VANDERBILT School of Engineering

Postdoctoral position for up to 2 years focused on groundwater remediation and decision making under uncertainty

Department	Civil and Environmental Engineering
Full Description	This position offers a unique opportunity for collaborative synthesis with academic and government leaders in environmental management, providing fundamental scientific advancement to societally relevant challenges. The appointment will support an effort to develop a novel and transferable methodology for groundwater treatment process performance assessment and groundwater monitoring and management in contaminated sites undergoing remediation. In addition to a strong physical template, this methodology will be informed by the legal and regulatory analyses of remedial decision-making and practice at comparable sites. Research goals include: a) Evaluate and refine the existing flow and transport models for contaminated sites. b) Use a Value of Information (VOI) approach to evaluate the current data collection strategy, identify additional data needs, and propose an optimal observation network that maximizes information and minimizes costs. c) Propose an approach, based on a Bayesian Model Averaging (BMA), for the estimation of plume characterization and its fate under uncertain release history, observations, and subsurface architecture. The successful post-doctoral applicant(s) will be part of a research group focused on environmental remediation and decision making. Necessary skills include experience with flow and transport modeling, programming (e.g., MATLAB, R, Python, FORTRAN, or C), geostatistics, uncertainty quantification, and high-performance computing. The successful applicant will be expected to work effectively both independently and in collaborative groups. Collaborations will include DOE national laboratories and international collaborators. *The preferred due date for applications is August 31, 2018.* However, applications will be reviewed as they are received until the position(s) is filled. One or multiple individuals may be selected to fill positions.
Application Details	Please submit the following: i) letter of interest and key qualifications, ii) full curriculum vitae, iii) example publications, iv) at least three professional references (include name, title, affiliation, e-mail address and phone number). Submit to Jesus Gomez-Velez (jesus.gomezvelez@vanderbilt.edu).
Contact:	Jesus Gomez-Velez, PhD jesus.gomezvelez@vanderbilt.edu Phone: 615-343-0319
Posted	2018-08-10