Package 'MRMiSTERI'

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Type Package

Title Mixed-Scale Treatment Effect Robust Identification (MR MiSTERI) and Estimation

Version 0.1.0

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Description This package performs robust Mendelian randomization to estimate the effect of treatment on the treated with possibly invalid IVs.

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Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

R topics documented:

`misterigauss` *MR MiSTERI for a continous outcome with Gaussian errors.*

Description

This function estimates the causal effect of treatment on the treated (ETT) for a continous outcome with Gaussian error terms.

Usage

```
misterigauss(Z = Z, A = A, Y = Y)
```

Arguments

`Z`	an IV scalar variable
`A`	the exposure variable
`Y`	the continuous outcome variable

Value

a list object that contains causal effect estimates and standard errors.

References

https://www.medrxiv.org/content/10.1101/2020.09.29.20204420v3

`misterigaussmix` *MR MiSTERI for a continous outcome with Gaussian mixture errors.*

Description

This function estimates the causal effect of treatment on the treated (ETT) for a continous outcome with error terms that follow Gaussian mixture distributions.

Usage

```
misterigaussmix(Z, A, Y, maxiter = 100, tol = 0.001)
```

Arguments

`Z`	an IV scalar variable
`A`	the exposure variable
`Y`	the continuous outcome variable

Value

a list object that contains causal effect estimates and standard errors.

References

https://www.medrxiv.org/content/10.1101/2020.09.29.20204420v3 #' @import alabama

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`misterimawii` *MR MiSTERI with many weak invalid IVs*

Description

misterimawii combines many weak invalid IVs to reduce weak IV bias.

Usage

```
misterimawii(Z, A, Y)
```

Arguments

`Z`	an IV matrix with columns representing IVs
`A`	the exposure variable
`Y`	the continuous outcome variable

Value

a list object that contains causal effect estimates and standard errors.

References

https://www.medrxiv.org/content/10.1101/2020.09.29.20204420v3

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