

July 13, 2009

Simulation summary with the following tuning:

DS – γ = sequence (from = 3, to = 20, by = 1)

SCAD – $\alpha_{in} = \alpha_{out} = 0.1$, size of the subset of the variables used in the estimation of error variance
= $E[\text{active effects}] + 1$ rounded up

GS – $R^2\text{-inc} = 0.99 / (E[\text{active effects}] + 1 \text{ rounded up})$, $k = n$

FORWARD – α_{in} in $\{0.05, 0.10, 0.15\}$

STEPWISE – $(\alpha_{in}, \alpha_{out})$ in $\{0.05, 0.10, 0.15\} \times \{0.05, 0.10, 0.15\}$ such that $\alpha_{in} \geq \alpha_{out}$

Where applicable, models were chosen via $mAIC = n \cdot \log(RSS/n) + 2 \cdot p^2$

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No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.6053	0.9948	0.6696	0.9872	0.3304	0.0128	0.0052	0.3947	1.26	0.85
SCAD	0.2995	0.9990	0.8658	0.9818	0.1342	0.0182	0.0010	0.7005	1.26	0.31
LASSO	0.7516	0.9887	0.4694	0.9906	0.5306	0.0094	0.0113	0.2484	1.26	1.37
LARS	0.7516	0.9887	0.4694	0.9906	0.5306	0.0094	0.0113	0.2484	1.26	1.37
GSDS	0.5705	0.9991	0.9071	0.9870	0.0929	0.0130	0.0009	0.4295	1.26	0.60
GSR2-r	0.5784	0.9784	0.4309	0.9879	0.5691	0.0121	0.0216	0.4216	1.26	1.78
GSR2	0.5842	0.9786	0.4202	0.9878	0.5798	0.0122	0.0214	0.4158	1.26	1.77
FOR	0.9949	0.3755	0.0357	0.9996	0.9643	0.0004	0.6245	0.0051	1.26	34.83
SWCV	0.9869	0.8190	0.1221	0.9995	0.8779	0.0005	0.1810	0.0131	1.26	10.97

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5160	0.9948	0.8164	0.9737	0.1836	0.0263	0.0052	0.4840	0.48	0.28
SCAD	0.2519	0.9990	0.9429	0.9622	0.0571	0.0378	0.0010	0.7481	0.48	0.12
LASSO	0.6979	0.9891	0.7363	0.9824	0.2637	0.0176	0.0109	0.3021	0.48	0.42
LARS	0.6979	0.9891	0.7363	0.9824	0.2637	0.0176	0.0109	0.3021	0.48	0.42
GSDS	0.6143	0.9983	0.9412	0.9787	0.0588	0.0213	0.0017	0.3857	0.48	0.30
GSR2-r	0.7405	0.9060	0.3425	0.9833	0.6575	0.0167	0.0940	0.2595	0.48	1.24
GSR2	0.7308	0.9064	0.3317	0.9828	0.6683	0.0172	0.0936	0.2692	0.48	1.23
FOR	0.9954	0.3729	0.0768	0.9993	0.9232	0.0007	0.6271	0.0046	0.48	6.46
SWCV	0.9861	0.8233	0.2489	0.9989	0.7511	0.0011	0.1767	0.0139	0.48	2.16

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5451	0.9948	0.6061	0.9902	0.3939	0.0098	0.0052	0.4549	0.77	0.57
SCAD	0.2789	0.9990	0.8213	0.9862	0.1787	0.0138	0.0010	0.7211	0.77	0.20
LASSO	0.7073	0.9886	0.4319	0.9924	0.5681	0.0076	0.0114	0.2927	0.77	0.95
LARS	0.7073	0.9886	0.4319	0.9924	0.5681	0.0076	0.0114	0.2927	0.77	0.95
GSDS	0.4533	0.9993	0.8911	0.9889	0.1089	0.0111	0.0007	0.5467	0.77	0.31
GSR2-r	0.4563	0.9942	0.5427	0.9889	0.4573	0.0111	0.0058	0.5437	0.77	0.54
GSR2	0.4557	0.9943	0.5414	0.9889	0.4586	0.0111	0.0057	0.5443	0.77	0.53
FOR	0.9950	0.3761	0.0270	0.9997	0.9730	0.0003	0.6239	0.0050	0.77	28.37
SWCV	0.9874	0.8181	0.0980	0.9996	0.9020	0.0004	0.1819	0.0126	0.77	8.81

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No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.6374	0.9957	0.7131	0.9877	0.2869	0.0123	0.0043	0.3626	1.22	0.80
SCAD	0.8617	0.9975	0.8918	0.9937	0.1082	0.0063	0.0025	0.1383	1.22	1.01
LASSO	0.9549	0.9888	0.4854	0.9972	0.5146	0.0028	0.0112	0.0451	1.22	1.69
LARS	0.9549	0.9888	0.4854	0.9972	0.5146	0.0028	0.0112	0.0451	1.22	1.69
GSDS	0.6151	0.9992	0.9242	0.9875	0.0758	0.0125	0.0008	0.3849	1.22	0.59
GSR2-r	0.7546	0.9769	0.4485	0.9908	0.5515	0.0092	0.0231	0.2454	1.22	1.99
GSR2	0.7518	0.9779	0.4539	0.9909	0.5461	0.0091	0.0221	0.2482	1.22	1.93
FOR	0.9994	0.3747	0.0349	1.0000	0.9651	0.0000	0.6253	0.0006	1.22	34.86
SWCV	0.9994	0.8289	0.1370	1.0000	0.8630	0.0000	0.1711	0.0006	1.22	10.45

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5002	0.9951	0.8147	0.9728	0.1853	0.0272	0.0049	0.4998	0.48	0.26
SCAD	0.8178	0.9975	0.9490	0.9872	0.0510	0.0128	0.0025	0.1822	0.48	0.37
LASSO	0.9387	0.9878	0.7604	0.9948	0.2396	0.0052	0.0122	0.0613	0.48	0.55
LARS	0.9387	0.9878	0.7604	0.9948	0.2396	0.0052	0.0122	0.0613	0.48	0.55
GSDS	0.5638	0.9986	0.9447	0.9758	0.0553	0.0242	0.0014	0.4362	0.48	0.26
GSR2-r	0.8440	0.8950	0.3352	0.9875	0.6648	0.0125	0.1050	0.1560	0.48	1.39
GSR2	0.8418	0.8981	0.3386	0.9873	0.6614	0.0127	0.1019	0.1582	0.48	1.35
FOR	1.0000	0.3695	0.0739	1.0000	0.9261	0.0000	0.6305	0.0000	0.48	6.49
SWCV	1.0000	0.8288	0.2605	1.0000	0.7395	0.0000	0.1712	0.0000	0.48	2.13

