

عنوان مقاله:

Review and Classification of Modeling Approaches of Soil Hydrology Processes

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خلاصه مقاله:

To use soil hydrology processes (SHP) models, which have increasingly extended during the last years, comprehensive knowledge about these models and their modeling approaches seems to be necessary. The modeling approaches can be categorized as either classical or non-classical. Classical approaches mainly model the SHP through solving the general unsaturated flow (Richards) equation, numerically or analytically. Due to some shortcomings of classical approaches, a trend toward the application of non-classical models has been initiated in recent years. Artificial neural networks and fuzzy logic systems are two main categories of non-classical approaches. In this study, existing modeling approaches of SHP are examined and compared, with an emphasis on recent trends. Also, modeling approaches of soil hydraulic functions are reviewed briefly as a main part of SHP models. Finally, different perspectives on classifications for SHP models are presented.

کلمات کلیدی:

Artificial neural networks, classical, Fuzzy Logic, modeling approaches, soil hydrology processes

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