

University of Nottingham

PhD Studentship in Integrative Biology

Project title:

Modelling the biomechanics of seed germination: Towards a virtual seed.

Principal supervisor:

Biology: Prof M Holdsworth email: michael.holdsworth@nottingham.ac.uk

Other supervisors:

Mathematics: Prof J King email: john.king@nottingham.ac.uk

Environmental Science: Prof. N Crout email: neil.crout@nottingham.ac.uk

Background:

From September 2008, a number of fully funded stipends will be available on an interdisciplinary PhD programme for highly qualified applicants for 4-year PhD studentships in the University of Nottingham, Interdisciplinary Doctoral Training Centre (IDTC) for Integrative Biology. The successful candidate will be a member of a very active community of researchers: the IDTC is one aspect of the University of Nottingham's strategic investment in Integrative Biology, which is seen as a key development for future research. Further descriptions of the research area can be found in the URLs below and at http://www.bbsrc.ac.uk/science/initiatives/SABR_call.pdf.

The IDTC will be managed under the auspices of MyCIB (<http://nottingham.mycib.ac.uk/>), which coordinates the £9.2m Centre for Plant Integrative Biology (<http://cpib.info/>, funded by BBSRC and EPSRC) and other projects. The students will be based primarily at the Sutton Bonington campus, though they will also spend time in collaborating Schools and Institutions.

Project description:

The aim of this PhD training programme is to provide a dynamic mathematical description of the biomechanics of plant seed germination in the plant model species *Arabidopsis thaliana*. Germination is an ideal exemplary subject for the development of systems approaches that aim to integrate multiscale simulations with crop scale environmental modelling. This interdisciplinary project will combine expertise in mathematics (KING), germination biology (HOLDSWORTH) and environmental modelling (CROUT), and will be carried out as part of the pan-European ERANET-PG project vSEED (vseed.eu). As such the student will have the opportunity to interact and visit with scientists across Europe studying the systems biology of seed germination.

Further information and Application

Applicants should have an undergraduate or masters with significant mathematical content. Informal enquiries may be addressed to the supervisors. Candidates should apply by covering letter and CV, including expected or actual degree class and the names of at least 2 academic referees with their email addresses to **john.king@nottingham.ac.uk**.

Start Date: 1 September 2009 or as soon as possible thereafter.

Closing date: 01-04-09 or: The position will be filled when suitable candidates have been identified. Early application is strongly encouraged.

Eligibility for Funding

The studentships are available for a period of four years from September 2009 and provide the standard postgraduate stipend, though there are potential funding restrictions for non-EU students.