Prof. Dr. O. Rheinbach Dipl.-Math. F. Röver Institut für Numerische Mathematik und Optimierung TU Bergakademie Freiberg

4th Exercise in HPC

Exercise 1

Use the following program to make yourself familiar with the C + + - Multithreading.

```
#include <iostream>
#include <vector>
#include <thread>
// needs: g++ -std=c++11 -pthread
using namespace std;
void testme(int N)
{
   cout<<"Thread: "<<this_thread::get_id()<<" N ist "<<N<<endl;
}
int main()
{
   thread t1(testme,2);
   thread t2(testme,3);
   thread t3(testme,4);
   testme(1)
t1.join(); t2.join(); t3.join();
}</pre>
```

Exercise 2

Write a programm to calculate the scalar-product of 2 vectors using the C++- Multithreading support. You can make use of the std:vector < type > class provided by C++.