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5862	0.9958	0.6673	0.9911	0.3327	0.0089	0.0042	0.4138	0.74	0.54
SCAD	0.8437	0.9975	0.8580	0.9952	0.1420	0.0048	0.0025	0.1563	0.74	0.64
LASSO	0.9474	0.9890	0.4897	0.9978	0.5103	0.0022	0.0110	0.0526	0.74	1.14
LARS	0.9474	0.9890	0.4897	0.9978	0.5103	0.0022	0.0110	0.0526	0.74	1.14
GSDS	0.5157	0.9994	0.9133	0.9901	0.0867	0.0099	0.0006	0.4843	0.74	0.33
GSR2-r	0.6332	0.9948	0.6370	0.9915	0.3630	0.0085	0.0052	0.3668	0.74	0.60
GSR2	0.6361	0.9953	0.6475	0.9916	0.3525	0.0084	0.0047	0.3639	0.74	0.58
FOR	0.9989	0.3759	0.0263	0.9999	0.9737	0.0001	0.6241	0.0011	0.74	28.38
SWCV	0.9989	0.8291	0.1129	1.0000	0.8871	0.0000	0.1709	0.0011	0.74	8.32

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No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.9501	0.9957	0.7158	0.9979	0.2842	0.0021	0.0043	0.0499	1.32	1.45
SCAD	0.9291	0.9975	0.8962	0.9959	0.1038	0.0041	0.0025	0.0709	1.32	1.23
LASSO	0.9780	0.9885	0.4996	0.9984	0.5004	0.0016	0.0115	0.0220	1.32	1.86
LARS	0.9780	0.9885	0.4994	0.9984	0.5006	0.0016	0.0115	0.0220	1.32	1.86
GSDS	0.9208	0.9994	0.9396	0.9973	0.0604	0.0027	0.0006	0.0792	1.32	1.21
GSR2-r	0.7499	0.9784	0.4641	0.9901	0.5359	0.0099	0.0216	0.2501	1.32	1.96
GSR2	0.7482	0.9778	0.4605	0.9900	0.5395	0.0100	0.0222	0.2518	1.32	1.99
FOR	1.0000	0.3767	0.0378	1.0000	0.9622	0.0000	0.6233	0.0000	1.32	34.80
SWCV	1.0000	0.8484	0.1787	1.0000	0.8213	0.0000	0.1516	0.0000	1.32	9.52

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.9536	0.9958	0.9077	0.9966	0.0923	0.0034	0.0042	0.0464	0.52	0.53
SCAD	0.9089	0.9966	0.9430	0.9926	0.0570	0.0074	0.0034	0.0911	0.52	0.48
LASSO	0.9692	0.9874	0.7827	0.9968	0.2173	0.0032	0.0126	0.0308	0.52	0.61
LARS	0.9692	0.9874	0.7827	0.9968	0.2173	0.0032	0.0126	0.0308	0.52	0.61
GSDS	0.9784	0.9992	0.9811	0.9980	0.0189	0.0020	0.0008	0.0216	0.52	0.51
GSR2-r	0.8325	0.8999	0.3467	0.9861	0.6533	0.0139	0.1001	0.1675	0.52	1.36
GSR2	0.8397	0.8981	0.3471	0.9865	0.6529	0.0135	0.1019	0.1603	0.52	1.38
FOR	1.0000	0.3739	0.0819	1.0000	0.9181	0.0000	0.6261	0.0000	0.52	6.46
SWCV	1.0000	0.8464	0.3137	1.0000	0.6863	0.0000	0.1536	0.0000	0.52	2.00

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.9298	0.9956	0.7068	0.9982	0.2932	0.0018	0.0044	0.0702	0.8	0.92
SCAD	0.9167	0.9977	0.8667	0.9967	0.1333	0.0033	0.0023	0.0833	0.8	0.76
LASSO	0.9754	0.9888	0.5006	0.9987	0.4994	0.0013	0.0112	0.0246	0.8	1.25
LARS	0.9754	0.9887	0.5004	0.9987	0.4996	0.0013	0.0113	0.0246	0.8	1.25
GSDS	0.8791	0.9994	0.9429	0.9971	0.0571	0.0029	0.0006	0.1209	0.8	0.70
GSR2-r	0.6502	0.9955	0.6703	0.9909	0.3297	0.0091	0.0045	0.3498	0.8	0.60
GSR2	0.6419	0.9952	0.6548	0.9908	0.3452	0.0092	0.0048	0.3581	0.8	0.61
FOR	1.0000	0.3774	0.0284	1.0000	0.9716	0.0000	0.6226	0.0000	0.8	28.33
SWCV	1.0000	0.8489	0.1513	1.0000	0.8487	0.0000	0.1511	0.0000	0.8	7.52

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No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.7759	0.9903	0.5082	0.9921	0.4918	0.0079	0.0097	0.2241	1.23	1.35
SCAD	0.3188	0.9988	0.8362	0.9826	0.1638	0.0174	0.0012	0.6812	1.23	0.34
LASSO	0.7801	0.9890	0.4775	0.9910	0.5225	0.0090	0.0110	0.2199	1.23	1.35
LARS	0.7801	0.9890	0.4775	0.9910	0.5225	0.0090	0.0110	0.2199	1.23	1.35
GSDS	0.7681	0.9897	0.4870	0.9927	0.5130	0.0073	0.0103	0.2319	1.23	1.41
GSR2-r	0.5875	0.9789	0.4294	0.9882	0.5706	0.0118	0.0211	0.4125	1.23	1.74
GSR2	0.6015	0.9776	0.4256	0.9885	0.5744	0.0115	0.0224	0.3985	1.23	1.83
FOR	0.9984	0.3735	0.0351	0.9997	0.9649	0.0003	0.6265	0.0016	1.23	34.93
SWCV	0.9962	0.8231	0.1215	0.9997	0.8785	0.0003	0.1769	0.0038	1.23	10.75

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.7195	0.9911	0.7749	0.9841	0.2251	0.0159	0.0089	0.2805	0.48	0.42
SCAD	0.2757	0.9992	0.9478	0.9633	0.0522	0.0367	0.0008	0.7243	0.48	0.13
LASSO	0.7272	0.9864	0.6982	0.9830	0.3018	0.0170	0.0136	0.2728	0.48	0.45
LARS	0.7272	0.9864	0.6982	0.9830	0.3018	0.0170	0.0136	0.2728	0.48	0.45
GSDS	0.8983	0.9836	0.7041	0.9921	0.2959	0.0079	0.0164	0.1017	0.48	0.57
GSR2-r	0.7168	0.9080	0.3370	0.9825	0.6630	0.0175	0.0920	0.2832	0.48	1.21
GSR2	0.7327	0.9026	0.3327	0.9829	0.6673	0.0171	0.0974	0.2673	0.48	1.27
FOR	0.9958	0.3657	0.0745	0.9992	0.9255	0.0008	0.6343	0.0042	0.48	6.52
SWCV	0.9939	0.8198	0.2436	0.9994	0.7564	0.0006	0.1802	0.0061	0.48	2.20

No. factors = 10; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.7334	0.9901	0.4687	0.9940	0.5313	0.0060	0.0099	0.2666	0.75	0.93
SCAD	0.2972	0.9987	0.7631	0.9869	0.2369	0.0131	0.0013	0.7028	0.75	0.22
LASSO	0.7227	0.9896	0.4527	0.9928	0.5473	0.0072	0.0104	0.2773	0.75	0.90
LARS	0.7227	0.9896	0.4527	0.9928	0.5473	0.0072	0.0104	0.2773	0.75	0.90
GSDS	0.6526	0.9911	0.4704	0.9928	0.5296	0.0072	0.0089	0.3474	0.75	0.83
GSR2-r	0.4698	0.9945	0.5546	0.9895	0.4454	0.0105	0.0055	0.5302	0.75	0.53
GSR2	0.4844	0.9940	0.5433	0.9897	0.4567	0.0103	0.0060	0.5156	0.75	0.56
FOR	0.9986	0.3751	0.0264	0.9998	0.9736	0.0002	0.6249	0.0014	0.75	28.41
SWCV	0.9955	0.8237	0.0956	0.9998	0.9044	0.0002	0.1763	0.0045	0.75	8.55

