Package ‘doubcens’

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Title Survivor Function Estimation for Doubly Interval-Censored Failure Time Data

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**DGLwghts**  
*Estimate Survivor Function using Doubly Interval-Censored Failure Time Data*

### Description
Estimates the discrete Survivor Function from doubly interval-censored failure time data using the algorithm of De Gruttola and Lagakos.

### Usage
```
DGLwghts(x_L, x_R, Z_L, Z_R)
```

### Arguments
- `x_L` The left endpoint of the censoring interval for the initial event time
- `x_R` The right endpoint of the censoring interval for the initial event time
- `Z_L` The left endpoint of the censoring interval for the terminating event time
- `Z_R` The right endpoint of the censoring interval for the terminating event time

### Details
Set $X_L = X_R$ if the initial event is observed. Set $Z_L = Z_R$ if the terminating event is observed. Set $X_L = -\infty$ if the initial event is left-censored. Set $Z_R = \infty$ if the terminating event is right-censored.

### Value
DGLwghts returns a list containing the following components
- `x_val` A vector of mass points for initial event
- `w_new` A vector of estimated probabilities for `x_val`
- `t_val` A vector of mass points for terminating event
- `f_new` A vector of estimated probabilities for `t_val`
- `counter` Number of iterations required for convergence

### References

### Examples
```
test <- DGLwghts(c(1,1,1), c(1,2,1), c(1,2,3), c(Inf, Inf, Inf))
```
Sunwgghts

Estimate Survivor Function using Doubly Interval-Censored Left-Truncated Failure Time Data

Description

Estimates the discrete Survivor Function from doubly interval-censored left-truncated failure time data using the algorithm of Sun.

Usage

Sunwgghts(Ei, Ri, Li, Ui, Bi1, Bi2)

Arguments

Ei The left endpoint of the censoring interval for the initial event time
Ri The right endpoint of the censoring interval for the initial event time
Li The left endpoint of the censoring interval for the terminating event time
Ui The right endpoint of the censoring interval for the terminating event time
Bi1 The left endpoint of the truncation interval for the terminating event time
Bi2 The right endpoint of the truncation interval for the terminating event time

Details

Set Ei = Ri if the initial event is observed. Set Li = Ui if the terminating event is observed. Set Ei = -INF if the initial event is left-censored. Set Ri = INF if the terminating event is right-censored.

Value

Sunwgghts returns a list containing the following components

uj A vector of mass points for survival lengths
fnew A vector of estimated probabilities for uj
counter Number of iterations required for convergence

References


Examples

test <- Sunwgghts(c(1,2,1), c(4,4,4), c(5,8,9), c(5,9,10), c(4.4,4.5,8), c(Inf, Inf, Inf))
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