

Package ‘optband’

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Type Package

Title 'surv' Object Confidence Bands Optimized by Area

Version 0.2.2

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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 ($\geq$ 3.1.0)

Imports utils, LambertW

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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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`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

<code>survi</code>	a <code>survfit</code> object.
<code>conf.level</code>	desired coverage level.
<code>fun</code>	"surv" for survival function and "cumhaz" for the cumulative-hazard. function, with "surv" as the default.
<code>tl</code>	a lower bound for truncation.
<code>tu</code>	an upper bound for truncation.
<code>samples</code>	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)
```

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