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Emphasizing Collaboration in Hydrogeophysics

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Hydrogeophysics is a relatively young discipline, showing a dramatic increase in publication rates in the early 1990's. The early success of the discipline was based on the adoption of geophysical methods developed for mineral prospecting to define hydrogeologic structures. The next phase of development saw adaptation of these methods and related inversion routines for hydrologic applications, with particular emphasis on monitoring water flow in the unsaturated zone and the movement of saline plumes. While these applications will continue to be important, I contend that hydrogeophysics is entering a new realm. Future developments will be marked by improved integration of geophysical and direct measurements as well as development of methods specifically designed to address challenging hydrologic targets. I will discuss these challenges and present opportunities for advancement of hydrogeophysics as a discipline in their context. Key to these advances is improved integration of measurement and modeling, including experts from many disciplines, at all stages of scientific and engineering investigations.