

Inputs

Data 1 (e.g. tachogram)
stands still during analysis

Data 2 (e.g. tidal volume)
is being moved during analysis

Settings

- *method*
- *scaling*
- *threshold*
- *length of the signal*
- *maximal shift in both sides*
- *time resolution of points*
- *time resolution of shifts*

Main loop

Selection of signals' parts

Scaling (if chosen)

Linear modeling (LM)

Time series distance (TD)

- *Manhattan*
- *Fourier*
- ...

Normalization of the distance
(if threshold is chosen)

Estimation of the main parameter
(depending on the method)

Determining the curve of maximum or minimum values - **causal vector**
(for linear modeling or time series distance kernels, respectively)

Outputs

Parameters in an **array form**
(points vs shifts vs parameters value)

Figure prepared using ggplot function

Parameters in an **data frame form**
(clear column names)

The curve of maximum or minimum values
(causal vector)