. Engineering Geology 117(1-2):121-133.

Rucker, D.F., M.H. Loke, G.E. Noonan, and M.T. Levitt, 2010. Electrical Resistivity Characterization of an Industrial Site Using Long Electrodes. Geophysics (in press).

Rucker, D.F., M. McNeill, A. Schindler, and G.E. Noonan, 2009. Monitoring of a secondary recovery application of leachate injection into a heap. Hydrometallurgy 99(3-4):238-248. doi: 10.1016/j.hydromet.2009.08.012.

Conference Proceedings

Rucker, D.F., B.D. Cubbage, D.A. Myers, M.T. Levitt, G.E. Noonan, M. McNeill, K. Rucker, 2011. Electrical Imaging of Industrially Complex Areas: Using Existing Infrastructure as Sensors for Characterization and Monitoring. NOVCARE 2011. Novel Methods for Subsurface Characterization and Monitoring, Cape Cod, MA. May 9-11, 2011.

Noonan, G. and D.F., Rucker, 2011. Panama Canal Expansion Project: How Marine Electrical Resistivity was Used in Support of Canal Dredging. SAGEEP 2011, Annual meeting of the Environmental and Engineering Geophysical Society, Charleston, SC. April 10-14, 2011.

Certifications

Engineer-in-Training (EIT) Certified

MSHA certified

OSHA certified