case1

data: E with 4 continuous variables

GxE: g[,1]\*e[,1],g[,1]\*e[,2],g[,1]\*e[,3],g[,2]\*e[,4],g[,3]\*e[,1],g[,3]\*e[,2],

g[,4]\*e[,4],g[,5]\*e[,1],g[,5]\*e[,2],g[,6]\*e[,4],g[,7]\*e[,1],g[,7]\*e[,2]

n=200, p=500, seq(0,1,by=0.01), rep=30

coefficients: (0.1, 0.5)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | BL | | | BLSS | | |
| error |  | main | interaction | total | main | interaction | total |
| n(0,1) | Top100 | 7.6 | 6.8 | 14.4 | 7.8 | 10.8 | 18.6 |
| SD | 0.49 | 1.6 | 1.73 | 0.41 | 0.92 | 1.13 |
| t(2) | Top100 | 6.37 | 3.9 | 10.27 | 6.33 | 8.53 | 14.87 |
| SD | 1.90 | 2.07 | 3.19 | 1.63 | 2.46 | 3.71 |
| lognorm(0,2) | Top100 | 0.9 | 0.5 | 1.4 | 0.73 | 0.47 | 1.2 |
| SD | 1.21 | 0.97 | 1.45 | 0.94 | 0.68 | 1.35 |
| 90% n(0,1) + 10% Cauchy(0,1) | Top100 | 5.57 | 3.63 | 9.2 | 6.2 | 8.3 | 14.5 |
| SD | 2.99 | 2.53 | 5.05 | 2.62 | 3.98 | 6.39 |
| 80% n(0,1) + 20% Cauchy(0,1) | Top100 | 5.07 | 3 | 8.07 | 4.6 | 5.7 | 10.3 |
| SD | 2.89 | 2.49 | 5.01 | 3.25 | 4.23 | 7.27 |

top1001, top1002, top1003, top1004, top1005

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | LADBL | | | LADBLSS | | |
| error |  | main | interaction | total | main | interaction | total |
| n(0,1) | Top100 | 7.67 | 6.53 | 14.2 | 7.76 | 10.53 | 18.3 |
| SD | 0.55 | 1.85 | 1.81 | 0.50 | 1.36 | 1.49 |
| t(2) | Top100 | 7.43 | 5.8 | 13.23 | 7.53 | 9.9 | 17.43 |
| SD | 0.94 | 1.71 | 2.01 | 0.51 | 1.56 | 1.76 |
| lognorm(0,2) | Top100 | 6.27 | 3.67 | 9.93 | 6.1 | 8.93 | 15.03 |
| SD | 1.55 | 1.94 | 2.75 | 1.37 | 2.02 | 3.09 |
| 90% n(0,1) + 10% Cauchy(0,1) | Top100 | 7.77 | 7 | 14.77 | 7.77 | 10.67 | 18.23 |
| SD | 0.43 | 1.93 | 1.81 | 0.57 | 1.50 | 1.67 |
| 80% n(0,1) + 20% Cauchy(0,1) | Top100 | 7.57 | 6.83 | 14.4 | 7.8 | 10.53 | 18.33 |
| SD | 0.57 | 1.07 | 1.83 | 0.55 | 1.36 | 1.69 |

case2

data: E with 2 continuous variables and 2 discrete variables

GxE: g[,1]\*e[,1],g[,3]\*e[,2],g[,5]\*e[,3],g[,8]\*e[,4],g[,15]\*e[,1],g[,18]\*e[,2],

g[,24]\*e[,4],g[,25]\*e[,1],g[,35]\*e[,2],g[,36]\*e[,4],g[,40]\*e[,1],g[,43]\*e[,2]

n=200, p=500, seq(0,1,by=0.01), rep=30

coefficients: (0.1, 0.5)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | BL | | | BLSS | | |
| error |  | main | interaction | total | main | interaction | total |
| n(0,1) | Top100 | 7.83 | 3.8 | 11.63 | 7.9 | 5.07 | 12.97 |
| SD | 0.46 | 1.09 | 1.10 | 0.31 | 1.41 | 1.35 |
| t(2) | Top100 | 6.9 | 1.87 | 8.77 | 6.97 | 3 | 9.97 |
| SD | 1.88 | 1.48 | 2.75 | 1.27 | 1.74 | 2.53 |
| lognorm(0,2) | Top100 | 0.53 | 0.53 | 1.07 | 0.63 | 0.77 | 1.4 |
| SD | 0.89 | 0.73 | 1.08 | 0.81 | 1.00 | 1.19 |
| 90% n(0,1) + 10% Cauchy(0,1) | Top100 | 6.73 | 1.87 | 8.6 | 6.1 | 3 | 9.1 |
| SD | 2.48 | 1.36 | 3.45 | 2.86 | 2.12 | 4.51 |
| 80% n(0,1) + 20% Cauchy(0,1) | Top100 | 6.13 | 2.27 | 8.4 | 4 | 1.43 | 5.43 |
| SD | 2.33 | 1.34 | 2.91 | 3.18 | 1.50 | 4.46 |

top1011, top1012, top1013, top1014, top1015

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | LADBL | | | LADBLSS | | |
| error |  | main | interaction | total | main | interaction | total |
| n(0,1) | Top100 | 7.9 | 3.6 | 11.5 | 7.33 | 4.03 | 11.76 |
| SD | 0.40 | 1.49 | 1.63 | 0.52 | 1.59 | 1.48 |
| t(2) | Top100 | 7.7 | 2.93 | 10.63 | 7.47 | 3.9 | 11.37 |
| SD | 0.70 | 1.46 | 1.52 | 0.82 | 1.29 | 1.59 |
| lognorm(0,2) | Top100 | 7.1 | 1.6 | 8.7 | 6.73 | 2.97 | 9.7 |
| SD | 1.03 | 1.25 | 1.66 | 1.20 | 1.13 | 1.95 |
| 90% n(0,1) + 10% Cauchy(0,1) | Top100 | 7.97 | 3.17 | 11.13 | 7.77 | 4.53 | 12.3 |
| SD | 0.18 | 1.78 | 1.74 | 0.57 | 1.69 | 1.84 |
| 80% n(0,1) + 20% Cauchy(0,1) | Top100 | 7.8 | 2.73 | 10.53 | 7.8 | 4.37 | 12.17 |
| SD | 0.41 | 1.44 | 1.50 | 0.48 | 1.38 | 1.51 |