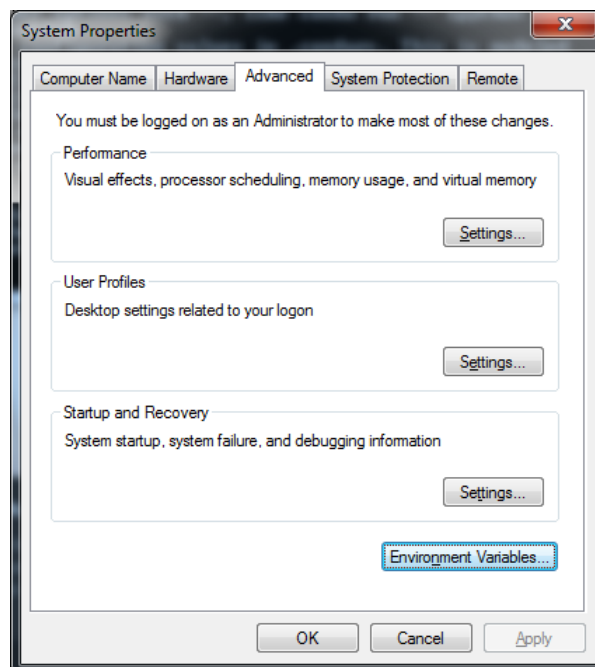# Installing MPI and mpi4py on a Windows computer

MPI

NOTE: This guide assumes that you are working with Python 2.7 and that you have Anaconda for Python 2.7 installed or that you are executing the console commands in a Python 2.7 environment.

First, you need something corresponding to `mpich` or `openmpi`. Microsoft has its own version which works fine on computers using Windows. It is found at Microsoft's homepage.

After downloading and installing, you will need to add the path in which you installed the MPI to your PATH variable. It is easiest done by searching for `environment variables` in the control panel, which will bring up the System Properties window.

Clicking the Environment Variables button will bring up a list of variables. Edit the one named PATH and append the directory in which you installed mpiexec. It will most likely be

```
C:\Program Files\Microsoft MPI\Bin
```

however that may vary, so make sure that you append the right directory to your PATH.

To check if it worked properly, open a Command Prompt and type PATH. If it worked correctly the directory will be shown at the end of the PATH variable. Also, you may enter `mpiexec` in the command prompt to get information on the program.

mpi4py

Now, while you are in the Command Prompt, it is time to install a `mpi4py` package for python. It is done by entering

```
conda install --channel https://conda.anaconda.org/dhirschfeld mpi4py
```

in the console. Information on this package can be found here. The package will now be installed and you are most likely good to go. Test the MPI by entering

```
mpiexec -n 4 python C:\Users\YourName\Documents\Python\YourMPItest.py
```

in the command prompt, where the directory is (obviously) edited to where you have your Python programs. Examples of programs you can use to test are found at the page included att the FMNN25 homepage.