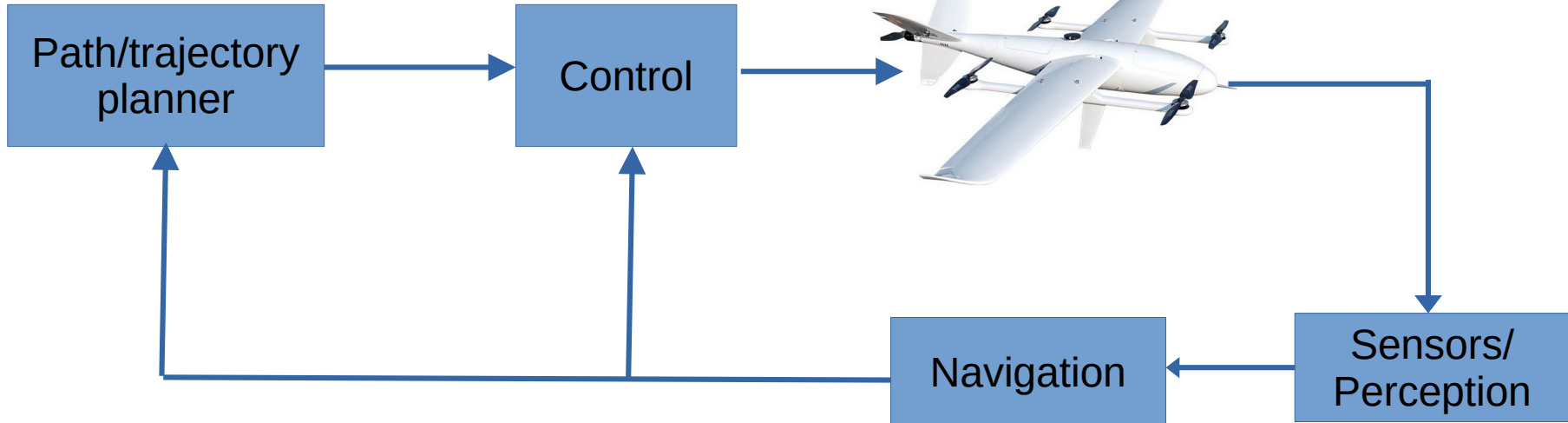


How to identify and attract your potential lover with System identification ?

How they behave ?

- linear or nonlinear
- deterministic or stochastic



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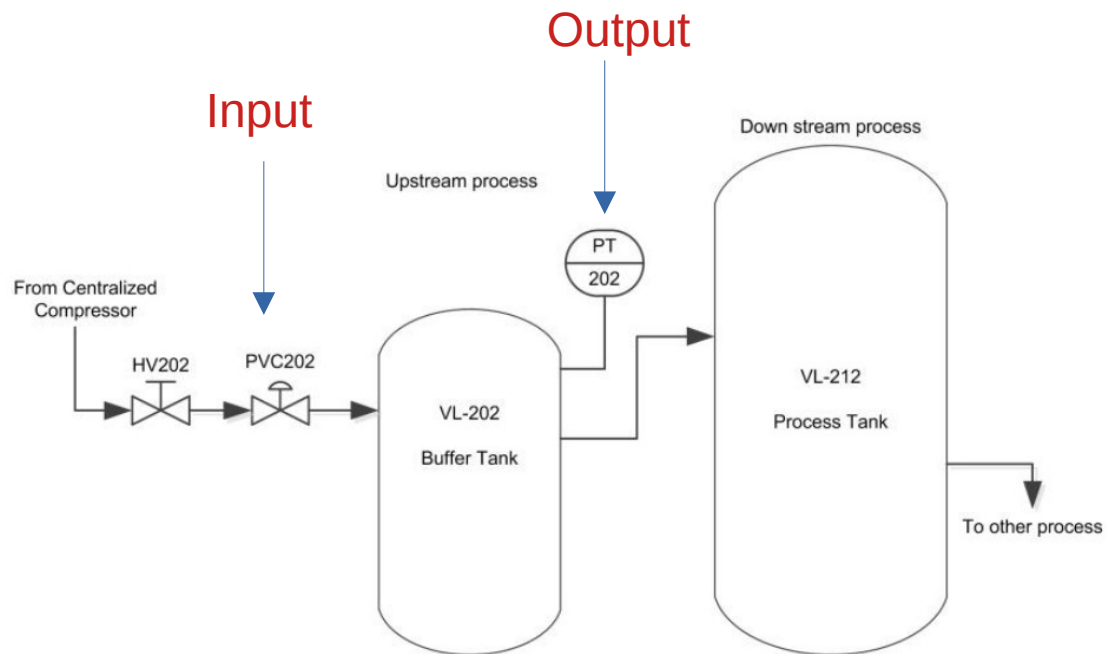
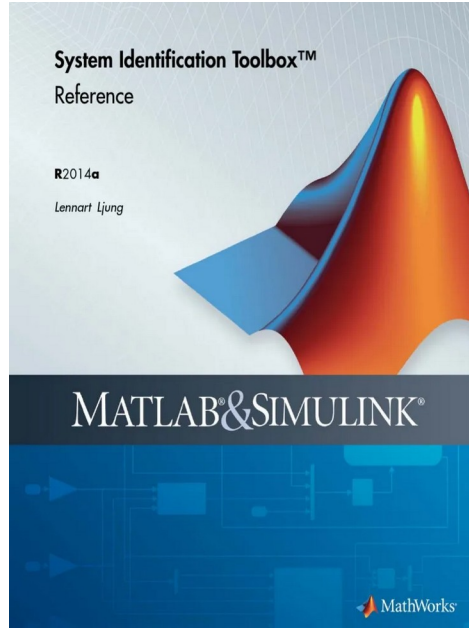
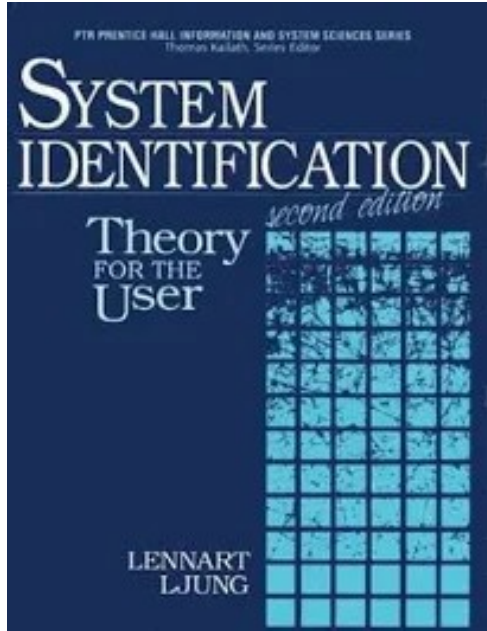