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No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3694	0.9987	0.9403	0.9394	0.0597	0.0606	0.0013	0.6306	4.37	1.17
SCAD	0.3884	0.9949	0.8307	0.9413	0.1693	0.0587	0.0051	0.6116	4.37	1.42
LASSO	0.4448	0.9965	0.8598	0.9427	0.1402	0.0573	0.0035	0.5552	4.37	1.47
LARS	0.4448	0.9965	0.8598	0.9427	0.1402	0.0573	0.0035	0.5552	4.37	1.47
GSDS	0.3545	0.9998	0.9879	0.9391	0.0121	0.0609	0.0002	0.6455	4.37	1.10
GSR2-r	0.6622	0.9760	0.7148	0.9615	0.2852	0.0385	0.0240	0.3378	4.37	3.62
GSR2	0.6657	0.9764	0.7125	0.9616	0.2875	0.0384	0.0236	0.3343	4.37	3.60
FOR	0.9797	0.3936	0.1204	0.9924	0.8796	0.0076	0.6064	0.0203	4.37	34.97
SWCV	0.9350	0.8414	0.3437	0.9891	0.6563	0.0109	0.1586	0.0650	4.37	11.95

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3452	0.9989	0.9832	0.8455	0.0168	0.1545	0.0011	0.6548	2.01	0.54
SCAD	0.3872	0.9949	0.9443	0.8577	0.0557	0.1423	0.0051	0.6128	2.01	0.64
LASSO	0.4308	0.9982	0.9726	0.8568	0.0274	0.1432	0.0018	0.5692	2.01	0.65
LARS	0.4308	0.9982	0.9726	0.8568	0.0274	0.1432	0.0018	0.5692	2.01	0.65
GSDS	0.4309	0.9999	0.9985	0.8602	0.0015	0.1398	0.0001	0.5691	2.01	0.71
GSR2-r	0.8083	0.8687	0.6237	0.9281	0.3763	0.0719	0.1313	0.1917	2.01	2.56
GSR2	0.8141	0.8703	0.6219	0.9292	0.3781	0.0708	0.1297	0.1859	2.01	2.55
FOR	0.9831	0.3957	0.2893	0.9840	0.7107	0.0160	0.6043	0.0169	2.01	6.80
SWCV	0.9346	0.8393	0.6172	0.9722	0.3828	0.0278	0.1607	0.0654	2.01	3.10

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3137	0.9987	0.9079	0.9599	0.0921	0.0401	0.0013	0.6863	2.36	0.63
SCAD	0.3533	0.9948	0.7360	0.9598	0.2640	0.0402	0.0052	0.6467	2.36	0.78
LASSO	0.3948	0.9962	0.7908	0.9615	0.2092	0.0385	0.0038	0.6052	2.36	0.81
LARS	0.3948	0.9962	0.7908	0.9615	0.2092	0.0385	0.0038	0.6052	2.36	0.81
GSDS	0.2178	0.9998	0.9730	0.9558	0.0270	0.0442	0.0002	0.7822	2.36	0.39
GSR2-r	0.4965	0.9968	0.8758	0.9673	0.1242	0.0327	0.0032	0.5035	2.36	1.06
GSR2	0.4990	0.9970	0.8742	0.9673	0.1258	0.0327	0.0030	0.5010	2.36	1.05
FOR	0.9754	0.3930	0.0805	0.9939	0.9195	0.0061	0.6070	0.0246	2.36	28.17
SWCV	0.9301	0.8416	0.2607	0.9926	0.7393	0.0074	0.1584	0.0699	2.36	8.86

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No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3641	0.9989	0.9494	0.9389	0.0506	0.0611	0.0011	0.6359	4.33	1.10
SCAD	0.8037	0.9922	0.8666	0.9708	0.1334	0.0292	0.0078	0.1963	4.33	3.14
LASSO	0.6816	0.9957	0.8736	0.9584	0.1264	0.0416	0.0043	0.3184	4.33	2.32
LARS	0.6816	0.9957	0.8736	0.9584	0.1264	0.0416	0.0043	0.3184	4.33	2.32
GSDS	0.3499	0.9999	0.9913	0.9383	0.0087	0.0617	0.0001	0.6501	4.33	1.01
GSR2-r	0.7228	0.9743	0.7091	0.9654	0.2909	0.0346	0.0257	0.2772	4.33	3.88
GSR2	0.7291	0.9747	0.7088	0.9659	0.2912	0.0341	0.0253	0.2709	4.33	3.89
FOR	0.9938	0.3953	0.1219	0.9967	0.8781	0.0033	0.6047	0.0062	4.33	34.96
SWCV	0.9815	0.8653	0.3938	0.9957	0.6062	0.0043	0.1347	0.0185	4.33	11.03

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3366	0.9992	0.9833	0.8446	0.0167	0.1554	0.0008	0.6634	1.99	0.50
SCAD	0.7993	0.9918	0.9553	0.9338	0.0447	0.0662	0.0082	0.2007	1.99	1.41
LASSO	0.6679	0.9969	0.9643	0.8980	0.0357	0.1020	0.0031	0.3321	1.99	1.04
LARS	0.6679	0.9969	0.9643	0.8980	0.0357	0.1020	0.0031	0.3321	1.99	1.04
GSDS	0.4002	0.9996	0.9934	0.8554	0.0066	0.1446	0.0004	0.5998	1.99	0.64
GSR2-r	0.8463	0.8557	0.6057	0.9364	0.3943	0.0636	0.1443	0.1537	1.99	2.71
GSR2	0.8519	0.8561	0.6041	0.9373	0.3959	0.0627	0.1439	0.1481	1.99	2.72
FOR	0.9933	0.3818	0.2855	0.9924	0.7145	0.0076	0.6182	0.0067	1.99	6.94
SWCV	0.9797	0.8691	0.6556	0.9903	0.3444	0.0097	0.1309	0.0203	1.99	3.00

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3132	0.9989	0.9211	0.9596	0.0789	0.0404	0.0011	0.6868	2.34	0.60
SCAD	0.7832	0.9923	0.8102	0.9790	0.1898	0.0210	0.0077	0.2168	2.34	1.73
LASSO	0.6498	0.9955	0.8374	0.9716	0.1626	0.0284	0.0045	0.3502	2.34	1.28
LARS	0.6498	0.9955	0.8374	0.9716	0.1626	0.0284	0.0045	0.3502	2.34	1.28
GSDS	0.2274	0.9999	0.9891	0.9559	0.0109	0.0441	0.0001	0.7726	2.34	0.38
GSR2-r	0.5863	0.9972	0.9054	0.9704	0.0946	0.0296	0.0028	0.4137	2.34	1.17
GSR2	0.5917	0.9975	0.9108	0.9708	0.0892	0.0292	0.0025	0.4083	2.34	1.17
FOR	0.9932	0.3979	0.0825	0.9976	0.9175	0.0024	0.6021	0.0068	2.34	28.02
SWCV	0.9802	0.8647	0.3061	0.9969	0.6939	0.0031	0.1353	0.0198	2.34	8.03

