

Application of Automated time-Lapse Electrical Resistivity Tomography(ALERT)

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Abstract

The use of Electric Resistivity Tomography(ERT) to study hydrogeological characteristics and process over a range of spatial and temporal scales has been an area of active research for a decade. Time-lapse ERT can provides dynamic information of changes in some properties such as infiltration, saline intrusion. There is two example of the application of ALERT. The first case is using permanent ERT measures to monitor landside site. The research group used resistivity data from ALERT, to predicted downslope electrode movement, and can fit the manual measurements of electrodes well. The second case is using crosshole ERT to get the image of site, and monitor a tracer test. In this case, it is possible to see the movement of tracer with temporal variation. Through two cases, we can know that ALERT have good ability to monitor processes like landslide or dispersion of tracer and pollutants.

References

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