

Summary

14 years Geophysical experience.

Education

Ph.D., Environmental and Geographical Sciences. Manchester Metropolitan University. Manchester, United Kingdom.

M.S., Archaeology. Liverpool University. Liverpool, United Kingdom.

B.S., Geology and Geophysics. Durham University. Durham, United Kingdom.

Experience

2011 – Present. Senior Geophysicist. hydroGEOPHYSICS, Inc. Richland, Washington.

Expert knowledge in electrical and electromagnetic geophysics. Experience with seismics is beneficial. Experience in inverse modeling, numerical methods, scientific computing languages (Fortran, MATLAB, etc.), and data acquisition. Strong communications skills, including published papers, conference presentations, and invited talks. Demonstrates prior experience with various field surveys, showing knowledge of survey design, geophysical equipment, data acquisition techniques, and data processing methodology. Prior DOE/DOD/National Laboratory experience.

2008 – 2011. Shared Field Measurement Facility Manager. Stanford University, Stanford, California.

Creation and development of the Shared Field Measurement Facility in the School of Earth Sciences, specializing in near-surface geophysical applications. Provide geophysical support to research projects within the Stanford community, including: survey design, data acquisition and processing, interpretation and integration of resulting data. Service and maintenance of instruments housed in the facility. Developed and instructor for GP190 (Introduction to Geophysical Field Methods) and Arch115/315 (Geophysical Prospection for Archaeology Applications) courses. Creation of workshops and field classes concerning the use of instruments housed in the facility.

2006 – 2008. Geophysics Department, Postdoctoral Research Associate. Stanford University, Stanford, California.

Development of the Hydrological Measurement Facility (HMF) - Geophysics module (part of the CUAHSI effort), included; creation of infrastructure to assist with forming partnerships between the geophysical and hydrological communities. Completed a series of feasibility studies demonstrating the value of geophysical techniques to the WATERS test-bed sites in: Baltimore, MD; Flathead River, MT; Sierra Nevada, CA; Clear Creek, IA. Created a nationwide geophysics network to promote the sharing of geophysical equipment and expertise within the hydrological community.

2006 – 2008. Department of Environmental Science, Postdoctoral Research Associate. Stanford University, Stanford, California.

Hydrogeophysical characterization of surface-ground water interactions, part of the NERC funded Lowland Catchment Research (LOCAR) program. Demonstrated the value of hydrogeophysical surveys for improved hydrostratigraphic mapping within the riparian zone and measurement of changes in pore fluid chemistry in near surface sediments. Developed a new technique which uses temperature time series from river bed piezometers to compute estimates of groundwater contaminant influxes.

1998 – 2006. Freelance Geophysicist. Geo-Services International Limited, Oxfordshire, United Kingdom.

Management and execution of near surface geophysical projects for geotechnical and environmental applications. Projects included; Unexploded ordinance detection at Brownfield sites throughout the UK; Void detection along the proposed channel tunnel rail link route using microgravity and 3D GPR, London, UK.

1997 – 1998. Geophysicist. Read Well Services, Aberdeen, United Kingdom.

Processing / interpretation of Vertical Seismic Profiles from the North Sea.

Affiliations

American Geophysical Union

Environmental and Engineering Geophysical Society

European Association of Geoscientists and Engineers

British Hydrological Society

Certifications

Environmental, geotechnical and archaeological applications of GPR workshop, Reynolds Geo-Sciences (2003)

MSHA certified

OSHA certified (29CFR 1910.120) Hazardous Materials Awareness

OSHA certified (29CFR 1910.1200) Hazard Communications (Department of Labor)