case1

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=50, seq(0,1,by=0.01), rep=30

coefficients: (0.1, 0.5)

error		BL	BLSS	LADBL	LADBLSS
n(0,1)	AUC	0.8307	0.8503	0.8205	0.8383
	SD	0.0075	0.0159	0.0068	0.0141
t(2)	AUC	0.7666	0.7792	0.8003	0.8154
	SD	0.0112	0.0265	0.0089	0.0116
laplace(0,2)	AUC	0.7607	0.7754	0.7694	0.7801
	SD	0.0070	0.0222	0.0094	0.0139
lognorm(0,1)	AUC	0.7863	0.8090	0.8080	0.8268
	SD	0.0063	0.0192	0.0079	0.0105

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

coefficients: (0.1, 0.5)

error		BL	BLSS	LADBL	LADBLSS
laplace(0,2)	AUC	0.7644	0.8186	0.7731	0.8246
	SD	0.0091	0.0297	0.0062	0.0171
lognorm(0,1)	AUC	0.7969	0.8513	0.8199	0.8673
	SD	0.0082	0.0238	0.0074	0.0132

n=200, p=1000, seq(0,1,by=0.01), rep=30

coefficients: (0.1, 0.5)

error3: laplace(0,2)

	BL	BLSS	LADBL	LADBLSS
AUC	0.7664	0.8124	0.7758	0.8248
SD of AUC	0.0069	0.0317	0.0074	0.0172

error4: lognorm(0,1)

	BL	BLSS	LADBL	LADBLSS
AUC	0.7959	0.8390	0.8176	0.8671
SD of AUC	0.0077	0.0231	0.0060	0.0154

case2

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=50, seq(0,1,by=0.01), rep=30

coefficients: (0.1, 0.5)

error1: n(0,1)

	BL	BLSS	LADBL	LADBLSS
AUC	0.9091	0.9759	0.9164	0.9744
SD of AUC	0.0081	0.0016	0.0067	0.0033

error2: t(2)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8233	0.9364	0.8898	0.9673
SD of AUC	0.0128	0.0159	0.0074	0.0035

error3: laplace(0,2)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8149	0.9424	0.8389	0.9436
SD of AUC	0.0119	0.0119	0.0091	0.0096

error4: lognorm(0,1)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8575	0.9561	0.9069	0.9713
SD of AUC	0.0087	0.0154	0.0079	0.0042

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

coefficients: (0.1, 0.5)

error3: laplace(0,2)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8202	0.9598	0.8450	0.9622
SD of AUC	0.0083	0.0125	0.0092	0.0055

error4: lognorm(0,1)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8662	0.9762	0.9160	0.9881
SD of AUC	0.0083	0.0079	0.0064	0.0032

n=200, p=1000, seq(0,1,by=0.01), rep=30

coefficients: (0.1, 0.5)

error3: laplace(0,2)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8234	0.9619	0.8455	0.9622
SD of AUC	0.0084	0.0137	0.0069	0.0083

error4: lognorm(0,1)

	BL	BLSS	LADBL	LADBLSS
AUC	0.8660	0.9767	0.9158	0.9879
SD of AUC	0.0097	0.0079	0.0066	0.0030

ROC curves:
case1
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],
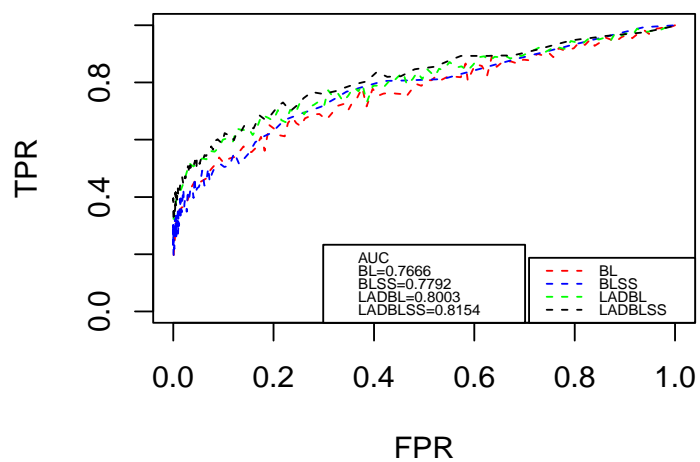   g[,24]*e[,4],g[,25]*e[,1],g[,35]*e[,2],g[,36]*e[,4],g[,40]*e[,1],g[,43]*e[,2]

