

## Industrial Year Student Job Specification at The National Plant Phenomics Centre (NPPC), Gogerddan, Aberystwyth University



*Plants on conveyor going through imaging chambers at the NPPC*

### About the NPPC

The NPPC is based within IBERS at Gogerddan and is a National Capability funded by BBSRC running research projects in collaboration with UK and international partners.

The NPPC is home to a number of phenotyping platforms including an automated greenhouse in which plants are grown in controlled environments and monitored by being delivered via a conveyor system to imaging units. This allows for repeated high-throughput non-destructive measurements of plants to be made over time. Different treatments and

environmental conditions can be compared on different groups of plants, which are individually RFID tagged. This produces vast amounts of images and data to be analysed and managed.

High-throughput plant phenotyping is an exciting area of research which allows characteristics of plants to be analysed and related to the plants' genetic makeup. Experiments such as assessing which types of crops are most tolerant to drought can be investigated, - giving important insights into the crops that can give us the best yields to feed growing populations in ever changing climates.

### Responsibilities

You will work alongside a team of plant biologists, programmers and computer vision experts. Your role will be flexible to allow you to develop a range of useful programming and related skills to include:

- Developing image analysis software using OpenCV and/or Matlab/Octave and to document the algorithms you produce.
- Working with the rest of the NPPC team to ensure the smooth running of the various experiments in the greenhouse, from the initial project setup meetings to the final delivery and presentation of results from the experiments.
- Being involved in processing and management of the large data sets

### Personal Criteria

- Work well as part of a team
- Ability to program in one of C, C++, Java, Matlab, Octave
- Understanding of scientific method
- Understanding of project management
- Use of databases (e.g. MySQL)

### Salary

Around £15,000/annum pro rata for length of placement

### Application

For any queries or more information please contact [marie.neal@gmail.com](mailto:marie.neal@gmail.com) , or send a CV and covering letter explaining why you want to work for us by 23<sup>rd</sup> January 2015