This presentation will describe three recent advances that are useful for the analyses of high dimensional time series. The first one concerns new ways for visualizing large sets of time series. Dynamic quantiles will be introduced and some multivariate plots will be shown illustrating ways to reveal the information in the set of time series. The second one is clustering time series by dependency. A new way to cluster the series by their linear dependency will be described and shown to be able to split the set of series into homogeneous groups. The third one is dynamic factor models, and some examples of high dimensional tensor factor models will be given. The future evolution of the field of dependent high dimensional data will be discussed in the conclusions.