n=200, p=50, seq(0,1,by=0.01), rep=30
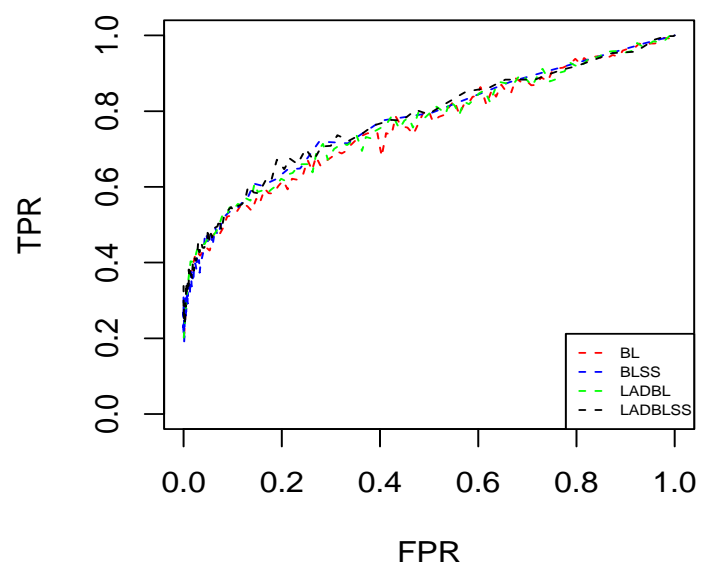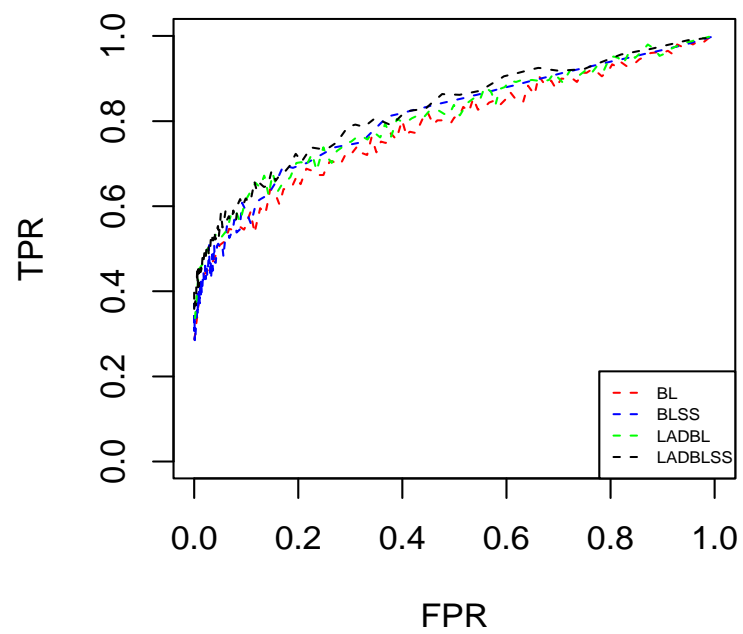coefficients: (0.1, 0.5)

error=n(0,1)

AUC
BL=0.8307
BLSS=0.8503
LADBL=0.8205
LADBLSS=0.8383

- - - BL
- - - BLSS
- - - LADBL
- - - LADBLSS

error=t(2)

AUC
BL=0.7666
BLSS=0.7792
LADBL=0.8003
LADBLSS=0.8154

- - - BL
- - - BLSS
- - - LADBL
- - - LADBLSS

error=rlaplace(0,2)

TPR vs FPR

Legend:
- BL
- BLSS
- LADBL
- LADBLSS

error=rlnorm(n)

