

1 Method comparison application

Figure 1: Rugplot showing locations of signal after baseline removal using detrendr estimate of 15th quantile and a threshold of the median plus 3MAD.

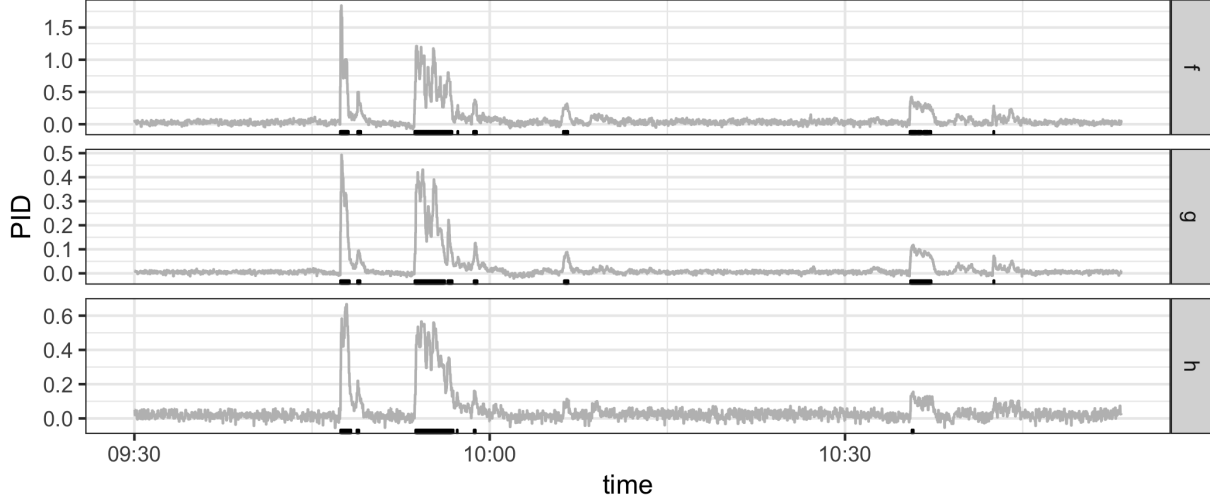


Figure 2: Variation of Information (VI) between sensor nodes after trend removal by quantile and method. The rows in the figure represent the three thresholds used: 3MAD, 4MAD, and 5MAD. Lower VI represents more similar classifications.

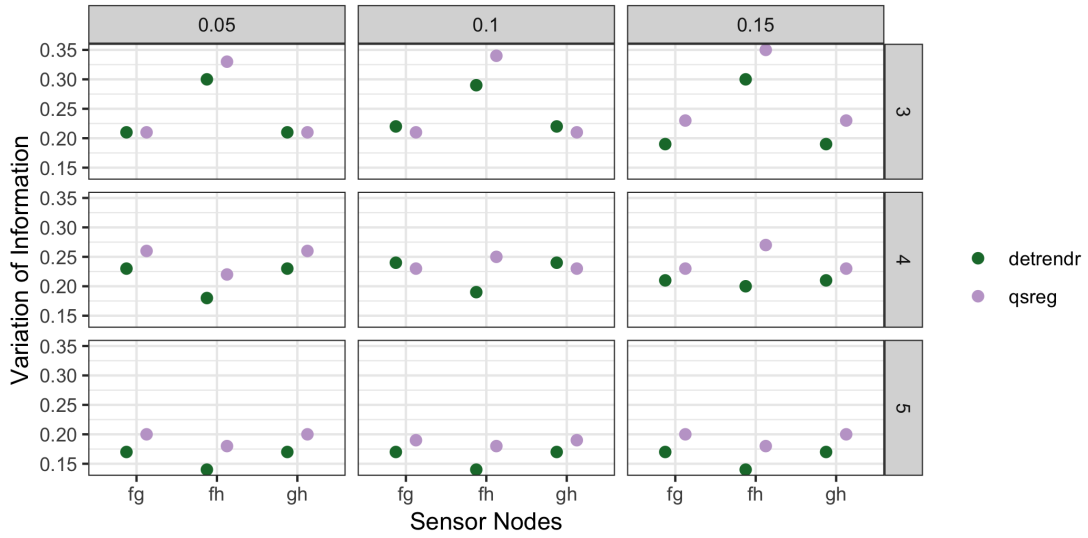


Figure 3: Normalized Mutual Information (NMI) between sensor nodes after trend removal by quantile and method. The rows in the figure represent the three thresholds used: 3MAD, 4MAD, and 5MAD. Higher NMI represents more similar classifications.

