

| MLS       | Dataset            | PCR(AIC)           | PCR(AICc)          | PCR(BIC)           | PCR(HQIC)          | PCR(GMDL)          |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Ridge     | abalone            | <b>48.82</b> (2)   | <b>48.82</b> (2)   | <b>48.82</b> (2)   | <b>48.82</b> (2)   | 49.73(5)           |
|           | airfoil_self_noise | <b>3.29e+4</b> (3) | <b>3.29e+4</b> (3) | <b>3.29e+4</b> (3) | <b>3.29e+4</b> (3) | <b>3.29e+4</b> (3) |
|           | auto_mpg           | <b>943.57</b> (3)  | <b>943.57</b> (3)  | <b>943.57</b> (3)  | <b>943.57</b> (3)  | <b>943.57</b> (3)  |
|           | automobile         | <b>417.34</b> (3)  | <b>417.34</b> (3)  | <b>417.34</b> (3)  | <b>417.34</b> (3)  | <b>417.34</b> (3)  |
|           | concrete_data      | 38.94(3)           | <b>38.94</b> (1)   | 38.94(5)           | <b>38.94</b> (1)   | 38.94(3)           |
|           | crime              | <b>35.11</b> (2)   | 35.11(4)           | <b>35.11</b> (2)   | <b>35.11</b> (2)   | 35.11(4)           |
|           | fertility          | 106.73(3)          | 106.73(3)          | 106.73(3)          | 106.73(3)          | <b>103.66</b> (1)  |
|           | flow               | <b>65.32</b> (2)   | <b>65.32</b> (2)   | 293.34(5)          | <b>65.32</b> (2)   | <b>65.32</b> (2)   |
|           | forest             | <b>101.76</b> (3)  | <b>101.76</b> (3)  | <b>101.76</b> (3)  | <b>101.76</b> (3)  | <b>101.76</b> (3)  |
|           | gsar               | 43.17(3)           | <b>43.17</b> (1)   | 43.17(3)           | 43.17(3)           | 43.17(3)           |
|           | servo              | <b>60.53</b> (3)   | <b>60.53</b> (3)   | <b>60.53</b> (3)   | <b>60.53</b> (3)   | <b>60.53</b> (3)   |
|           | slump              | <b>87.19</b> (3)   | <b>87.19</b> (3)   | <b>87.19</b> (3)   | <b>87.19</b> (3)   | <b>87.19</b> (3)   |
|           | traffic            | 45.07(3)           | <b>43.95</b> (1)   | 45.07(3)           | <b>43.95</b> (1)   | 49.95(5)           |
|           | wine_red           | <b>65.46</b> (2)   | 65.46(5)           | <b>65.46</b> (2)   | <b>65.46</b> (2)   | <b>65.46</b> (2)   |
|           | wine_white         | 75.83(3)           | <b>75.37</b> (1)   | 75.83(4)           | 75.37(2)           | 75.83(5)           |
| Avg. Rank |                    | (2.97)             | (2.73)             | (3.30)             | <b>(2.63)</b>      | (3.37)             |
| SVR       | abalone            | 57.61(4)           | <b>50.41</b> (1)   | 50.41(2)           | 50.41(3)           | 65.13(5)           |
|           | airfoil_self_noise | <b>3.28e+4</b> (3) | <b>3.28e+4</b> (3) | <b>3.28e+4</b> (3) | <b>3.28e+4</b> (3) | <b>3.28e+4</b> (3) |
|           | auto_mpg           | 185.55(3)          | <b>182.67</b> (1)  | 185.55(3)          | 185.55(3)          | 193.93(5)          |
|           | automobile         | <b>451.56</b> (3)  | <b>451.56</b> (3)  | <b>451.56</b> (3)  | <b>451.56</b> (3)  | <b>451.56</b> (3)  |
|           | concrete_data      | 240.53(5)          | <b>232.99</b> (1)  | 240.53(3)          | 232.99(2)          | 240.53(3)          |
|           | crime              | <b>56.05</b> (3)   | <b>56.05</b> (3)   | <b>56.05</b> (3)   | <b>56.05</b> (3)   | <b>56.05</b> (3)   |
|           | fertility          | 158.60(4)          | <b>117.74</b> (1)  | 155.12(3)          | 130.04(2)          | 170.95(5)          |
|           | flow               | <b>296.80</b> (3)  | <b>296.80</b> (3)  | <b>296.80</b> (3)  | <b>296.80</b> (3)  | <b>296.80</b> (3)  |
|           | forest             | <b>103.89</b> (3)  | <b>103.89</b> (3)  | <b>103.89</b> (3)  | <b>103.89</b> (3)  | <b>103.89</b> (3)  |
