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**A data-driven model based on Fourier transform and support vector regression for
monthly reservoir inflow forecasting**

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Abstract: The recent trend for data-driven streamflow forecasting is to hybridize artificial intelligence with decomposition pre-processing. In this paper, a decomposition-based data-driven model called FT-SVR that exploits both Fourier transform (FT) and support vector regression (SVR) techniques is proposed for monthly reservoir inflow forecasting and the Three Gorges Dam (TGD) located on the Yangtze River in China is taken as the case for study. As the inflow time series contains oscillations of disparate scales, FT-SVR uses FT to appropriately decompose the series into multiple decomposed components, with each component comprising of neighboring frequencies and having a clear physical meaning. SVR is employed to develop an independent forecasting model for each decomposed component. The development of each SVR

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