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THE GEOTECHNICAL ENGINEERING RESPONSE TO BIG DATA: REACTIVE VERSUS PROACTIVE… YOU CAN CHOOSE

October 9th, 12-1PM
Berthoud Hall Room 241

Let's start with the premise that the current state of geotechnical data management leaves a lot to be desired and that geotechnical engineers have historically been poor data managers. Left to their own devices and without an external push, the status quo will be considered acceptable to many practitioners because it is painful to change current practice and because many practitioners do not see a need to change based on input and response from owners, clients, and contractors. In the world of automated geotechnical instrumentation, in-cab construction data collection and control; geographic information systems and data visualization, LIDAR, drone surveys, etc., these practitioners will quickly find that conventional techniques for data management cannot be sustained and will soon be recognized by their clients as being unacceptable. So, what to do? We can go the way of the dinosaur and slowly be considered irrelevant or we can get in front of the parade and be recognized as leaders and innovators. Work at the Colorado School of Mines clearly shows that you are of the latter mindset, so this presentation and message might be considered "preaching to the choir." However, even if this is the case, it is often found beneficial and helpful to have another preacher lead the tent revival. With apologies for the numerous clichés, this presentation will present examples of how the geotechnical world should be looking to the future regarding data management and visualization.

Dr. Bachus s a civil engineer with more than 40 years of experience, with an expertise in geotechnical and geoenvironmental engineering. He started his professional career as a member of the faculty at the Georgia Institute of Technology where he taught for 11 years before joining Geosyntec Consultants in 1990, where he is now a Senior Principal. The firm specializes in geotechnical, environmental, and water resource engineering, with >1,200 employees in its 75 offices in the U.S., Canada, and Europe. His research and project activities cover a wide range of topics, including dams and levees, landslide assessment, landfill design and performance, soil/rock properties, and forensic engineering. He has worked extensively on the properties and beneficial use of coal combustion residuals (CCRs) and geotechnical data management and visualization. He is currently an Adjunct Professor at Georgia Tech and Chairman of the Transportation Research Board's Standing Committee on Soil and Rock Properties.

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