**Supplementary Table 3**

**Metabolomics dataset**

**Table 3.1** The data of low-dimensional metabolic time series under the condition of and =900 (Lusch et al. 2018)

The data is listed on <https://github.com/suranl/EKATP> (Supplementary Table 3.1.csv)

**Table 3.2** The data of low-dimensional metabolic time series under the condition of and =900 (Lusch et al. 2018)

The data is listed on <https://github.com/suranl/EKATP> (Supplementary Table 3.2.csv)

**Table 3.3** The data of high-dimensional metabolic time series under the condition of and =900

The data is listed on <https://github.com/suranl/EKATP> (Supplementary Table 3.3.csv)

**Table 3.4** The data of high-dimensional metabolic time series under the condition of and =900

The data is listed on <https://github.com/suranl/EKATP> (Supplementary Table 3.4.csv)

**Table 3.5** Parameter setting of fluid flow system

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter |  |  |  |  |
| Value | 0.1 | 1 | -0.1 | 10 |

**Table 3.6** Division of training set and testing set

|  |  |  |
| --- | --- | --- |
| Dataset | Training set | Testing set |
| Value | [0:800] | [800:900] |

**Table 3.7** PCC and RMSE values between predictive state and true state under different noise intensities

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 0.001 | 0.005 | 0.010 | 0.050 | 0.100 | 0.500 |
| PCC | 0.999818 | 0.999726 | 0.999418 | 0.945674 | 0.768908 | 0.166338 |
| RMSE | 0.000225 | 0.000254 | 0.000332 | 0.003008 | 0.006405 | 0.015410 |