DDC – Notes

1. [SPSA overview](https://www.jhuapl.edu/spsa/" \l "Overview): SPSA > finite-diff SA due to 1/p times measurements to reach convergence of obj fn. (p = no of terms being optimised) thus, great for high dimensionality applications.   
   Pseudo-gradient of cost fn used to update control parameter. Here obj fn is unkown, thus an update param used to get seq of opt control I/P (timeseries), NN can be used to optimise.  
   - optimal, but if control needs to be changed rapidly, slow convergence
2. ZS Chou, challenges of DDC, pg.8
3. Industrial process: low cost, easy to install control, automation equipment
4. Every application in detail:
   1. What? (Intro and Overview)
   2. How? (Working principle, architecture, how its applied)
   3. Why? (Advantages and Disadvantages)
   4. Applications (examples in industry)
5. Could use scores or ratings for various factors in determining the type of control strategy to be used:
   1. Model type: M-1 (easy to model), M-2(model with uncertainties), (Too complex, non-linear model), (Can’t model, too stochastic) etc..
   2. Volume/availability of data: V-1, V-2
   3. Data represting I/O: R-1, R-2...
   4. can relevant features be extracted? F-1, F-2..
   5. etc.