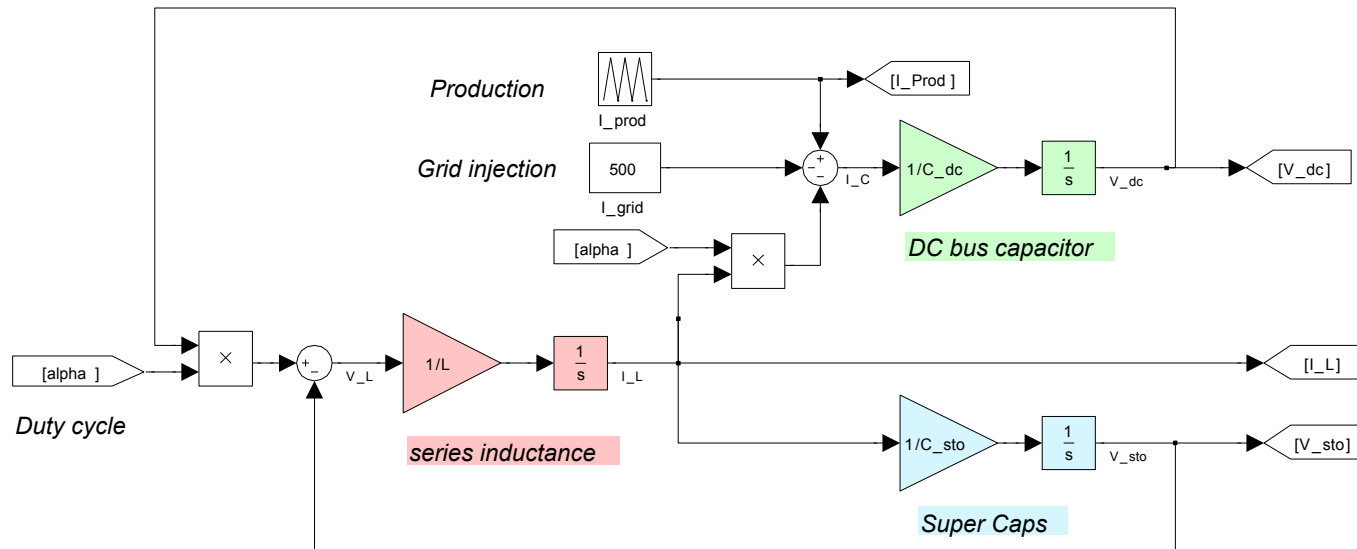


# Control of the DCDC converter of the supercaps to stabilize the DC bus voltage

Pierre Haessig - september 2013



$C_{dc} = 50e-3$  [F]  
 $C_{sto} = 20$  [F]  
 $L = 3e-3$  [H]

% Initial condition  
 $V_{dc0} = 1300$  [V]  
 $V_{sto0} = 1000$  [V]

% Set point  
 $V_{dc\_set} = 1300$  [V]

%% Control parameters %%  
 %Current loop :  
 $K_i = 0.00406$   
 $T_i = 0.274$   
 % Voltage loop:  
 $K_v = 10.2$   
 $T_v = 0.003$

## Cascaded Control of the duty cycle of the DCDC converter

