

CURRICULUM VITAE

DAN R. GLASER

danneyglaser@gmail.com | danney.r.glaser@usace.army.mil | dan.glaser@rutgers.edu

PROFESSIONAL EXPERIENCE

2016-Present: *Research Geophysicist*, Electromagnetics Group, Signature Physics Branch, USACE ERDC Cold Regions Research & Engineering Laboratory, Hanover, NH, USA

2016-Present: *Principal Geophysicist*, North River Geophysics, LLC, Nottingham, NH, USA

2014-2015: *Senior Project Manager, Senior Geophysicist*, Hager Geoscience, Inc., Woburn, MA, USA

2011-2014: *Project Manager, Senior Geophysicist*, Washington River Protection Solutions, LLC, Contractor to the US Department of Energy, Richland, WA, USA

2009-2011: *Research Geophysicist*, US Environmental Protection Agency, Office of Research & Development, National Exposure Research Laboratory, Las Vegas, NV, USA

2004-2009: *Geophysical Project Manager*, hydroGEOPHYSICS, LLC, Missoula, MT, USA

2002-2004: *Staff Geologist II*, NorthShore Engineering, Scottsdale, AZ, USA

2002-2002: *Graduate Research Assistant-Hydrogeophysics*, Geosciences Dept., Univ. of Missouri, Kansas City, MO, USA

1997-2000: *Research Assistant – Environmental Geophysics*, Geosciences Dept., Univ. of Southern Maine, Gorham, ME, USA

EDUCATION

2019-Present: Ph.D. Candidate, Earth & Environmental Science: *Near-Surface Geophysics*
Rutgers University, Newark, NJ, USA

2010-2011: Post Graduate Coursework in *Hydrogeology*
University of Nevada, Las Vegas, NV USA

2000-2002: M.S. Urban Environmental Geology: *Hydrogeophysics*
University of Missouri, Kansas City, MO, USA

2002: Postgraduate Coursework: *Exploration Geophysics*
University of Kansas, Lawrence, KS USA

1996-2000: B.A. Environmental Geology: *Environmental Geophysics*
University of Southern Maine, Gorham, ME, USA

PROFESSIONAL REGISTRATION & CERTIFICATION

2014: Certified Project Management Professional (#704786)

2013: Licensed Professional Geologist New Hampshire (License # 848)

2012: Licensed Professional Geologist Washington State (License # 2941)

2005: Mine Safety & Health Administration Safety Training (MSHA)

2004 & 2011-2014: US Department of Energy: Radiation Worker II

2002: Hazardous Waste Operations & Emergency Response (40hr, 24hr, 8hr)

HONORARY SCIENTIFIC SOCIETY

2000 – Present, Sigma Xi Scientific Research Honor Society

CURRICULUM VITAE

===== AWARDS & RECOGNITION =====

2021, 1st Place, Society of Exploration Geophysics, NSTS, Photo Contest

2020, USACE ERDC Long-Term Training Award

2019, USACE ERDC Outstanding Achievement in Student Outreach: Colleges & Universities

2019, USACE ERDC/CRREL Performance Award: Distributed Acoustic Sensing

2018, USACE ERDC/CRREL Performance Award: Distributed Acoustics Sensing

2010, US EPA Performance Award: Emerging Contaminants – Spectral Induced Polarization

2009, US EPA Performance Award: Emerging Contaminants – Spectral Induced Polarization

===== PROFESSIONAL SOCIETY SERVICE =====

2023-Present: Intersociety Committee Chair, Environmental & Engineering Geophysical Society.

2022-Present: Executive Committee – American Geophysical Union Near Surface Section, Role: Science Advisor to the EOS Publication, and EEGS Liaison

2020-2023: Board of Directors, Environmental and Engineering Geophysical Society, elected, 3yr term, Role: Member-at-large, Communications Committee

2022: Guest Editor: *FastTIMES* Special Issue on Climate Change and the Critical Zone Geophysics

2010-Present: Associated Editor, Journal of Environmental & Engineering Geophysics

===== TECHNICAL SOCIETY MEMBERSHIP =====

Member, American Geophysical Union (AGU)

Associate Member, Society of Exploration Geophysics (SEG)

Member, Environmental and Engineering Geophysical Society (EEGS)

USACE Geotechnical, Geology and Materials Community of Practice (GGM CoP), Geophysics SubCoP

Past Membership: AGI, AEG, ASTM International, EAGE, GSA, NGWA, SAME, SSSA

===== SESSION CHAIR/CO-CHAIR (last 5 yrs) =====

2023 – Society of Exploration Geophysics – IMAGE’23 – Huston, TX – *Cryogeophysics: Near-Surface Geophysics in the Cryosphere.*