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No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.8099	0.9989	0.9497	0.9747	0.0503	0.0253	0.0011	0.1901	4.38	3.09
SCAD	0.8211	0.9920	0.8642	0.9725	0.1358	0.0275	0.0080	0.1789	4.38	3.28
LASSO	0.8033	0.9948	0.8696	0.9706	0.1304	0.0294	0.0052	0.1967	4.38	3.07
LARS	0.8025	0.9948	0.8695	0.9705	0.1305	0.0295	0.0052	0.1975	4.38	3.06
GSDS	0.7969	0.9999	0.9924	0.9740	0.0076	0.0260	0.0001	0.2031	4.38	3.02
GSR2-r	0.7242	0.9750	0.7142	0.9648	0.2858	0.0352	0.0250	0.2758	4.38	3.84
GSR2	0.7330	0.9741	0.7103	0.9656	0.2897	0.0344	0.0259	0.2670	4.38	3.93
FOR	0.9948	0.3958	0.1234	0.9971	0.8766	0.0029	0.6042	0.0052	4.38	34.96
SWCV	0.9825	0.8964	0.4838	0.9961	0.5162	0.0039	0.1036	0.0175	4.38	9.52

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.7957	0.9994	0.9927	0.9357	0.0073	0.0643	0.0006	0.2043	2.02	1.42
SCAD	0.8171	0.9913	0.9584	0.9362	0.0416	0.0638	0.0087	0.1829	2.02	1.45
LASSO	0.7953	0.9972	0.9746	0.9290	0.0254	0.0710	0.0028	0.2047	2.02	1.35
LARS	0.7942	0.9972	0.9746	0.9287	0.0254	0.0713	0.0028	0.2058	2.02	1.35
GSDS	0.8655	0.9998	0.9977	0.9522	0.0023	0.0478	0.0002	0.1345	2.02	1.61
GSR2-r	0.8313	0.8599	0.6080	0.9341	0.3920	0.0659	0.1401	0.1687	2.02	2.66
GSR2	0.8402	0.8545	0.6038	0.9361	0.3962	0.0639	0.1455	0.1598	2.02	2.73
FOR	0.9942	0.4023	0.2954	0.9936	0.7046	0.0064	0.5977	0.0058	2.02	6.79
SWCV	0.9816	0.8997	0.7155	0.9908	0.2845	0.0092	0.1003	0.0184	2.02	2.78

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.8012	0.9989	0.9452	0.9830	0.0548	0.0170	0.0011	0.1988	2.36	1.67
SCAD	0.7999	0.9921	0.8013	0.9805	0.1987	0.0195	0.0079	0.2001	2.36	1.83
LASSO	0.7841	0.9943	0.8282	0.9798	0.1718	0.0202	0.0057	0.2159	2.36	1.71
LARS	0.7835	0.9943	0.8282	0.9797	0.1718	0.0203	0.0057	0.2165	2.36	1.71
GSDS	0.7165	0.9999	0.9931	0.9783	0.0069	0.0217	0.0001	0.2835	2.36	1.41
GSR2-r	0.5968	0.9974	0.9055	0.9706	0.0945	0.0294	0.0026	0.4032	2.36	1.18
GSR2	0.6105	0.9973	0.9048	0.9711	0.0952	0.0289	0.0027	0.3895	2.36	1.21
FOR	0.9947	0.3946	0.0831	0.9980	0.9169	0.0020	0.6054	0.0053	2.36	28.18
SWCV	0.9808	0.8960	0.4020	0.9972	0.5980	0.0028	0.1040	0.0192	2.36	6.74

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No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5243	0.9975	0.8822	0.9510	0.1178	0.0490	0.0025	0.4757	4.33	1.86
SCAD	0.3402	0.9955	0.8176	0.9376	0.1824	0.0624	0.0045	0.6598	4.33	1.14
LASSO	0.4392	0.9964	0.8422	0.9421	0.1578	0.0579	0.0036	0.5608	4.33	1.41
LARS	0.4392	0.9964	0.8422	0.9421	0.1578	0.0579	0.0036	0.5608	4.33	1.41
GSDS	0.5692	0.9978	0.8910	0.9550	0.1090	0.0450	0.0022	0.4308	4.33	2.08
GSR2-r	0.6726	0.9748	0.6987	0.9615	0.3013	0.0385	0.0252	0.3274	4.33	3.64
GSR2	0.6723	0.9751	0.6995	0.9616	0.3005	0.0384	0.0249	0.3277	4.33	3.62
FOR	0.9848	0.3940	0.1203	0.9938	0.8797	0.0062	0.6060	0.0152	4.33	34.97
SWCV	0.9484	0.8388	0.3432	0.9908	0.6568	0.0092	0.1612	0.0516	4.33	12.15

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.4997	0.9975	0.9642	0.8761	0.0358	0.1239	0.0025	0.5003	1.96	0.82
SCAD	0.3374	0.9950	0.9249	0.8492	0.0751	0.1508	0.0050	0.6626	1.96	0.50
LASSO	0.4153	0.9970	0.9540	0.8575	0.0460	0.1425	0.0030	0.5847	1.96	0.60
LARS	0.4153	0.9970	0.9540	0.8575	0.0460	0.1425	0.0030	0.5847	1.96	0.60
GSDS	0.7131	0.9964	0.9590	0.9151	0.0410	0.0849	0.0036	0.2869	1.96	1.25
GSR2-r	0.8058	0.8624	0.5995	0.9272	0.4005	0.0728	0.1376	0.1942	1.96	2.54
GSR2	0.8126	0.8641	0.6019	0.9299	0.3981	0.0701	0.1359	0.1874	1.96	2.54
FOR	0.9836	0.3996	0.2855	0.9830	0.7145	0.0170	0.6004	0.0164	1.96	6.76
SWCV	0.9435	0.8380	0.6033	0.9771	0.3967	0.0229	0.1620	0.0565	1.96	3.11

No. factors = 10; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.4913	0.9975	0.8695	0.9673	0.1305	0.0327	0.0025	0.5087	2.38	1.05
SCAD	0.2943	0.9957	0.7206	0.9571	0.2794	0.0429	0.0043	0.7057	2.38	0.64
LASSO	0.3913	0.9963	0.7874	0.9607	0.2126	0.0393	0.0037	0.6087	2.38	0.80
LARS	0.3913	0.9963	0.7874	0.9607	0.2126	0.0393	0.0037	0.6087	2.38	0.80
GSDS	0.3988	0.9981	0.8780	0.9631	0.1220	0.0369	0.0019	0.6012	2.38	0.83
GSR2-r	0.5183	0.9968	0.8752	0.9676	0.1248	0.0324	0.0032	0.4817	2.38	1.10
GSR2	0.5123	0.9968	0.8745	0.9673	0.1255	0.0327	0.0032	0.4877	2.38	1.08
FOR	0.9838	0.3933	0.0823	0.9958	0.9177	0.0042	0.6067	0.0162	2.38	28.20
SWCV	0.9449	0.8390	0.2644	0.9937	0.7356	0.0063	0.1610	0.0551	2.38	9.04

