IV P-value threshold



- 2) GWAS sample sizes sample_size_Xs sample_size_Y
- 3) GWAS sample overlap prop_gwas_overlap_Xs_and_Y

1) Variance in Y explained by **x**, *U*; **x** explained by *U*

Y_variance_explained_by_Xs Y_variance_explained_by_U Xs_variance_explained_by_U

2) Phenotypic, genetic correlation between **x**

phenotypic_correlation_Xs
genetic_correlation_Xs

1) Number, MAF of causal **x** SNPs number_of_causal_SNPs

2) Variance in **x** explained by **g**

- Partitioned by UHP, CHP, valid SNPs number_of_UHP_causal_SNPs number_of_CHP_causal_SNPs Xs_variance_explained_by_g Y_variance_explained_by_UHP

U_variance_explained_by_CHP

3) LD between SNPs in **g**LD causal SNPs

IV_Pvalue_threshold Winner's curse Simulation type IV LD r^2 pruning (weak IV or threshold winner's curse) LD_pruning_r2 simtype Weak instruments Fix F-statistic for instrument strength fix Fstatistic at