2023 - Symposium on the Application of Geophysics to Environmental and Engineering Problems, New Orleans, LA – *Cold Regions Geophysical Site Characterization*

2022 - AGU Fall Meeting, New Orleans, LA – *Cryogeophysics: Emerging Technologies for Sensing Dynamic Cold Regions Environments (1 oral session)*

2022 - Symposium on the Application of Geophysics to Environmental and Engineering Problems, Denver, CO – *Electromagnetics & Groundwater Dynamics*

2021 - AGU Fall Meeting, New Orleans, LA – *Cryogeophysics: Emerging Technologies for Sensing Dynamic Cold Regions Environments (x3 oral sessions; 1 poster session)*

2021 - Symposium on the Application of Geophysics to Environmental and Engineering Problems, Virtual Event - *Optical Sensing — DAS, Thermal, LiDAR & Multi-spectral Sensing & Transportation and Infrastructure — Engineering, Monitoring & Evaluation*

2019 - Symposium on the Application of Geophysics to Environmental and Engineering Problems, Portland, OR – *Contaminated Land*

CURRICULUM VITAE

SELECT PEER REVIEWED PUBLICATIONS

ORCID [0000-0002-7319-1608](https://orcid.org/0000-0002-7319-1608)

Glaser, D.R., Barrowes, B.E., Shubitidze, F., and L. Slater, *Sent out for Review*. Investigating High-Frequency Electromagnetic Induction Measurements for Macro-Scale Relaxation Signatures. *Geophysical Journal International*, TBD.

Glaser, D.R., Henderson, R.D., Werkema, D.D., Johnson, T.J., and R.J. Versteeg, 2022. Estimating Biofuel Contaminant Concentration from 4D ERT with Mixing Models, *Journal of Contaminant Hydrology*, <http://doi.org/10.1016/j.jconhyd.2022.104027>.

Liu, R., Zhu, C., Schmalzel, J., Offenbacher, D., Mehta, Y., Barrowes, B., **Glaser, D.R.**, and W. Lein. 2022. Experimental and Numerical Analysis of Soil Electrical Resistivity under Subfreezing Conditions, *Journal of Applied Geophysics*, 202(2022):104671, <https://doi.org/10.1016/j.jappgeo.2022.104671>.

Glaser, D.R., Prishvin, M., Shubitidze, F., and B. Barrowes, 2022. Standoff High-Frequency Electromagnetic Induction Response of Unsaturated Sands: A Tank-Scale Feasibility Study. *Journal of Environmental and Engineering Geophysics*, 27(1):45. <http://dx.doi.org/10.32389/JEEG21-030>.

Glaser, D.R., 2021. A Site-Specific Comparison of Permeability Prediction Models in Alluvial Sediments from Physical and Geoelectrical Measurements. *Journal of Environmental and Engineering Geophysics*, 26(4):315, <http://dx.doi.org/10.32389/JEEG21-025>.

Glaser, D.R., Burch, K., Brinkley, D., and Reppert, P., 2021. Localization of Deep Voids through Geophysical Signatures of Secondary Dewatering Features. *Geophysics: Special Issue on Shallow Void, Tunnel, and other Anomaly Detection*. 86: WA139-WA152. <https://doi.org/10.1190/geo2020-0491.1>

Glaser, D.R. and Wagner, A.M., 2019. Dynamic cold regions terrain effects on time-domain electromagnetic induction data. *Cold Regions Science & Technology*, 158:52-61. <https://doi.org/10.1016/j.coldregions.2018.11.008>

Rucker, D.F., and **D.R. Glaser**, 2015. Standard, random, and optimum array conversions from two-pole resistance data. *Journal of Environmental and Engineering Geophysics*, 20(3):207-217. <https://doi.org/10.2113/JEEG20.3.207>

Glaser, D.R., Werkema, D.D., Versteeg, R.J., Henderson, R.D., and Rucker, D.F., 2012. Temporal GPR Imaging of an Ethanol Release within a Laboratory-Scaled Sand Tank, *Journal of Applied Geophysics*, 86:133-45. <https://doi.org/10.1016/j.jappgeo.2012.07.016>

Joyce, R., **Glaser, D.R.**, Atekwana, E., and Werkema, D.D., 2012. Spectral induced polarization response to nanoparticles in a saturated sand matrix. *Journal of Applied Geophysics*, 77:63-71. <https://doi.org/10.1016/j.jappgeo.2011.11.009>

Rucker, D.F., Crook, N., **Glaser, D.R.**, and M.H. Loke, 2011. Pilot-scale field validation of the long-electrode electrical resistivity method. *Geophysical Prospecting*, 60(6):1150-1166. <https://doi.org/10.1111/j.1365-2478.2011.01039.x>