TPR vs FPR

Legend:
- BL
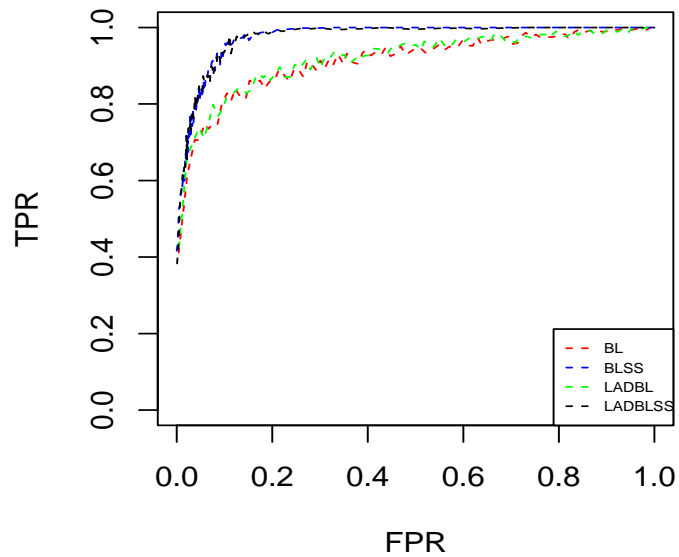- BLSS
- LADBL
- LADBLSS
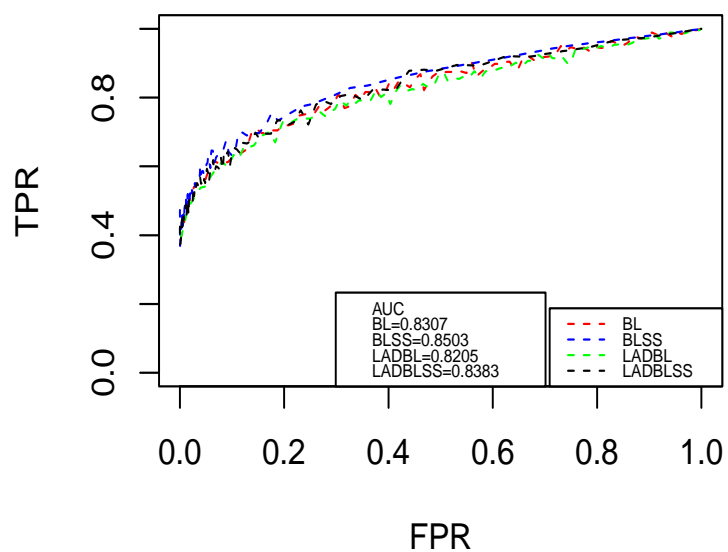
case2
data: E with 4 continuous variables
GxE: g[,1]*e[,1],g[,1]*e[,2],g[,1]*e[,3],g[,2]*e[,4],g[,3]*e[,1],g[,3]*e[,2],
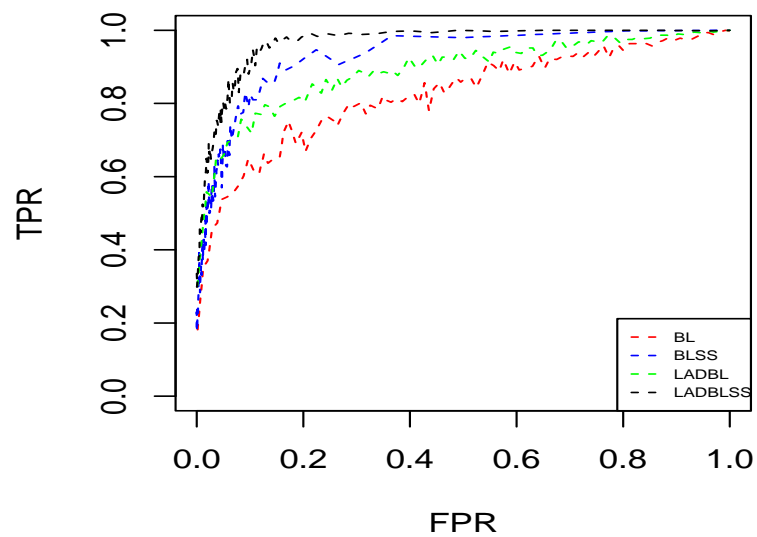   g[,4]*e[,4],g[,5]*e[,1],g[,5]*e[,2],g[,6]*e[,4],g[,7]*e[,1],g[,7]*e[,2]

n=200, p=50, seq(0,1,by=0.01), rep=30
coefficients: (0.1, 0.5)

error=n(0,1)

error=t(2)

error=laplace(0,2)

error=lnorm(0,1)