A A A B A B B B B B	ertility low forest spar servo slump craffic wine_red wine_white sbalone sirfoil_self_noise	47.26(3) 49.11(2) 18.84(3) 17.44(2) 39.06(3) 2.80e+20(3) 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77) 43.91(1)	47.26(3) 49.11(2) 18.84(3) 17.44(2) 39.06(3) 105.77(5) 70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3) (3.10)	104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	47.26(3) 49.11(2) 18.84(3) 17.44(2) 39.06(3) 2.80e+20(3) ² 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3)	104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
A A A A A A A A A A	auto_mpg automobile concrete_data crime ertility dow orest spar servo clump raffic dwine_red wine_white	18.84(3) 17.44(2) 39.06(3) 2.80e+20(3) 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	18.84(3) 17.44(2) 39.06(3) 20.80e+20(3): 105.77(5) 70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	18.84(3) 17.59(4) 39.06(3) 2.80e+20(3): 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	18.84(3) 17.44(2) 39.06(3) 2.80e+20(3) 2 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	18.84(3) 17.59(4) 39.06(3) 2.80e+20(3) 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Ridge ff ff ff s s t w w MAvg. Rank	automobile concrete_data rrime ertility low orest spar servo dump raffic wine_red wine_white bbalone irfoil_self_noise	17.44(2) 39.06(3) 2.80e+20(3) 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	17.44(2) 39.06(3) 2.80e+20(3) 105.77(5) 70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	17.59(4) 39.06(3) 2.80e+20(3): 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	17.44(2) 39.06(3) 2.80e+20(3) 2 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	17.59(4) 39.06(3) 2.80e+20(3) 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Ridge ff fg S S S S S S S S S S S S S S S S S	concrete_data rrime rritity flow orest qsar servo slump raffic wine_red wine_white abalone urfoil_self_noise	39.06(3) 2.80e+20(3) 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	39.06(3) 2.80e+20(3) 105.77(5) 70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	39.06(3) 2.80e+20(3) 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	39.06(3) 2.80e+20(3) 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	39.06(3) 2.80e+20(3) 104.82(2) 64.38(1) 101.44(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Ridge ff fg g s s s s s t w w w Avg. Rank	rrime ertility dow orrest qsar servo slump raffic wine_red wine_white abalone uirfoil_self_noise	2.80e+20(3) 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	2.80e+20(3) 105.77(5) 70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	2.80e+20(3) 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	2.80e+20(3) 2 104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	2.80e+20(3) 104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Ridge fit	ertility low forest lysar servo slump raffic wine_red wine_white sbalone sirfoil_self_noise	104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	105.77(5) 70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	104.82(2) 67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	104.82(2) 64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Ridge fig. 6 graph signs	dow forest sar servo slump traffic wine_red wine_white abalone sirfoil_self_noise	67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3)	70.62(5) 101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	67.94(3) 101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	64.38(1) 101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
