

Water expert will talk about applications of advanced computational methods in engineering.

[Submitted by Trisha Brown](#)

David Steward, Professor of Civil Engineering and Walter B. Booth Distinguished Professorship at the North Dakota State University, is the speaker at the Civil Engineering Graduate Seminar Invited Lecture Series at 4 p.m. Wednesday, February 1, in 1052 Rathbone Hall (via Zoom).

David will present recent developments in the Analytic Element Method (AEM) that provide nearly exact solutions to challenging problems in engineering and science. Examples include groundwater/surface water interactions and flow near faults; seepage through coarse sands embedded within fine sands; ecological interactions between plants and groundwater; near-shore wave interactions as well as the propagation of tsunamis through bathymetric shoals; and interpretation of Electrical Resistance Tomography data in soils. The basic principles of how to develop solutions using the AEM will be overviewed, following Steward (2020), "Analytic Element Method: Complex Interactions of Boundaries and Interfaces," Oxford University Press.

A zoom link can be obtained by contacting trishab8@ksu.edu.