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No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3241	0.9940	0.4475	0.9833	0.5525	0.0167	0.0060	0.6759	2.55	1.28
SCAD	0.1394	0.9978	0.4858	0.9808	0.5142	0.0192	0.0022	0.8606	2.55	0.52
LASSO	0.4124	0.9930	0.4206	0.9847	0.5794	0.0153	0.0070	0.5876	2.55	1.57
LARS	0.4124	0.9930	0.4206	0.9847	0.5794	0.0153	0.0070	0.5876	2.55	1.57
GSDS	0.2818	0.9996	0.9138	0.9833	0.0862	0.0167	0.0004	0.7182	2.55	0.61
GSR2-r	0.3521	0.9844	0.3750	0.9849	0.6250	0.0151	0.0156	0.6479	2.55	2.62
GSR2	0.3515	0.9839	0.3696	0.9849	0.6304	0.0151	0.0161	0.6485	2.55	2.68
FOR	0.6075	0.4803	0.0257	0.9826	0.9743	0.0174	0.5197	0.3925	2.55	62.59
SWCV	0.6038	0.8992	0.1193	0.9903	0.8807	0.0097	0.1008	0.3962	2.55	13.36

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.4240	0.9864	0.5955	0.9675	0.4045	0.0325	0.0136	0.5760	0.76	0.48
SCAD	0.2182	0.9952	0.7037	0.9585	0.2963	0.0415	0.0048	0.7818	0.76	0.20
LASSO	0.5858	0.9842	0.6329	0.9736	0.3671	0.0264	0.0158	0.4142	0.76	0.60
LARS	0.5858	0.9842	0.6329	0.9736	0.3671	0.0264	0.0158	0.4142	0.76	0.60
GSDS	0.4238	0.9992	0.9586	0.9682	0.0414	0.0318	0.0008	0.5762	0.76	0.30
GSR2-r	0.5762	0.9034	0.2909	0.9734	0.7091	0.0266	0.0966	0.4238	0.76	1.80
GSR2	0.5757	0.8997	0.2873	0.9735	0.7127	0.0265	0.1003	0.4243	0.76	1.86
FOR	1.0000	0.0060	0.0515	1.0000	0.9485	0.0000	0.9940	0.0000	0.76	14.91
SWCV	0.9918	0.7908	0.2201	0.9990	0.7799	0.0010	0.2092	0.0082	0.76	3.72

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.2283	0.9950	0.3645	0.9856	0.6355	0.0144	0.0050	0.7717	1.79	0.80
SCAD	0.0940	0.9981	0.3854	0.9840	0.6146	0.0160	0.0019	0.9060	1.79	0.32
LASSO	0.2957	0.9942	0.3570	0.9863	0.6430	0.0137	0.0058	0.7043	1.79	0.97
LARS	0.2957	0.9942	0.3570	0.9863	0.6430	0.0137	0.0058	0.7043	1.79	0.97
GSDS	0.1924	0.9997	0.8851	0.9854	0.1149	0.0146	0.0003	0.8076	1.79	0.31
GSR2-r	0.2507	0.9957	0.4882	0.9863	0.5118	0.0137	0.0043	0.7493	1.79	0.82
GSR2	0.2490	0.9956	0.4853	0.9863	0.5147	0.0137	0.0044	0.7510	1.79	0.82
FOR	0.4418	0.5457	0.0167	0.9826	0.9833	0.0174	0.4543	0.5582	1.79	47.68
SWCV	0.4391	0.9142	0.0852	0.9893	0.9148	0.0107	0.0858	0.5609	1.79	9.64

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No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3191	0.9942	0.4504	0.9839	0.5496	0.0161	0.0058	0.6809	2.43	1.20
SCAD	0.5388	0.9912	0.5081	0.9885	0.4919	0.0115	0.0088	0.4612	2.43	2.11
LASSO	0.5708	0.9896	0.4195	0.9899	0.5805	0.0101	0.0104	0.4292	2.43	2.47
LARS	0.5708	0.9896	0.4195	0.9899	0.5805	0.0101	0.0104	0.4292	2.43	2.47
GSDS	0.3062	0.9996	0.9186	0.9841	0.0814	0.0159	0.0004	0.6938	2.43	0.59
GSR2-r	0.4200	0.9841	0.3910	0.9869	0.6090	0.0131	0.0159	0.5800	2.43	2.78
GSR2	0.4206	0.9845	0.3943	0.9869	0.6057	0.0131	0.0155	0.5794	2.43	2.73
FOR	0.6058	0.4794	0.0236	0.9833	0.9764	0.0167	0.5206	0.3942	2.43	62.69
SWCV	0.6049	0.8995	0.1137	0.9908	0.8863	0.0092	0.1005	0.3951	2.43	13.27

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3866	0.9877	0.5892	0.9672	0.4108	0.0328	0.0123	0.6134	0.73	0.43
SCAD	0.8483	0.9807	0.7146	0.9874	0.2854	0.0126	0.0193	0.1517	0.73	0.82
LASSO	0.9183	0.9774	0.6748	0.9922	0.3252	0.0078	0.0226	0.0817	0.73	0.94
LARS	0.9183	0.9774	0.6748	0.9922	0.3252	0.0078	0.0226	0.0817	0.73	0.94
GSDS	0.4073	0.9989	0.9433	0.9684	0.0567	0.0316	0.0011	0.5927	0.73	0.28
GSR2-r	0.6584	0.8994	0.2958	0.9784	0.7042	0.0216	0.1006	0.3416	0.73	1.90
GSR2	0.6571	0.9017	0.2982	0.9784	0.7018	0.0216	0.0983	0.3429	0.73	1.87
FOR	1.0000	0.0048	0.0490	1.0000	0.9510	0.0000	0.9952	0.0000	0.73	14.93
SWCV	0.9975	0.7919	0.2078	0.9996	0.7922	0.0004	0.2081	0.0025	0.73	3.68

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.2276	0.9951	0.3642	0.9863	0.6358	0.0137	0.0049	0.7724	1.7	0.77
SCAD	0.3893	0.9926	0.4174	0.9887	0.5826	0.0113	0.0074	0.6107	1.7	1.29
LASSO	0.4157	0.9912	0.3659	0.9896	0.6341	0.0104	0.0088	0.5843	1.7	1.53
LARS	0.4157	0.9912	0.3659	0.9896	0.6341	0.0104	0.0088	0.5843	1.7	1.53
GSDS	0.2182	0.9997	0.8977	0.9864	0.1023	0.0136	0.0003	0.7818	1.7	0.31
GSR2-r	0.3070	0.9959	0.5336	0.9879	0.4664	0.0121	0.0041	0.6930	1.7	0.87
GSR2	0.3081	0.9960	0.5439	0.9879	0.4561	0.0121	0.0040	0.6919	1.7	0.86
FOR	0.4422	0.5449	0.0156	0.9833	0.9844	0.0167	0.4551	0.5578	1.7	47.76
SWCV	0.4418	0.9143	0.0819	0.9898	0.9181	0.0102	0.0857	0.5582	1.7	9.59