free free free free free free free free	orest qsar servo slump raffic vine_red vine_white abalone sirfoil_self_noise	101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3)	101.44(3) 43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	101.44(3) 43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	101.44(3) 43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Avg. Rank	sar servo slump raffic vine_red vine_white abalone sirfoil_self_noise	43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	43.07(3) 60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	43.07(3) 60.02(2) 86.69(2) 44.02(2) 65.56(3)	43.07(3) 61.79(4) 86.69(2) 44.45(4) 65.56(3)
Avg. Rank	servo slump sraffic wine_red wine_white sbalone sirfoil_self_noise	60.02(2) 86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	60.02(2) 90.66(5) 43.38(1) 65.56(3) 73.46(3)	61.79(4) 86.69(2) 44.45(4) 65.56(3) 73.46(3)	60.02(2) 86.69(2) 44.02(2) 65.56(3)	61.79(4) 86.69(2) 44.45(4) 65.56(3)
s t w w Avg. Rank	slump craffic wine_red wine_white abalone airfoil_self_noise	86.69(2) 44.02(2) 65.56(3) 73.46(3) (2.77)	90.66(5) 43.38(1) 65.56(3) 73.46(3)	86.69(2) 44.45(4) 65.56(3) 73.46(3)	86.69(2) 44.02(2) 65.56(3)	86.69(2) 44.45(4) 65.56(3)
Avg. Rank	raffic wine_red wine_white abalone airfoil_self_noise	44.02(2) 65.56(3) 73.46(3) (2.77)	43.38(1) 65.56(3) 73.46(3)	44.45(4) 65.56(3) 73.46(3)	44.02(2) 65.56(3)	44.45(4) 65.56 (3)
Avg. Rank a	wine_red wine_white abalone airfoil_self_noise	65.56(3) 73.46(3) (2.77)	65.56 (3) 73.46 (3)	65.56 (3) 73.46 (3)	65.56(3)	65.56(3)
Avg. Rank a a	wine_white abalone airfoil_self_noise	73.46(3) (2.77)	73.46(3)	73.46(3)		
Avg. Rank a a	abalone airfoil_self_noise	(2.77)			73.46(3)	
a	airfoil_self_noise		(3.10)			73.46(3)
a	airfoil_self_noise	43.91(1)		(3.10)	(2.77)	(3.27)
			43.91(1)	47.69(4)	45.55(3)	47.69(4)
		74.65(3)	72.78(1)	74.65(3)	74.65(3)	74.65(3)
a	uto_mpg	25.91(2)	25.52(1)	26.09(4)	25.91(2)	26.09(4)
a	utomobile	19.34(3)	19.34(3)	19.34(3)	19.34(3)	19.34(3)
c	concrete_data	31.36(2)	30.24(1)	33.22(4)	31.36(2)	34.00(5)
c	rime	41.17(4)	41.17(4)	39.23(1)	41.17(4)	39.23(1)
fe	ertility	112.28(3)	112.28(3)	112.28(3)	112.28(3)	105.85(1)
SVR fl	low	93.13(3)	106.08(5)	66.31(1)	93.13(3)	66.31(1)
fe	orest	117.17(3)	117.17(3)	117.17(3)	117.17(3)	117.17(3)
q	ısar	40.08(2)	36.48(1)	40.60(4)	40.08(2)	40.60(4)
S	servo	17.39(3)	17.39(3)	17.38(1)	17.39(3)	17.68(5)
S	lump	96.67(3)	96.67(3)	96.67(3)	96.67(3)	75.91(1)
t:	raffic	47.25(1)	48.71(5)	48.31(3)	47.25(1)	48.31(3)
W	wine_red	60.34(1)	60.34(1)	63.60(4)	62.52(3)	63.60(4)
W	wine_white	110.85(3)	110.85(3)	110.85(3)	110.85(3)	110.85(3)
Avg. Rank		(2.80)	(2.67)	(3.27)	(3.00)	(3.27)
a	abalone	48.32(3)	46.27(1)	48.32(3)	48.32(3)	48.32(3)
a	airfoil_self_noise	13.55(3)	13.44(1)	14.82(4)	13.44(1)	24.09(5)
a	uto_mpg	14.26(1)	14.30(3)	14.41(4)	14.26(1)	15.79(5)
a	utomobile	23.86(3)	25.13(4)	21.62(2)	25.13(4)	16.91(1)
c	concrete_data	12.29(2)	12.29(2)	12.29(2)	12.29(2)	15.88(5)
c	rime	36.89(3)	36.89(3)	36.89(3)	36.89(3)	36.89(3)
fe	ertility	104.59(4)	104.59(4)	99.10(2)	104.59(4)	96.12(1)
RFR fl	low	85.09(4)	85.09(4)	76.27(1)	85.09(4)	76.27(1)
fe	orest	108.27(2)	116.67(5)	108.27(2)	108.27(2)	108.27(2)
q	ısar	39.36(3)	38.68(1)	39.36(3)	39.36(3)	39.36(3)
	servo	27.01(3)	27.01(3)	26.96(1)	27.01(3)	27.19(5)
	lump	82.32(4)	78.90(2)	79.34(3)	82.32(4)	72.64(1)
	raffic	49.87(2)	51.91(5)	50.60(4)	49.87(2)	46.17(1)
W	wine_red	59.51(3)	59.51(3)	59.51 (3)	59.51(3)	59.51(3)
	wine_white	65.05(3)	60.62(1)	65.05(3)	65.05(3)	65.05(3)
Avg. Rank		(3.13)	(2.90)	(2.87)	(3.13)	(2.97)
Mean Rank		(2.90)	(2.89)	(3.08)	(2.97)	(3.17)

Table 23: The 3-fold cross validation relative mean squared error and Friedman ranks for all the datasets when PLS, using several stop criteria (AIC, AICc, BIC, HQIC and GMDL), taking into account some baseline systems (Ridge, SVR and RFR) and the HB sampling strategy.