

## My Project

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# Chapter 1

## Class Index

### 1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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## Chapter 2

# File Index

### 2.1 File List

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

<a href="#">hw3.cpp</a>	函数实现 . . . . .	9
<a href="#">hw3.h</a>	. . . . .	10
<a href="#">main.cpp</a>	. . . . .	11





## Chapter 3

# Class Documentation

### 3.1 hw3 Class Reference

#### Public Member Functions

- void `set_size` (int)  
设置进程数目
- void `set_rank` (int)  
设置进程编号
- void `set_f` (const RHS &)  
设置右端项
- void `set_N` (int)  
设置网格密度
- void `set_lambda` (double)  
设置`lambda`参数
- void `set_step` (int)  
设置迭代步数
- SOL `solve` ()  
求解
- void `set_solution` (const RHS &)  
设置真解
- double `error` ()  
设置误差

#### 3.1.1 Member Function Documentation

##### 3.1.1.1 double hw3::error ( )

设置误差

##### Returns

误差

##### 3.1.1.2 void hw3::set\_f ( const RHS & f1 )

设置右端项

**Parameters**

<i>RHS</i>	右端项函数
<i>f1</i>	右端项

**3.1.1.3 void hw3::set\_lambda ( double *lambda1* )**

设置lambda参数

设置参数lambda

**Parameters**

<i>double</i>	lambda
<i>lambda1</i>	参数lambda

**3.1.1.4 void hw3::set\_N ( int *N1* )**

设置网格密度

设置网格数目

**Parameters**

<i>int</i>	网格密度
<i>N1</i>	网格数目

**3.1.1.5 void hw3::set\_rank ( int *rank1* )**

设置进程编号

**Parameters**

<i>int</i>	进程编号
<i>rank1</i>	进程编号

**3.1.1.6 void hw3::set\_size ( int *size1* )**

设置进程数目

**Parameters**

进程数目	
<i>size1</i>	进程数目

### 3.1.1.7 void hw3::set\_solution ( const RHS & *u1* )

设置真解

设置真解(供测试使用)

#### Parameters

<i>RHS</i>	真解
<i>u1</i>	真解

### 3.1.1.8 void hw3::set\_step ( int *step1* )

设置迭代步数

#### Parameters

<i>int</i>	迭代步数
<i>step1</i>	迭代步数

### 3.1.1.9 std::vector< std::complex< double > > hw3::solve ( )

求解

#### Returns

解

The documentation for this class was generated from the following files:

- [hw3.h](#)
- [hw3.cpp](#)



## Chapter 4

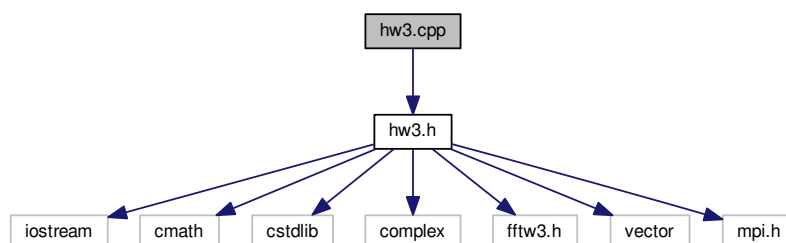
# File Documentation

### 4.1 hw3.cpp File Reference

函数实现

```
#include "hw3.h"
```

Include dependency graph for hw3.cpp:



#### 4.1.1 Detailed Description

函数实现

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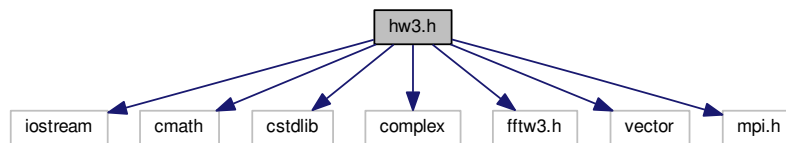
Date

2016-12-10

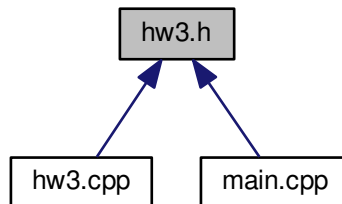
## 4.2 hw3.h File Reference

```
#include <iostream>
#include <cmath>
#include <cstdlib>
#include <complex>
#include <fftw3.h>
#include <vector>
#include "mpi.h"
```

Include dependency graph for hw3.h:



This graph shows which files directly or indirectly include this file:



### Classes

- class [hw3](#)

### 4.2.1 Detailed Description

#### Author

lczheng, [lczheng@pku.edu.cn](mailto:lczheng@pku.edu.cn)

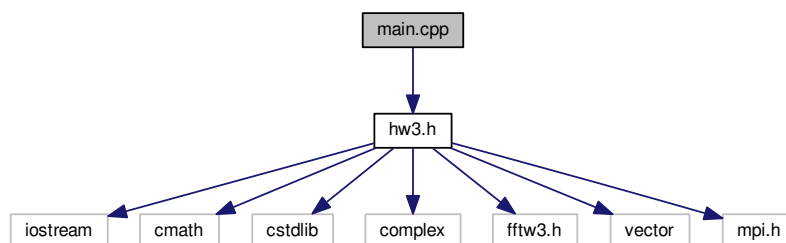
#### Date

2016-11-27

## 4.3 main.cpp File Reference

```
#include "hw3.h"
```

Include dependency graph for main.cpp:



### Functions

- double **u** (double x, double y, double z)
- double **f** (double x, double y, double z)
- int **main** (int argc, char \*\*argv)

#### 4.3.1 Detailed Description

##### Author

lczheng, [lczheng@pku.edu.cn](mailto:lczheng@pku.edu.cn)

##### Date

2016-11-18





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