

## CalibratedSimulationFunctions

### calibratedSimulationFunctions.R

DesignTable : function (NN, DataList, methods, R = 100, columnnames = NULL, filename = NULL)  
ExpectedRegret : function (NN, C, theta, methods, R)  
PrintRegretTable : function (RegretTable, NN, filename)  
SimulateTWaveDesign : function (NN, C, theta, method = “modifiedthompson”)

### ReadData.R

DataToTheta : function (filename, dataname, k, strataVars, OutcomeName, TreatmentName, CovariatesNames, printFigures = FALSE)  
PrintDataFigures : function (stratasizes, sumstats, filename, dataname, FooterText, k)  
ReadAllData : function (printFigures = F)

## IllustrationFunctions

### Illustration\_\_NonConvexity\_\_Functions.R

MSEcalc : function (theta, N)  
powerCalc : function (theta, N)  
stylizedDesign : function (A, B, C, N)

## OptimalAssignmentFunctions

### SimulatedWelfareFunctions.R

Seed : function (A, B, Nmax)  
simplex : function (N, k, coverage = “full”, RR = 500, thetahat = NULL)  
simulatedSample : function (D, theta)  
Uhat : function (A, B, C, n, Vfunction = SWF)

### WelfareFunctions.R

betabinomial : function (n, s, a, b)  
betaposterior : function (D, Y)  
Dtchoice : function (A, B, C, Nt, method = “optimal”)  
EqualAssignment : function (N, k)  
GivenAssignment : function (n, k)  
PolicyChoice : function (A, B, C)  
Regret : function (D, Y, C, theta)  
SWF : function (A, B, C)  
U : function (A, B, C, n, Vfunction = SWF)  
UoverSimplex : function (A, B, C, N, Ufunction = U, coverage = “full”)  
V : function (A, B, C, NN)

## **welfareplotsGraphics.R**

```
OptimalPilot : function (A, B, C, M, parallel = TRUE)
PlotSimplex : function (A, B, C, N)
PlotSimplexAlternative : function (A, B, C, N)
SimplexPanel : function (N, alternativeplot = FALSE)
```

## **ThompsonHierarchicalFunctions**

### **ThompsonCalibration.R**

```
RunAllSimulationsThompson : function (DataList, T = 4, nt = 36, RR = 1000)
SimulateTWaveDesignThompson : function (Nt, C, theta, PX)
```

### **ThompsonHierarchical.R**

```
betabinomialMLE : function (NN, SS)
DtchoiceThompson : function (Y, D, k, Nt)
DtchoiceThompsonAveraged : function (Y, D, k, Nt, RR)
DtchoiceThompsonHierarchical : function (Y, D, X, k, nx, Xt)
DtchoiceThompsonHierarchicalAveraged : function (Y, D, X, k, nx, Xt, RR)
hierarchicalPosteriorDraw : function (NN, SS, LLH)
hierarchicalPosteriorMean : function (Y, D, X, draws = 1000)
SimulateX : function (PX, N)
SimulateY : function (theta, D, X)
StratifiedAssignment : function (X, k, nx)
```