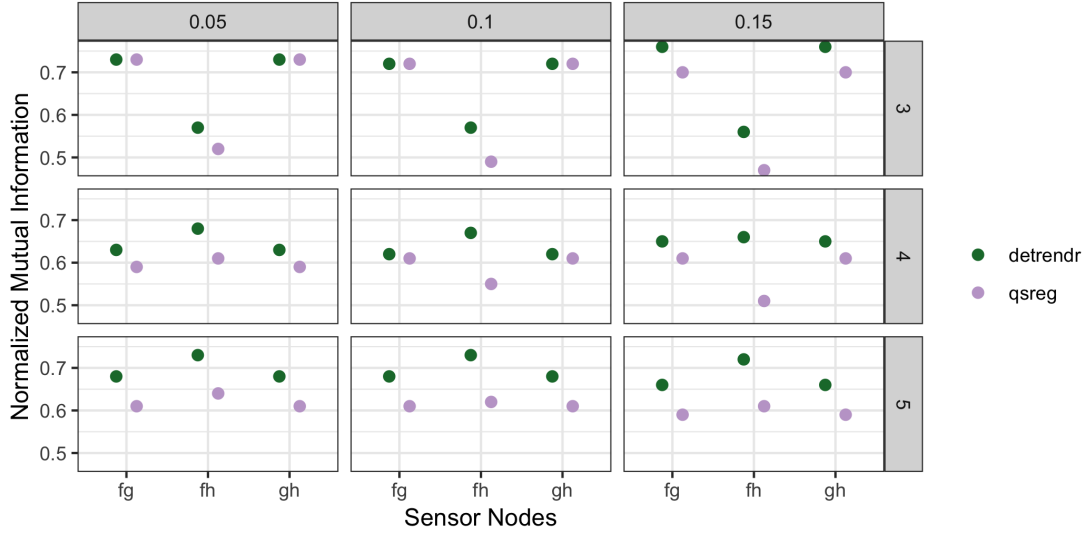


Table 1: Confusion matrices for 3 SPod nodes after baseline removal (n=5000). Node order is f, g, h. The threshold for the signal was set as the median + 3*MAD.

Method	Quantile	0,0,0	1,0,0	0,1,0	1,1,0	1,0,0	1,1,0	1,0,1	1,1,1
detrendr	0.05	4565	22	36	106	14	16	6	235
qsreg	0.05	4571	33	27	119	11	13	10	216
detrendr	0.10	4567	20	43	105	14	16	6	229
qsreg	0.10	4574	33	30	125	11	6	14	207
detrendr	0.15	4575	20	29	111	15	15	6	229
qsreg	0.15	4576	35	29	120	10	6	22	202

Table 2: Confusion matrices for 3 SPod nodes after baseline removal (n=5000). Node order is f, g, h. The threshold for the signal was set as the median + 4*MAD.

Method	Quantile	0,0,0	1,0,0	0,1,0	1,1,0	1,0,0	1,1,0	1,0,1	1,1,1
detrendr	0.05	4672	24	43	35	4	16	14	192
qsreg	0.05	4650	40	53	41	9	10	11	186
detrendr	0.10	4669	28	43	36	3	15	14	192
qsreg	0.10	4670	37	36	44	11	6	21	175
detrendr	0.15	4680	29	28	37	4	16	14	192
qsreg	0.15	4678	38	25	47	11	6	30	165

Table 3: Confusion matrices for 3 SPod nodes after baseline removal (n=5000). Node order is f, g, h. The threshold for the signal was set as the median + 5*MAD.

Method	Quantile	0,0,0	1,0,0	0,1,0	1,1,0	1,0,0	1,1,0	1,0,1	1,1,1
detrendr	0.05	4743	25	14	4	8	11	16	179
qsreg	0.05	4732	27	25	10	8	7	27	164
detrendr	0.10	4738	26	17	5	8	11	13	182
qsreg	0.10	4747	26	14	7	10	7	33	156
detrendr	0.15	4743	20	17	4	8	12	21	175
qsreg	0.15	4751	26	22	11	10	7	29	144