

PCA

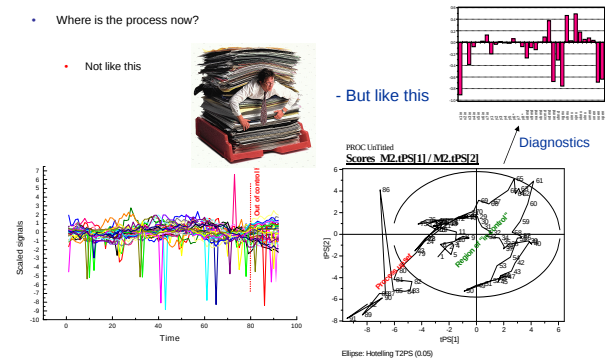
An introduction

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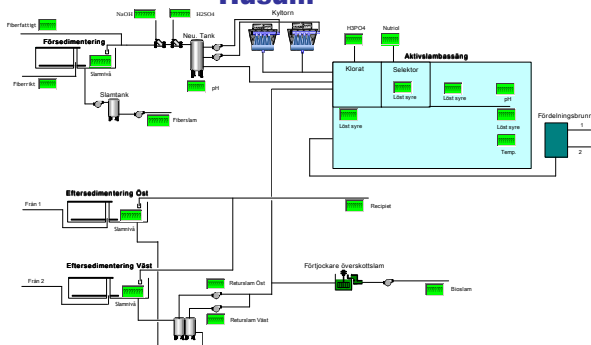
Multivariate Data Analysis - MVDA

- Where is the process now?

- Not like this

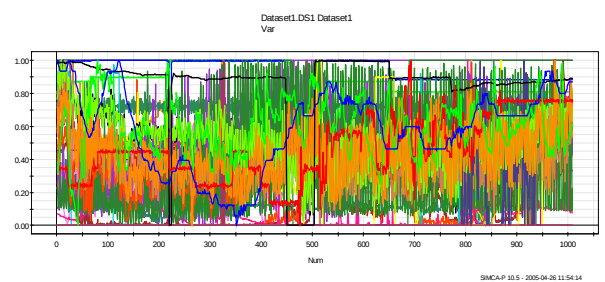


MVDA: Waste Water Plant Husum



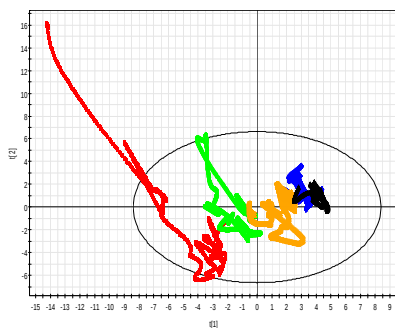
100 signals: process variables every 10 minutes, daily quality variables

MVDA: Waste Water Plant Husum



Process drift 2004 nov – 2005 Mar, sample of 30 signals

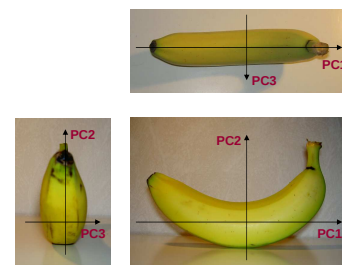
MVDA: Waste Water Plant Husum



Process drift 2004 nov – 2005 Mar, all relevant signals

Make a drawing of a banana!

- Which drawing did you do?



We often intuitively use the projection with most information,
= highest variability,
=> first PC1, then PC2