Rucker, D.F., **Glaser, D.R.**, Osborne, T. and W. Maehl 2009. Electrical Resistivity Characterization of the reclaimed Landusky Gold Mine to Delineate Acid Rock Drainage Pathways. *Mine Water and the Environment*, 28 (2): 146-157. <https://doi.org/10.1007/s10230-009-0072-x>

Rucker, D.F., A. Schindler, M.T. Levitt, and **D.R. Glaser**, 2009. Three-Dimensional Electrical Resistivity Imaging of a Gold Heap. *Hydrometallurgy*, 98 (3-4): 267-275. <https://doi.org/10.1016/j.hydromet.2009.05.011>

Slater, L. D. and **Glaser, D.R.**, 2003, Controls on Induced Polarization in Sandy Unconsolidated Sediments and Application to Aquifer Characterization, *Geophysics*, 68(5): 1547-1558. <https://doi.org/10.1190/1.1620628>

CURRICULUM VITAE

BOOK CHAPTERS

James, S., A. Garcia, and **D.R. Glaser**, *Submitted*. “Environmental Geophysics, in “Environmental Science,” Ed. Ellen Whol, New York: Oxford University Press, TBD.

Johnson T.C., D.F. Rucker, and **D.R. Glaser**. 2015. “Near-Surface Geophysics at the Hanford Nuclear Site, the United States.” Chapter 11.17 in *Treatise on Geophysics, Second Edition*, vol. 11, ed. G. Schubert, pp. 571-595. Elsevier, Amsterdam, Netherlands.

THESIS & DISSERTATION

Glaser, D.R., *In Progress*. *Macro-scale Relaxation Signatures in the Electromagnetic Induction Response of Porous media with Metal, Semi-Metal, and Clay Inclusions*. Doctoral Dissertation, Department of Earth & Environmental Sciences, Rutgers University, Newark.

Glaser, D.R., 2007. *Estimation of Alluvium Properties from Spectral Induced Polarization Measurements*. Master’s Thesis, Department of Geosciences, University of Missouri Kansas City.

PERIODICALS & WEBSITES

Glaser, D.R., and S.R. James, 2021. Foreword to this Special Issue on Climate Change and the Critical Zone Geophysics. *FastTIMES, Special Issue on Climate Change and the Critical Zone*, 26(3), Editors D.R. Glaser, S. James. <https://fasttimesonline.co/foreword-to-this-special-issue-on-climate-change-and-the-critical-zone-geophysics/>

Glaser, D.R., Costley, R.D., and Z. Courville, 2021. Polar bear intrusion detection at Arctic Camps using Distributed Acoustic Sensing. *FastTIMES, Special Issue on Climate Change and the Critical Zone*, 26(3), Editors D.R. Glaser, S. James. <https://fasttimesonline.co/distributed-acoustic-sensing-of-polar-bear-intrusion-at-arctic-research-camps-a-laboratory-feasibility-study/>

Werkema, D.D., Jackson, M., and **Glaser, D.R.**, 2010. The Environmental Geophysics Web Site and Geophysical Support System (GDSS). U.S. Environmental Protection Agency, Washington, DC, EPA/600/C-10/004. <https://www.epa.gov/environmental-geophysics>

SELECT CONFERENCE ABSTRACTS (Last 5 yrs)

Liu, R., Zhu, C., Schmalzel, J., Barrowes, B., **Glaser, D.R.**, Maxson, M., and W. Lein, *Submitted*. Electrical Resistivity Behavior of Saline Soil under Low Temperature Conditions. *Traffic Research Board*.

Burch, K., Lein, W., and **Glaser, D.R.**, *Submitted*. Site investigation database for geophysical and geotechnical data collected on a specific soil type, Geo-Congress 2024

Glaser, D.R., Barrowes, B.E., Shubitidze, F., and L.D. Slater, *Submitted*. Macro-scale relaxation investigations with frequency- and time-domain electromagnetic induction. The International Meeting for Applied Geoscience & Energy (IMAGE), 28 Aug – 1 Sept, 2023.

Wagner, A., Sullivan, T., and **Glaser, D.R.**, *Submitted*. Permafrost and groundwater characterization and detection of long-term changes using geophysical methods. The International Meeting for Applied Geoscience & Energy (IMAGE), 28 Aug – 1 Sept, 2023.

Glaser D. R., Reynolds, R., Shubitidze, F., Slater, L.D., and Barrowes, B., 2023. Investigating Time-Domain Electromagnetic Induction Signatures in Porous Media for Evidence of Macro-Scale Relaxation. *The Symposium on the Application of Geophysics for Environmental and Engineering Problems*, New Orleans, LA, 2-6 Apr, 2023.

