libtest

0.1.0

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# **Chapter 1**

# File Index

### 1.1 File List

Here is a list of all documented files with brief descriptions:

math_algo.c	
Some mathematical algorithm functions	(
memory management.c	?'

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### **Chapter 2**

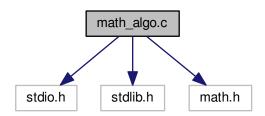
### **File Documentation**

### 2.1 math\_algo.c File Reference

Some mathematical algorithm functions.

```
#include <stdio.h>
#include <stdlib.h>
#include <math.h>
```

Include dependency graph for math\_algo.c:



#### **Functions**

```
• int rinv (double a[], int n)
```

A function to caculate the inverse of the input square matrix.

- void Gauss\_elimination (int n, double(\*a)[n+1], double \*x)
- double mu\_BJ (double x)
  - $\mu$  Barth Jesperse limiter.
- double mu\_Ven (double x)

 $\mu$  Venkatakrishnan limiter.

File Documentation

#### 2.1.1 Detailed Description

Some mathematical algorithm functions.

Author

Lei Xin

#### 2.1.2 Function Documentation

2.1.2.1 double mu\_BJ( double x ) [inline]

 $\mu$  Barth Jesperse limiter.

#### **Parameters**

in	Х	$x$ in $\mu(x)$
----	---	-----------------

Returns

 $\mu(x)$ 

Definition at line 157 of file math\_algo.c.

**2.1.2.2** double mu\_Ven ( double x ) [inline]

 $\boldsymbol{\mu}$  Venkatakrishnan limiter.

#### **Parameters**

in 
$$x \mid x \ln \mu(x)$$

Returns

 $\mu(x)$ 

Definition at line 166 of file math\_algo.c.

2.1.2.3 int rinv ( double a[], int n )

A function to caculate the inverse of the input square matrix.

#### **Parameters**

	а	The pointer of the input square matrix.
in	n	The order of the input square matrix.

Definition at line 14 of file math\_algo.c.

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