Figure 2: Gaseous Pilot Plant: Snapshot (Left), P&ID Diagram (Right)



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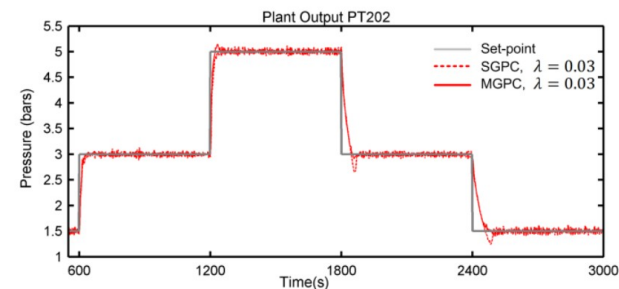
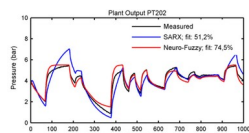
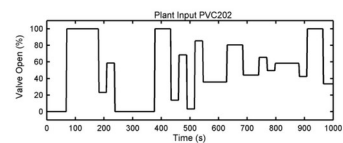
1998

L Ljung

Signal analysis and prediction, 163-173

System identification
toolbox (Matlab)

$$\begin{aligned}\dot{\mathbf{x}} &= \mathbf{A}\mathbf{x} + \mathbf{B}\mathbf{u} \\ \mathbf{y} &= \mathbf{C}\mathbf{x} + \mathbf{D}\mathbf{u}\end{aligned}$$

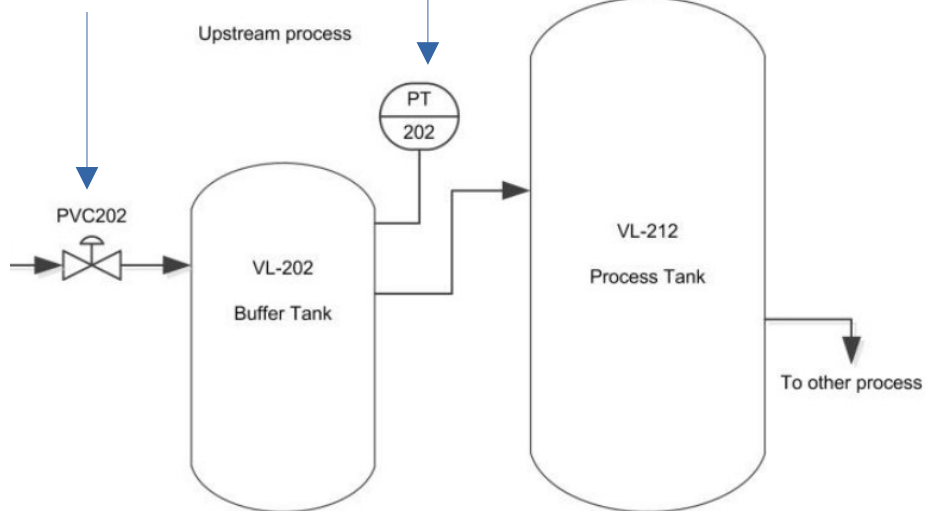


Input

Output

Upstream process

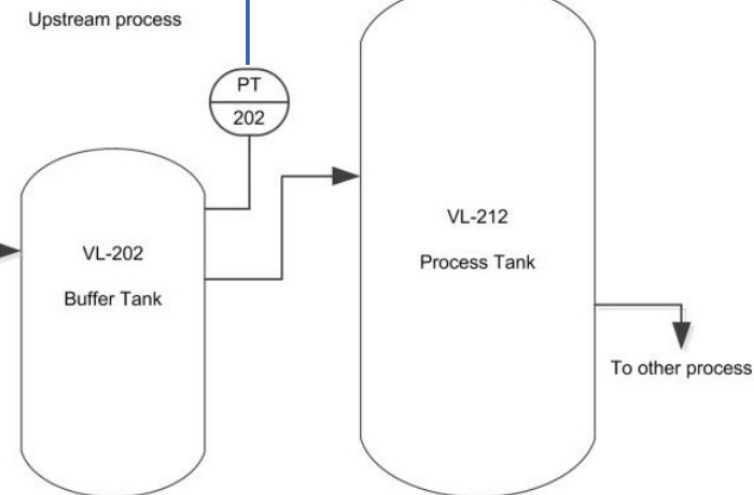
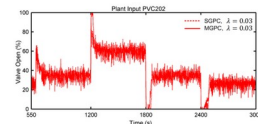
Down stream process



MPC
controller

Upstream process

Down stream process



What is the key of success:

Good MPC controller \leq good model \leq good data for system identification

How to get rich/valuable data ?

