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## CoSMoS v2.0: Making Time Series Generation Simple

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Many physically based models aiming to quantify the vulnerability and risk of hydrologic and geomorphic hazards need as input or forcing time series of processes such as precipitation, temperature, humidity, etc. The reliability of their output depends on how realistic the inputs are. CoSMoS is a multi-platform software that generates reliable time series from hydroclimatic variables (precipitation, temperature, wind, relative humidity, streamflow, etc.). It is developed in R (version 2.0) as well as in other platforms (Matlab, Mathematica, Excel). It can be used to generate univariate and multivariate time series at any time scale by reproducing the marginal distributions and the linear correlation structures (including intermittency) of the process under investigation. CoSMoS implements a unified stochastic modelling scheme that expands and enhances a generic modelling approach based on the transformation of “parent” Gaussian time series. By design it aims to offer a simple and easy-to-apply solution to the user requesting minimal information, such as the target marginal distribution and the correlation structure. The software is accompanied by a complete users’ manual.