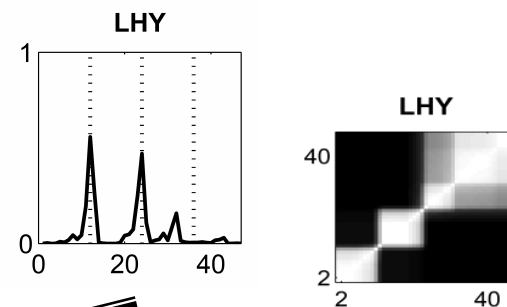


# Non-stationary continuous dynamic Bayesian networks

Marco Grzegorzczuk and Dirk Husmeier

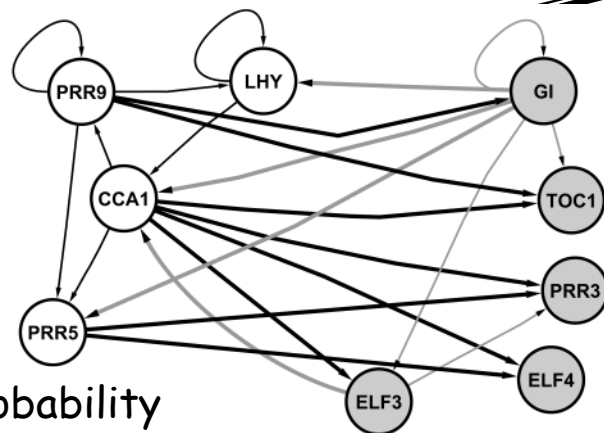
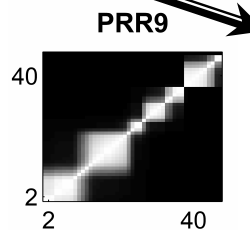
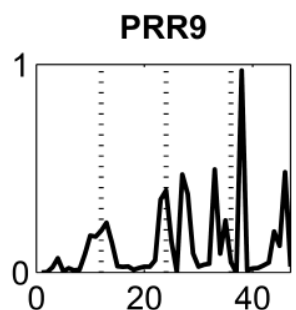
Following the Bayesian paradigm, our method infers network topologies and node-specific change-points from the posterior distribution with MCMC:

The network topologies are kept fixed among time segments to allow for information sharing...

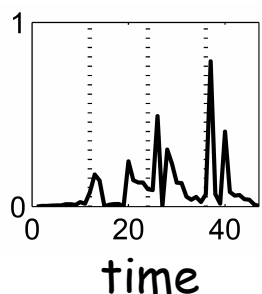


## Network of circadian genes in *Arabidopsis thaliana*...

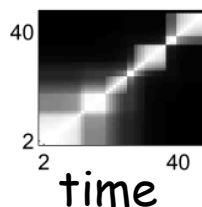
...non-stationarity in the local conditional probability distributions is approximated using node-specific change-points



Transition probabilities



Posterior probability of co-assignment



...inferred from microarray expression time series under 4 different experimental conditions