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No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5848	0.9896	0.4534	0.9904	0.5466	0.0096	0.0104	0.4152	2.61	2.70
SCAD	0.5709	0.9907	0.5320	0.9893	0.4680	0.0107	0.0093	0.4291	2.61	2.44
LASSO	0.5975	0.9887	0.4144	0.9906	0.5856	0.0094	0.0113	0.4025	2.61	2.85
LARS	0.5975	0.9887	0.4144	0.9906	0.5856	0.0094	0.0113	0.4025	2.61	2.85
GSDS	0.4502	0.9996	0.9161	0.9876	0.0839	0.0124	0.0004	0.5498	2.61	1.20
GSR2-r	0.4035	0.9839	0.3728	0.9857	0.6272	0.0143	0.0161	0.5965	2.61	2.84
GSR2	0.4074	0.9834	0.3744	0.9857	0.6256	0.0143	0.0166	0.5926	2.61	2.90
FOR	0.6100	0.4791	0.0260	0.9829	0.9740	0.0171	0.5209	0.3900	2.61	62.79
SWCV	0.6091	0.8995	0.1246	0.9905	0.8754	0.0095	0.1005	0.3909	2.61	13.40

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.9527	0.9779	0.7028	0.9958	0.2972	0.0042	0.0221	0.0473	0.78	1.02
SCAD	0.9190	0.9797	0.7351	0.9920	0.2649	0.0080	0.0203	0.0810	0.78	0.94
LASSO	0.9739	0.9752	0.6765	0.9970	0.3235	0.0030	0.0248	0.0261	0.78	1.08
LARS	0.9739	0.9752	0.6765	0.9970	0.3235	0.0030	0.0248	0.0261	0.78	1.08
GSDS	0.6398	0.9992	0.9707	0.9806	0.0293	0.0194	0.0008	0.3602	0.78	0.51
GSR2-r	0.6077	0.8970	0.2778	0.9753	0.7222	0.0247	0.1030	0.3923	0.78	1.94
GSR2	0.6139	0.8946	0.2791	0.9755	0.7209	0.0245	0.1054	0.3861	0.78	1.97
FOR	1.0000	0.0036	0.0519	1.0000	0.9481	0.0000	0.9964	0.0000	0.78	14.95
SWCV	0.9994	0.7928	0.2179	0.9999	0.7821	0.0001	0.2072	0.0006	0.78	3.71

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.4318	0.9912	0.4022	0.9897	0.5978	0.0103	0.0088	0.5682	1.84	1.68
SCAD	0.4201	0.9922	0.4506	0.9890	0.5494	0.0110	0.0078	0.5799	1.84	1.50
LASSO	0.4422	0.9905	0.3728	0.9898	0.6272	0.0102	0.0095	0.5578	1.84	1.77
LARS	0.4422	0.9905	0.3728	0.9898	0.6272	0.0102	0.0095	0.5578	1.84	1.77
GSDS	0.3687	0.9997	0.9204	0.9886	0.0796	0.0114	0.0003	0.6313	1.84	0.69
GSR2-r	0.3118	0.9959	0.5360	0.9870	0.4640	0.0130	0.0041	0.6882	1.84	0.91
GSR2	0.3140	0.9958	0.5353	0.9870	0.4647	0.0130	0.0042	0.6860	1.84	0.93
FOR	0.4527	0.5446	0.0179	0.9828	0.9821	0.0172	0.4554	0.5473	1.84	47.84
SWCV	0.4516	0.9142	0.0923	0.9895	0.9077	0.0105	0.0858	0.5484	1.84	9.69

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No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 900

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.4746	0.9919	0.4446	0.9865	0.5554	0.0135	0.0081	0.5254	2.61	1.98
SCAD	0.1067	0.9984	0.4753	0.9796	0.5247	0.0204	0.0016	0.8933	2.61	0.36
LASSO	0.4125	0.9930	0.4364	0.9843	0.5636	0.0157	0.0070	0.5875	2.61	1.58
LARS	0.4125	0.9930	0.4364	0.9843	0.5636	0.0157	0.0070	0.5875	2.61	1.58
GSDS	0.3859	0.9956	0.5122	0.9855	0.4878	0.0145	0.0044	0.6141	2.61	1.42
GSR2-r	0.3602	0.9840	0.3741	0.9845	0.6259	0.0155	0.0160	0.6398	2.61	2.68
GSR2	0.3638	0.9838	0.3743	0.9845	0.6257	0.0155	0.0162	0.6362	2.61	2.70
FOR	0.6131	0.4815	0.0254	0.9823	0.9746	0.0177	0.5185	0.3869	2.61	62.46
SWCV	0.6106	0.8972	0.1219	0.9901	0.8781	0.0099	0.1028	0.3894	2.61	13.63

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 900

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.7116	0.9822	0.6610	0.9812	0.3390	0.0188	0.0178	0.2884	0.76	0.75
SCAD	0.1310	0.9959	0.5936	0.9546	0.4064	0.0454	0.0041	0.8690	0.76	0.14
LASSO	0.5589	0.9837	0.6152	0.9724	0.3848	0.0276	0.0163	0.4411	0.76	0.59
LARS	0.5589	0.9837	0.6152	0.9724	0.3848	0.0276	0.0163	0.4411	0.76	0.59
GSDS	0.5765	0.9897	0.7137	0.9763	0.2863	0.0237	0.0103	0.4235	0.76	0.57
GSR2-r	0.5479	0.8999	0.2805	0.9717	0.7195	0.0283	0.1001	0.4521	0.76	1.83
GSR2	0.5528	0.8992	0.2810	0.9723	0.7190	0.0277	0.1008	0.4472	0.76	1.85
FOR	1.0000	0.0081	0.0511	1.0000	0.9489	0.0000	0.9919	0.0000	0.76	14.88
SWCV	0.9928	0.7982	0.2151	0.9992	0.7849	0.0008	0.2018	0.0072	0.76	3.62

No. factors = 15; $q_{me} = 0.05$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 900

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3605	0.9932	0.3996	0.9873	0.6004	0.0127	0.0068	0.6395	1.85	1.23
SCAD	0.0811	0.9987	0.4082	0.9832	0.5918	0.0168	0.0013	0.9189	1.85	0.22
LASSO	0.3151	0.9943	0.3847	0.9860	0.6153	0.0140	0.0057	0.6849	1.85	0.98
LARS	0.3151	0.9943	0.3847	0.9860	0.6153	0.0140	0.0057	0.6849	1.85	0.98
GSDS	0.3021	0.9964	0.5138	0.9868	0.4862	0.0132	0.0036	0.6979	1.85	0.85
GSR2-r	0.2760	0.9957	0.5114	0.9861	0.4886	0.0139	0.0043	0.7240	1.85	0.84
GSR2	0.2788	0.9957	0.5064	0.9861	0.4936	0.0139	0.0043	0.7212	1.85	0.85
FOR	0.4652	0.5468	0.0175	0.9823	0.9825	0.0177	0.4532	0.5348	1.85	47.58
SWCV	0.4637	0.9109	0.0893	0.9891	0.9107	0.0109	0.0891	0.5363	1.85	10.01

