



ANFIS: holistic modelling of dissimilar and divergent sediment-discharge relationships

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Seasonal effects that occur in hydrologic data make the relationships between hydrologic variables become complex thus complicating the modelling task. The ideal way of handling data with seasonal factor is to separate them by season, although the 'correct' separation is not always possible especially when a complex relationship such as sediment-discharge is involved. Two sets of artificial sediment-discharge data that mimic the seasonal effects are first created and then modelled using ANFIS. The real sediment-discharge datasets of two rivers in Missouri, Little Black River and Salt River are also used to build ANFIS models. The outcomes of both the artificial and real datasets are then analysed, mainly by visual comparison, to explain problems and issues in ANFIS modelling of seasonal hydrologic datasets.