



## SYSTEMS AND METHODS FOR ANALYZING SUBSURFACE FORMATIONS

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### The Invention

A UW researcher has developed a digital system for controlling pressure oscillations within a wellbore, as well as associated monitoring equipment and analysis codes. The equipment includes a wellhead apparatus capable of producing sinusoidal changes in the amount of water extracted / injected into a well and a central data collection system with wireless pressure transducers capable of recording both stimulation well injection / extraction rates and pressure change data from surrounding wells. The output of this method is improved estimates of aquifer / reservoir permeability and storage coefficients, and information about connectivity between wells. These analytical tools and other codes have been designed to determine optimal experimental setups given particular field geometries and constraints, and to efficiently compress and analyze data from these tests.

### Additional Information

#### For More Information About the Inventors

- [Michael Cardiff](#)

#### Tech Fields

- [Analytical Instrumentation, Methods & Materials : General analytical instrumentation](#)

For current licensing status, please contact Emily Bauer at [emily@warf.org](mailto:emily@warf.org) or 608-960-9842