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No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.1528	0.9957	0.6481	0.9351	0.3519	0.0649	0.0043	0.8472	8.59	1.37
SCAD	0.2338	0.9905	0.5600	0.9399	0.4400	0.0601	0.0095	0.7662	8.59	2.53
LASSO	0.1824	0.9958	0.6546	0.9355	0.3454	0.0645	0.0042	0.8176	8.59	1.40
LARS	0.1824	0.9958	0.6546	0.9355	0.3454	0.0645	0.0042	0.8176	8.59	1.40
GSDS	0.1661	0.9999	0.9913	0.9370	0.0087	0.0630	0.0001	0.8339	8.59	1.12
GSR2-r	0.4049	0.9827	0.6512	0.9527	0.3488	0.0473	0.0173	0.5951	8.59	5.12
GSR2	0.4107	0.9827	0.6517	0.9531	0.3483	0.0469	0.0173	0.5893	8.59	5.16
FOR	0.6597	0.4864	0.0884	0.9468	0.9116	0.0532	0.5136	0.3403	8.59	62.79
SWCV	0.6479	0.8909	0.3191	0.9683	0.6809	0.0317	0.1091	0.3521	8.59	17.52

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.2082	0.9912	0.8274	0.8260	0.1726	0.1740	0.0088	0.7918	3.02	0.61
SCAD	0.3459	0.9803	0.7978	0.8523	0.2022	0.1477	0.0197	0.6541	3.02	1.07
LASSO	0.2556	0.9917	0.8461	0.8299	0.1539	0.1701	0.0083	0.7444	3.02	0.65
LARS	0.2556	0.9917	0.8461	0.8299	0.1539	0.1701	0.0083	0.7444	3.02	0.65
GSDS	0.2870	0.9999	0.9971	0.8405	0.0029	0.1595	0.0001	0.7130	3.02	0.74
GSR2-r	0.6133	0.8629	0.5453	0.8933	0.4547	0.1067	0.1371	0.3867	3.02	3.46
GSR2	0.6200	0.8613	0.5456	0.8946	0.4544	0.1054	0.1387	0.3800	3.02	3.50
FOR	1.0000	0.0027	0.2016	1.0000	0.7984	0.0000	0.9973	0.0000	3.02	14.97
SWCV	0.9786	0.7761	0.5437	0.9919	0.4563	0.0081	0.2239	0.0214	3.02	5.60

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(6, 1)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.0978	0.9963	0.5096	0.9503	0.4904	0.0497	0.0037	0.9022	5.58	0.77
SCAD	0.1506	0.9917	0.4166	0.9525	0.5834	0.0475	0.0083	0.8494	5.58	1.46
LASSO	0.1099	0.9963	0.5123	0.9503	0.4877	0.0497	0.0037	0.8901	5.58	0.76
LARS	0.1099	0.9963	0.5123	0.9503	0.4877	0.0497	0.0037	0.8901	5.58	0.76
GSDS	0.0851	0.9999	0.9829	0.9502	0.0171	0.0498	0.0001	0.9149	5.58	0.37
GSR2-r	0.2847	0.9973	0.8406	0.9594	0.1594	0.0406	0.0027	0.7153	5.58	1.65
GSR2	0.2910	0.9975	0.8406	0.9596	0.1594	0.0404	0.0025	0.7090	5.58	1.66
FOR	0.4502	0.5445	0.0529	0.9467	0.9471	0.0533	0.4555	0.5498	5.58	47.82
SWCV	0.4423	0.9046	0.2190	0.9661	0.7810	0.0339	0.0954	0.5577	5.58	11.93

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No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.1526	0.9962	0.6795	0.9361	0.3205	0.0639	0.0038	0.8474	8.44	1.28
SCAD	0.5447	0.9763	0.5718	0.9596	0.4282	0.0404	0.0237	0.4553	8.44	6.43
LASSO	0.3570	0.9913	0.6700	0.9448	0.3300	0.0552	0.0087	0.6430	8.44	2.90
LARS	0.3570	0.9913	0.6700	0.9448	0.3300	0.0552	0.0087	0.6430	8.44	2.90
GSDS	0.1632	1.0000	0.9945	0.9377	0.0055	0.0623	0.0000	0.8368	8.44	1.03
GSR2-r	0.4350	0.9830	0.6726	0.9554	0.3274	0.0446	0.0170	0.5650	8.44	5.24
GSR2	0.4401	0.9825	0.6738	0.9559	0.3262	0.0441	0.0175	0.5599	8.44	5.36
FOR	0.6583	0.4859	0.0867	0.9476	0.9133	0.0524	0.5141	0.3417	8.44	62.81
SWCV	0.6526	0.8892	0.3080	0.9692	0.6920	0.0308	0.1108	0.3474	8.44	17.68

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.2119	0.9929	0.8508	0.8319	0.1492	0.1681	0.0071	0.7881	2.92	0.57
SCAD	0.8195	0.9456	0.7811	0.9432	0.2189	0.0568	0.0544	0.1805	2.92	2.76
LASSO	0.5276	0.9815	0.8510	0.8751	0.1490	0.1249	0.0185	0.4724	2.92	1.34
LARS	0.5276	0.9815	0.8510	0.8751	0.1490	0.1249	0.0185	0.4724	2.92	1.34
GSDS	0.2502	0.9998	0.9950	0.8402	0.0050	0.1598	0.0002	0.7498	2.92	0.63
GSR2-r	0.6228	0.8596	0.5471	0.8994	0.4529	0.1006	0.1404	0.3772	2.92	3.49
GSR2	0.6256	0.8553	0.5465	0.8993	0.4535	0.1007	0.1447	0.3744	2.92	3.55
FOR	1.0000	0.0033	0.1955	1.0000	0.8045	0.0000	0.9967	0.0000	2.92	14.96
SWCV	0.9900	0.7648	0.5202	0.9953	0.4798	0.0047	0.2352	0.0100	2.92	5.70

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(12, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.0900	0.9967	0.5254	0.9507	0.4746	0.0493	0.0033	0.9100	5.52	0.70
SCAD	0.3642	0.9801	0.4406	0.9624	0.5594	0.0376	0.0199	0.6358	5.52	3.67
LASSO	0.2251	0.9925	0.5274	0.9546	0.4726	0.0454	0.0075	0.7749	5.52	1.55
LARS	0.2251	0.9925	0.5274	0.9546	0.4726	0.0454	0.0075	0.7749	5.52	1.55
GSDS	0.0961	1.0000	0.9949	0.9511	0.0051	0.0489	0.0000	0.9039	5.52	0.41
GSR2-r	0.3238	0.9981	0.8977	0.9616	0.1023	0.0384	0.0019	0.6762	5.52	1.75
GSR2	0.3305	0.9980	0.8962	0.9621	0.1038	0.0379	0.0020	0.6695	5.52	1.81
FOR	0.4497	0.5443	0.0526	0.9475	0.9474	0.0525	0.4557	0.5503	5.52	47.85
SWCV	0.4458	0.9042	0.2141	0.9668	0.7859	0.0332	0.0958	0.5542	5.52	11.98