Glaser, D.R., Barrowes, B.E., Shubitidze, F., and Slater, L.D., 2022. In search of low-frequency surface charge relaxation signatures of porous media in low frequency electromagnetic induction data. *American Geophysical Union Fall Meeting*, Chicago, IL, 12-16 December.

CURRICULUM VITAE

- Glaser, D.R.**, Sullivan, T., and Wagner, A., 2022. Resolving the Base of Permafrost with ERT Depth Electrodes. Poster. *American Geophysical Union Fall Meeting*, Chicago, IL, 12-16 December.
- Sullivan, T., **Glaser, D.R.**, Maakestad, J., Dragos, V., Liddle Broberg, K., Saari, S., and Wagner, A., 2021. Investigation of Permafrost and Soil Moisture Distribution using GPR, NMR, and ERT. 2021 Regional Conference on Permafrost and 19th International Conference on Cold Regions Engineering, Virtual Conference, October 24-29, 2021.
- Glaser, D.R.**, Falzone, S., Scarlett, K., Alumbaugh, D., Worthmann, B., Ulrich, C., and M. Wallace, 2021. An automated cross-borehole GPR change detection GUI for localization of subsurface voids. AGU Fall Meeting, 2021, New Orleans, LA.
- Glaser, D.R.**, Burch, K., Boitnott, G.E., Garcia, A., Jones, B.J., Maxson, M., Brinkley, D., Powers, M., and P. Reppert, 2021. Multi-method Geophysical Investigation of Moisture Gradients in the Critical Zone Near the Connecticut River Hartland, VT. *Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems*, Virtual Conference, 14-19 March.
- Liu, R., Offenbacher, D., Zhu, C., Schmalzel, J., Mehta, Y., Barrowes, B., **Glaser, D.R.**, and W. Lein, 2021. Electrical Resistivity Hysteresis Response of Clayey-Sands under Sub-Freezing Conditions. *Transportation Research Board 2021, Virtual Conference*, 5-29 January.
- Peterson, D., Meyer, A.C., Dunn, K.G., Vecherin, S.N., **Glaser, D.R.**, Costley, R.D., Wheeler, A., Jones, B.J., Dunn, E.B., and M. Moran, 2020. Improving Detection of Acoustic Sources by Coiling Fiber Optic Cable, *Proc. SPIE 11418, Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXV, 114180B*, 24 April 2020.
- Glaser, D.R.**, Costley, R.D., Hathaway, K.K., Boitnott, G.E., and J. Weale, 2019. Snow Coupled Distributed Acoustic Sensing for Intrusion Detection of Polar Bears in Arctic Camps. AGU Fall Meeting, 2019.
- Garcia, A., Asenath-Smith, E., **Glaser, D.R.**, and L. Slater, 2019. Studying the Spectral Induced Polarization Signal of Calcite Crystal Growth through Double Diffusion in Porous Media. AGU Fall Meeting, 2019, NS43D-0868.
- Glaser, D.R.**, Barrowes, B.E., Prishvin, M., O'Neill, K., and F. Shubitidze, 2019. Bench Scale Measurement of Unsaturated Soils Using EMI, IP, TDR, and GPR. *Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems*, Portland, OR, 17-21 March.
- Barrowes, B., **Glaser, D.R.**, Prishvin, M., Coleman, M., and F. Shubitidze, 2019. Assessing the Frozen State of Soils using iFrost: an electromagnetic induction sensor on a UAS platform. 18th International Conference on Cold Regions Engineering and 8th Canadian Permafrost Conference, 18-22 August, Quebec City, Quebec, CA; Cold Regions Engineering 2019, p.8-16.
- Barrowes, B.E., **Glaser D.R.**, Prishvin, M., Jutras, G., O'Neill, K., and F. Shubitidze, 2019. HFEMI Data from Carbon Rods, Wires, and Improvised Explosive Device Constituent Parts. *Proc. SPIE 11012, Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIV, 110120Q*, 10 May.
- Glaser, D.R.**, North, R.E., Parkman, K.B., Engle, C.S., Quinn, M.C., Williams, C.R., and S.R., Stanton, 2018. Geoelectrical and electromagnetic induction delineation of seep origin at a US Army Earthen Dam. NS41B-0829, 2018 Fall Meeting, AGU, Washington D.C., 10-14 Dec.
- Barrowes, B.E., **Glaser, D.R.**, Prishvin, M., O'Neill, K., and Shubitidze, F., 2018. Short and long wire detection using high-frequency electromagnetic induction techniques. SPIE Defense + Commercial Sensing, Orlando, FL, April 14-18, 2018.
- Glaser, D.R.**, and Wagner, A.M., 2018. Cold Regions Effects on TDEMI Surveys for Metallic Debris Remediation Confirmation. *Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems*, Nashville, TN, 25-29 March.