Title SADD: stochastic analysis of destructively measured data - possibilities to include biological variations in statistical analysis

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Abstract

Three techniques are presented to include the structural variation always present in measured data in statistical analysis. The methods are investigated and compared using cross sectional data, generated based on an exponential model as if gathered by destructive measuring methods. All three methods are based on optimising objective functions based on the data and the biological shift model. These objective functions are calculated for each separate measuring point in time either according the specific density function belonging to the model applied, or after conversion into biological shift factors (also according to the model applied) according to a Gaussian distribution. The procedures used need to be improved, embedded in the existing statistical framework and all available statistical expertise and skills need to be combined into robust procedures capable of analysing everyday data.