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No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.5005	0.9853	0.6759	0.9556	0.3241	0.0444	0.0147	0.4995	8.53	5.01
SCAD	0.5998	0.9737	0.5901	0.9648	0.4099	0.0352	0.0263	0.4002	8.53	7.47
LASSO	0.4777	0.9865	0.6762	0.9530	0.3238	0.0470	0.0135	0.5223	8.53	4.55
LARS	0.4777	0.9865	0.6762	0.9530	0.3238	0.0470	0.0135	0.5223	8.53	4.55
GSDS	0.3974	0.9999	0.9925	0.9523	0.0075	0.0477	0.0001	0.6026	8.53	2.96
GSR2-r	0.4509	0.9830	0.6875	0.9560	0.3125	0.0440	0.0170	0.5491	8.53	5.40
GSR2	0.4504	0.9830	0.6854	0.9560	0.3146	0.0440	0.0170	0.5496	8.53	5.39
FOR	0.6593	0.4871	0.0885	0.9474	0.9115	0.0526	0.5129	0.3407	8.53	62.71
SWCV	0.6520	0.8907	0.3113	0.9689	0.6887	0.0311	0.1093	0.3480	8.53	17.54

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.7505	0.9688	0.8566	0.9213	0.1434	0.0787	0.0312	0.2495	3.02	2.29
SCAD	0.9021	0.9459	0.8110	0.9647	0.1890	0.0353	0.0541	0.0979	3.02	3.17
LASSO	0.7132	0.9716	0.8562	0.9111	0.1438	0.0889	0.0284	0.2868	3.02	2.09
LARS	0.7132	0.9716	0.8562	0.9111	0.1438	0.0889	0.0284	0.2868	3.02	2.09
GSDS	0.5612	0.9999	0.9977	0.8927	0.0023	0.1073	0.0001	0.4388	3.02	1.58
GSR2-r	0.6302	0.8563	0.5555	0.8954	0.4445	0.1046	0.1437	0.3698	3.02	3.57
GSR2	0.6230	0.8549	0.5514	0.8934	0.4486	0.1066	0.1451	0.3770	3.02	3.56
FOR	0.9977	0.0040	0.2009	0.9214	0.7991	0.0786	0.9960	0.0023	3.02	14.94
SWCV	0.9856	0.7721	0.5339	0.9937	0.4661	0.0063	0.2279	0.0144	3.02	5.66

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 1)$; Simulation size 1000

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3334	0.9873	0.5417	0.9606	0.4583	0.0394	0.0127	0.6666	5.51	2.72
SCAD	0.4076	0.9771	0.4467	0.9654	0.5533	0.0346	0.0229	0.5924	5.51	4.30
LASSO	0.3167	0.9883	0.5295	0.9591	0.4705	0.0409	0.0117	0.6833	5.51	2.46
LARS	0.3167	0.9883	0.5295	0.9591	0.4705	0.0409	0.0117	0.6833	5.51	2.46
GSDS	0.2893	1.0000	0.9930	0.9601	0.0070	0.0399	0.0000	0.7107	5.51	1.38
GSR2-r	0.3374	0.9983	0.9225	0.9626	0.0775	0.0374	0.0017	0.6626	5.51	1.83
GSR2	0.3402	0.9985	0.9200	0.9629	0.0800	0.0371	0.0015	0.6598	5.51	1.84
FOR	0.4518	0.5450	0.0531	0.9475	0.9469	0.0525	0.4550	0.5482	5.51	47.77
SWCV	0.4464	0.9049	0.2101	0.9667	0.7899	0.0333	0.0951	0.5536	5.51	11.88

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No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 300

Averages: for all effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.3068	0.9929	0.6612	0.9443	0.3388	0.0557	0.0071	0.6932	8.23	2.47
SCAD	0.2122	0.9917	0.5807	0.9419	0.4193	0.0581	0.0083	0.7878	8.23	2.26
LASSO	0.2061	0.9957	0.6551	0.9390	0.3449	0.0610	0.0043	0.7939	8.23	1.47
LARS	0.2061	0.9957	0.6551	0.9390	0.3449	0.0610	0.0043	0.7939	8.23	1.47
GSDS	0.2844	0.9990	0.9000	0.9468	0.1000	0.0532	0.0010	0.7156	8.23	2.08
GSR2-r	0.4285	0.9831	0.6570	0.9559	0.3430	0.0441	0.0169	0.5715	8.23	5.08
GSR2	0.4373	0.9829	0.6698	0.9568	0.3302	0.0432	0.0171	0.5627	8.23	5.20
FOR	0.6672	0.4865	0.0853	0.9498	0.9147	0.0502	0.5135	0.3328	8.23	62.77
SWCV	0.6586	0.8905	0.3085	0.9704	0.6915	0.0296	0.1095	0.3414	8.23	17.47

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 300

Averages: for main effects

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.4299	0.9859	0.8728	0.8584	0.1272	0.1416	0.0141	0.5701	2.98	1.15
SCAD	0.3138	0.9816	0.7864	0.8511	0.2136	0.1489	0.0184	0.6862	2.98	0.99
LASSO	0.2790	0.9900	0.8328	0.8342	0.1672	0.1658	0.0100	0.7210	2.98	0.69
LARS	0.2790	0.9900	0.8328	0.8342	0.1672	0.1658	0.0100	0.7210	2.98	0.69
GSDS	0.4703	0.9978	0.9658	0.8749	0.0342	0.1251	0.0022	0.5297	2.98	1.30
GSR2-r	0.6436	0.8658	0.5557	0.8997	0.4443	0.1003	0.1342	0.3564	2.98	3.47
GSR2	0.6505	0.8625	0.5641	0.9017	0.4359	0.0983	0.1375	0.3495	2.98	3.54
FOR	1.0000	0.0036	0.1992	1.0000	0.8008	0.0000	0.9964	0.0000	2.98	14.96
SWCV	0.9863	0.7720	0.5403	0.9935	0.4597	0.0065	0.2280	0.0137	2.98	5.63

No. factors = 15; $q_{me} = 0.2$; Active Eff. Dist $N(24, 4)$; Inactive Eff. Dist $N(0, 16)$; Simulation size 300

Averages: for interactions

	Sens	Spec	sPPV	sNPV	FDR	FNPV	Type I	Type II	MSTr	MSEst
DS	0.2072	0.9937	0.5112	0.9561	0.4888	0.0439	0.0063	0.7928	5.25	1.32
SCAD	0.1368	0.9929	0.4312	0.9550	0.5688	0.0450	0.0071	0.8632	5.25	1.27
LASSO	0.1362	0.9964	0.5138	0.9536	0.4862	0.0464	0.0036	0.8638	5.25	0.78
LARS	0.1362	0.9964	0.5138	0.9536	0.4862	0.0464	0.0036	0.8638	5.25	0.78
GSDS	0.1580	0.9992	0.8674	0.9563	0.1326	0.0437	0.0008	0.8420	5.25	0.78
GSR2-r	0.2876	0.9974	0.8366	0.9622	0.1634	0.0378	0.0026	0.7124	5.25	1.60
GSR2	0.2966	0.9976	0.8517	0.9628	0.1483	0.0372	0.0024	0.7034	5.25	1.65
FOR	0.4604	0.5444	0.0496	0.9497	0.9504	0.0503	0.4556	0.5396	5.25	47.82
SWCV	0.4538	0.9045	0.2033	0.9683	0.7967	0.0317	0.0955	0.5462	5.25	11.83