Package 'optband'

May 9, 2026

Type Package

Title 'surv' Object Confidence Bands Optimized by Area

Version 0.2.2

Date 2023-03-29

Description Given a certain coverage level, obtains simultaneous confidence bands for the survival and cumulative hazard functions such that the area between is minimized. Produces an approximate solution based on local time arguments.

Depends R (>= 3.1.0)

Imports utils, LambertW

License GPL-2 | GPL-3

URL https://github.com/seasamgo/optband

BugReports https://github.com/seasamgo/optband/issues

RoxygenNote 7.1.1

Encoding UTF-8

Suggests stats, survival, km.ci, knitr, rmarkdown

VignetteBuilder knitr, rmarkdown

NeedsCompilation no

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Contents

opt.ci *Confidence bands optimized by area*

Description

opt.ci obtains simultaneous confidence bands for the survival or cumulative-hazard functions such that the area between is minimized.

Usage

```
opt.ci(survi, conf.level = 0.95, fun = "surv", tl = NA, tu = NA, samples = 1)
```

Arguments

survi	a survfit object.
conf.level	desired coverage level.
fun	"surv" for survival function and "cumhaz" for the cumulative-hazard. function, with "surv" as the default.
tl	a lower bound for truncation.
tu	an upper bound for truncation.
samples	the number of groups (1 or 2).

Details

Produces an approximate solution based on local time arguments.

Value

A survfit object with optimized confidence bands.

Examples

```
library(survival)
# fit and plot a Kaplan-Meier curve
fit <- survfit(Surv(stop, event) ~ 1, data=bladder)
plot(fit)
fit2 <- opt.ci(fit)
plot(fit2)
```

Index