Package: RcppHyperDual (via r-universe)

September 5, 2024

Type Package

Title Rcpp Interface to Hyper-Dual Numbers

Version 0.0.1

Date 2015-03-07

Author Dirk Eddelbuettel, Ravi Varadhan and Tim Triche

Maintainer Dirk Eddelbuettel <edd@debian.org>

Description Hyper-Dual Numbers permit the exact calculation of second derivatives which is both free of truncation and subtractive cancellation. Hyper-Dual numbers were introduced Jeffrey Fike and Juan Alonson, and this package uses a header-only C++ implementation by Fike and released under the MIT license. Accurate 2nd derivatives computation.

License GPL (>= 2)

Imports Rcpp (>= 0.11.0)

LinkingTo Rcpp

Repository https://eddelbuettel.r-universe.dev

RemoteUrl https://github.com/eddelbuettel/rcpphyperdual

RemoteRef HEAD

RemoteSha f3b0998eef2f2a971f316ebc508c1cf0959e2999

Contents

RcppHyperDual-package *Rcpp Interface to Hyper-Dual Numbers*

Description

This package provides an interface to Hyper-Dual Numbers by Jeffrey Fike and Juan Alonson.

Details

To be done.

Author(s)

Dirk Eddelbuettel

Maintainer: Dirk Eddelbuettel <edd@debian.org>

Examples

```
addHD( c(1,2,0,0), c(2,-1,0,1))
```

addHD *Add two hyper-dual numbers*

Description

This function adds two hyper-dual numbers

Usage

```
addHD(x, y, verbose = FALSE)
```

Arguments

x	A vector of length four containg a hyper-dual number
y	A vector of length four containg a hyper-dual number
verbose	A boolean variable with default 'false' indicating if verbose operation is desired.

Value

A vector of length four containing the resulting hyper-dual number.

Author(s)

Dirk Eddelbuettel

Examples

```
addHD( c(1,0,0,1), c(2,1,0,-1) )
```

Index