

Interactive comment on “A fast TDR-inversion technique for the reconstruction of spatial soil moisture content” by S. Schlaeger

Anonymous Referee #2

Received and published: 22 July 2005

Dr. Schlaeger described in his paper the mathematical basis of a technique to invert TDR waveforms in order to get the water content profile along a probe made of a long specific “flat-ribbon cable”. The main originality of this work, when compared to most previous attempts to address this inversion problem, is the development of a “two-parameter reconstruction” method that takes into account explicitly losses by dispersion into the soil. In this frame, TDR measurements are taken from both sides of the cable which may be practically difficult if the system is installed afterwards but has the advantage of constraining the mathematical problem at both ends. Inversion examples given in this paper are fairly “academic”. References to the resolution of true real problems are also given but they are communications in congresses. May be the author could think of a second part to this paper devoted to the application of his method. As mentioned by another referee, the bibliography can be enriched. Beside the recent paper by Heimovaara suggested by the same referee another reference

[Full Screen / Esc](#)

[Print Version](#)

[Interactive Discussion](#)

[Discussion Paper](#)

could be also:

Chambarel, A. et al., 2001. TDR signal modelling using the electric line approach : model validation and signal inversion to retrieve soil moisture profile, TDR'2001, Evanston, Illinois, September 5-7 2001.

Since many people could be interested by testing the proposed inversion methods, the author should also precise where and how the corresponding software is available.

Interactive comment on Hydrology and Earth System Sciences Discussions, 2, 971, 2005.

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper