

# Quasi-Bayes mixture estimation

## Aim:

The [quasi-Bayes](#) estimation is done in different conditions. This case study offers feeling in use of this estimation algorithm.

## Specification:

**System:** continuous, static mixture of *ncom* components with centers on unit circle. The component weights increase anticlockwise from  $\langle 0, 1 \rangle$ . The common covariance of components is specified by value on diagonal *diac*. For details [view code](#).

**Decision:** structure parameters.

**Experience:** past data up to *ndat*; model structure.

**Ignorance:** mixture parameters.

## Processing:

the estimation is done specifying the number of iterations *niter* and forgetting rate *frg*. The estimation is repeated four times. Trajectory of random generator *seed* can be specified.

## Results:

individual estimated mixtures are displayed and normalized data likelihood are displayed.

## Recommended experiments:

- influence of data sample size (*ndat* = 500, 300, 200)
- influence of process noise (*diac* = 0.5, 1 )
- dependency on process complexity (*ncom* = 10, 20)
- dependency on forgetting rate (*frg* = 0.99, 0.9995)

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