Studentships and Prizes

AT CRANFIELD UNIVERSITY
The graduation ceremony at Cranfield University held on Friday 26th June saw several students who have been supported by The Trust receive their degrees as follows:

- **Joanna Niziolomski** - received her PhD for her project work on ‘Optimising soil disturbance and mulch attenuation for erosion and runoff control in asparagus crops’. Joanna also received the Shepperson Memorial prize for the best thesis applying engineering applications to agriculture.
- **Raed Al-Asadi** - received his PhD for his project work on ‘Combined impedance and visible and near infrared spectroscopy techniques for non-invasive in situ measurement of soil compaction’.
- **James Ulyett** - received his PhD for his project work on ‘Engineering biochar for arable soils and the impact on nutrient dynamics’.
- **Matthew Downie** - did not attend the ceremony but was awarded an MSc by Research for his work on the measurement of multiple trace gas emissions from environmental systems using the soil lysimeters at Cranfield University.

An update

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Travel Awards

The Douglas Bomford Trust jointly funded a team of four students to travel to the University of Maribor in Slovenia to take part in the Field Robot Event 2015. Participation in the event involved:

- Designing and testing a robot at the University prior to travelling to the event;
- Getting the robot to complete four tasks as part of the competition:
  - **Task 1** - Basic Navigation - involved progressing through a row crop, travelling down the rows and completing turns into the next row at the end of a row;
  - **Task 2** - Advanced Navigation - involved following a more complex path through the crop rows and taking account of missing plants in the row;
  - **Task 3** - Weed detection - to detect ‘good’ and ‘dried’ plants and produce a map of the plant area;
  - **Task 4** - a ‘Freestyle’ section where teams could demonstrate a feature of their own choosing.

An important aim of the project was to create a platform for future groups at Harper Adams University as well as compete in the 2015 event.

The group consisted of four final year Masters Students with two studying Agricultural Engineering and two studying Off Road Vehicle Design. The group had little robotics and programming experience before starting this project and ideally wanted to keep the robot as simple as possible.

The final robot consisted of an adapted Maverick Scout RC chassis, an Arduino Mega as the controller, two LED diffuse scanners and four Ultrasonic sensors for the navigation of the robot. The selection of these sensors proved to be successful allowing a Double Ended Control Strategy (DECS), to be implemented.

At the event, a total of 18 teams from 9 countries competed with the team from Harper Adams coming second in Task 2, first in Task 1 and in third place overall.
The effect of ground pressure on soil properties and crop development for 3 tillage systems

This research studentship in the Crop and Environmental Sciences and Engineering Departments at Harper Adams University, in conjunction with the University of Illinois at Urbana - Champaign, USA, is now open for applications.

The Michelin Tyre Company Ltd funds this project for a period of 3.5 years. The Director of Studies is Dr Paula Misiewicz, in conjunction with David White, Dr Ed Dickin and Professor Richard Godwin (Harper Adams University) and Dr Tony Grift of the University of Illinois, USA, where (after initial 3 - 6 months training at Harper Adams University, UK) the field studies will be conducted. It is anticipated that the final thesis preparation stage will be conducted at Harper Adams University (3 - 6 months).

Applications should be made through the Harper Adams University website: https://jobs.harper-adams.ac.uk/ where further details of the project can be found. The studentship will start on 28 September 2015, with the exact starting date to be negotiated at interview. Interviews will will take place at HAU for shortlisted UK applicants, and by Skype for shortlisted applicants from the USA and other countries.

Further information can be found on the HAU website at www.harper-adams.ac.uk and on the research training provided and PhD progression requirements in the Postgraduate Research Students Handbook at: http://www.harper-adams.ac.uk/research/files/MPhil-PhD-Handbook.pdf

For informal enquiries on general aspects of research degrees at HAU, applicants may contact Mrs Viv Slann, Research Students Administrator (vslann@harper-adams.ac.uk). For informal enquiries on the project, applicants may contact the Director of Studies named above through the staff directory: http://www.harper-adams.ac.uk/staff/photo-directory.cfm

The studentship includes tuition and bench fees and a personal stipend of £16,456 ($25,342); this is indicative and will be dependent upon the exchange rate at the time) rising with annual increments and including fringe benefits (US Health insurance). Applicants will normally be expected to hold a bachelor’s degree with a first or upper second class or a high GPA in an appropriate subject and ideally a relevant masters degree, such as agricultural engineering/mechanisation, soil and/or crop sciences, and agronomy/agriculture.

A minimum level of competency in English is required. International applicants need to be classed as an overall IELTS grade 6.0 with a minimum of 5.5 in each component. Please see the University's web site at http://www.harper-adams.ac.uk/international/english-language.cfm for English Language requirements.