Results of optimization of H1 and H2

Common parameter :
early stopping is triggered when the average error on validation set over 4 epochs stops decreasing significantly, ie, new_value>0.95* old_value

Main result :

Error on validation set (averaged over 3 redondancy)

$\mu=0.01, \quad v=0$

H1/H2	10	20	30	40	60	80	100
10	1.18%						
20	1.01%	0.92%					
30	1.20%	0.98%	1.04%				
40	1.32%	1.12%	0.83%	0.91%			
60	0.91%	0.83%	0.84%	0.79%	0.84%		
80	0.83%	0.91%	0.80%	0.79%	0.91%	0.85%	
100	0.86%	0.92%	0.82%	0.84%	0.87%	0.86%	0.87%

$\mu=0.01, \quad v=0.05$

H1/H2	10	20	30	40	60	80	100
10	0.0191						
20	0.0115	0.0103					
30	0.0120	0.0113	0.0110				
40	0.0095	0.0099	0.0102	0.0093			
60	0.0106	0.0096	0.0089	0.0096	0.0095		
80	0.0093	0.0091	0.0112	0.0084	0.0083	0.0082	
100	0.0097	0.0088	0.0081	0.0080	0.0079	0.0082	0.0087

$\mu=0.001, \quad v=0$

H1 / H2	10	20	30	40	60	80	100
10	0.035						
20	0.042	0.030					
30	0.031	0.023	0.028				
40	0.024	0.023	0.023	0.027			
60	0.024	0.024	0.030	0.021	0.031		
80	0.026	0.022	0.024	0.027	0.025	0.022	
100	0.024	0.023	0.021	0.026	0.022	0.025	0.023

$\mu=0.001, \quad v=0.05$

H1 / H2	10	20	30	40	60	80	100
10	0.039						
20	0.031	0.033					
30	0.028	0.026	0.027				
40	0.028	0.027	0.026	0.027			
60	0.027	0.023	0.026	0.025	0.025		
80	0.025	0.025	0.024	0.025	0.025	0.024	
100	0.026	0.024	0.024	0.025	0.024	0.023	0.024

Results of optimization of H1 and H2

Results for control :

number of epochs before converging

μ=0.01, v=0								μ=0.01, v=0.05						
H1 / H2	10	20	30	40	60	80	100	H1 / H2	10	20	30	40.000	60	80	100
10	30.7							10	25.3						
20	34.7	36.0						20	34.7	38.7					
30	30.7	38.7	36.0					30	29.3	33.3	33.3				
40	26.7	28.0	38.7	36.0				40	36.0	38.7	32.0	37.3			
60	36.0	41.3	33.3	38.7	36.0			60	33.3	33.3	38.7	38.7	40.0		
80	37.3	36.0	34.7	38.7	32.0	37.3		80	37.3	30.7	29.3	41.3	37.3	41.3	
100	38.7	34.7	36.0	33.3	32.0	37.3	30.7	100	37.3	29.3	38.7	36.0	40.0	40.0	36.0

μ=0.001, v=0								μ=0.001, v=0.05						
H1 \ H2	10	20	30	40	60	80	100	H1 / H2	10	20	30	40	60	80	100
10	49.0							10	41.3						
20	40.0	40.0						20	43.0	47.3					
30	48.0	49.0	49.0					30	46.7	49.0	47.0				
40	48.0	49.0	49.0	48.0				40	44.0	46.0	47.3	48.3			
60	49.0	49.0	32.0	48.0	32.0			60	45.3	48.0	47.0	48.3	47.0		
80	49.0	48.0	44.0	48.0	40.0	49.0		80	46.7	44.3	48.7	46.0	47.0	48.0	
100	44.0	48.0	49.0	40.0	49.0	48.0	48.0	100	48.7	45.7	47.3	45.7	47.0	45.3	47.0

49 means that the process has been stopped earlier (limit
of 50 epochs)

standard deviation of error

μ=0.01, v=0								μ=0.01, v=0.05						
H1 / H2	10	20	30	40	60	80	100	H1 / H2	10	20	30	40	60	80	100
10	0.003							10	0.010						
20	0.002	0.001						20	0.001	0.001					
30	0.001	0.001	0.001					30	0.001	0.001	0.002				
40	0.002	0.000	0.001	0.001				40	0.001	0.001	0.000	0.001			
60	0.001	0.001	0.001	0.001	0.001			60	0.002	0.001	0.000	0.001	0.002		
80	0.000	0.002	0.001	0.002	0.002	0.001		80	0.000	0.002	0.003	0.001	0.000	0.001	
100	0.001	0.001	0.000	0.001	0.001	0.001	0.001	100	0.002	0.001	0.001	0.001	0.000	0.001	0.001

μ=0.001, v=0								μ=0.001, v=0.05						
H1 / H2	10	20	30	40	60	80	100	H1 / H2	10	20	30	40	60	80	100
10	NC							10	0.002						
20	NC	NC						20	0.001	0.004					
30	NC	NC	NC					30	0.003	0.002	0.001				
40	NC	NC	NC	NC				40	0.003	0.003	0.001	0.001			
60	NC	NC	NC	NC	NC			60	0.000	0.000	0.003	0.000	0.000		
80	NC	NC	NC	NC	NC	NC		80	0.004	0.004	0.003	0.003	0.001	0.002	
100	NC	NC	NC	NC	NC	NC	NC	100	0.002	0.003	0.002	0.002	0.002	0.001	0.001