|           | gsar               | 58.70(4)           | <b>45.28</b> (1)   | 48.38(3)           | 45.28(2)           | 62.63(5)           |
|           | servo              | 32.37(4)           | 32.08(2)           | 32.37(4)           | <b>29.32</b> (1)   | 32.37(4)           |
|           | slump              | <b>274.30</b> (3)  | <b>274.30</b> (3)  | <b>274.30</b> (3)  | <b>274.30</b> (3)  | <b>274.30</b> (3)  |
|           | traffic            | <b>81.22</b> (2)   | 88.31(5)           | <b>81.22</b> (2)   | 81.65(4)           | <b>81.22</b> (2)   |
|           | wine_red           | 106.00(3)          | <b>84.20</b> (1)   | 106.00(4)          | 85.26(2)           | 118.84(5)          |
|           | wine_white         | 89.09(4)           | 79.47(2)           | 89.09(3)           | <b>79.47</b> (1)   | 96.78(5)           |
| Avg. Rank |                    | (3.40)             | <b>(2.20)</b>      | (3.03)             | (2.53)             | (3.83)             |
| RFR       | abalone            | 69.79(4)           | <b>59.86</b> (1)   | 69.40(3)           | 62.30(2)           | 71.97(5)           |
|           | airfoil_self_noise | 1.26e+4(5)         | <b>1.06e+4</b> (1) | 1.06e+4(3)         | <b>1.06e+4</b> (1) | 1.18e+4(4)         |
|           | auto_mpg           | <b>910.67</b> (3)  | <b>910.67</b> (3)  | <b>910.67</b> (3)  | <b>910.67</b> (3)  | <b>910.67</b> (3)  |
|           | automobile         | <b>411.55</b> (3)  | <b>411.55</b> (3)  | <b>411.55</b> (3)  | <b>411.55</b> (3)  | <b>411.55</b> (3)  |
|           | concrete_data      | <b>480.88</b> (1)  | <b>480.88</b> (1)  | 480.88(4)          | 480.88(4)          | 480.88(4)          |
|           | crime              | <b>45.01</b> (1)   | 45.01(5)           | 45.01(3)           | <b>45.01</b> (1)   | 45.01(3)           |
|           | fertility          | 107.00(3)          | 107.00(3)          | 108.49(5)          | 107.00(3)          | <b>99.35</b> (1)   |
|           | flow               | <b>874.77</b> (3)  | <b>874.77</b> (3)  | <b>874.77</b> (3)  | <b>874.77</b> (3)  | <b>874.77</b> (3)  |
|           | forest             | <b>103.94</b> (3)  | <b>103.94</b> (3)  | <b>103.94</b> (3)  | <b>103.94</b> (3)  | <b>103.94</b> (3)  |
|           | gsar               | 66.68(5)           | <b>48.91</b> (1)   | 66.41(4)           | 48.91(2)           | 66.41(3)           |
|           | servo              | <b>31.82</b> (1)   | 32.11(3)           | 33.83(4)           | <b>31.82</b> (1)   | 43.36(5)           |
|           | slump              | 441.80(4)          | <b>369.46</b> (1)  | 441.80(4)          | <b>369.46</b> (1)  | 407.56(3)          |
|           | traffic            | 76.43(3)           | <b>70.89</b> (1)   | 76.98(5)           | <b>70.89</b> (1)   | 76.43(3)           |
|           | wine_red           | 78.37(3)           | <b>71.85</b> (1)   | 78.37(4)           | 73.35(2)           | 80.43(5)           |
|           | wine_white         | 88.45(4)           | <b>77.91</b> (1)   | 88.45(3)           | 84.07(2)           | 104.86(5)          |
| Avg. Rank |                    | (3.23)             | <b>(2.20)</b>      | (3.67)             | (2.30)             | (3.60)             |
| Mean Rank |                    | (3.20)             | <b>(2.38)</b>      | (3.33)             | (2.49)             | (3.60)             |

Table 17: The 3-fold cross validation relative mean squared error and Friedman ranks for all the datasets when PCR, using several stop criteria (AIC, AICc, BIC, HQIC and GMDL), taking into account some baseline systems (Ridge, SVR and RFR) and the PSO sampling strategy.