

Name: Gerald Glynn

Position: PhD Candidate

Department: Biomedical and Mechanical Engineering

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Biography:

Gerald is in his third year of a PhD in Biomedical Engineering. He holds a first class primary degree in Biomedical Engineering from NUIG. His PhD research is dedicated to improving an existing prosthetic device called the Jaipur Foot www.jaipurfoot.org. His specific goal is to make the Jaipur foot lighter and more dynamically responsive whilst maintaining the foot's flexibility, durability and affordability.

His research activities at present are computer modelling the foot for virtual testing (finite element analysis) and mechanical testing of different versions of the Jaipur Foot made at various centres in India and Africa in a uniaxial tester to measure their stiffness and energy absorption.

For the non technically-minded this is to improve the performance of the limb in walking whilst maintaining flexibility for squatting, an habitual activity in many of the areas the foot is used.

What aspects of Development Education (DE) are included in your work?

Gerald's work concerns 'Development' on many overlapping levels- he lists them as Health , Medical, Educational and Social – including in the social , amelioration of the social effects of landmines.

Jaipur foot, an inexpensively manufactured prosthetic limb is an example of what is known as adequate technology- this is Gerald's chief area of research interest; the transfer of technology from developed countries in a manner which ensures suitability in economic, social, geographical and cultural contexts that differ from those in the country where the products are designed. These products are designed so that the technology involved is suitable for both use and production in the regions where they will be used. This holistic approach ensures that the communities who use the products are able to benefit from the economic effects of production and that they are not dependant on external suppliers for spare parts or support services for the products. Gerald chose this area of work after an extensive exploration of the opportunities for using his PHD study for what he defines as a humanitarian purpose.

The education part of Development Education in Gerald's PhD work is the fact that his own PhD is devoted to a developmental goal.

Do you have interests or involvement in particular countries or regions?

Gerald has interests in India and South East Africa. He has also received approval for funding for a new project titled "Establishing a Network of Rehabilitation Centres and non profit Orthotic /Prosthetic Manufacturers in the Global South with the Aim of Technology Enhancement" under the Networking Grant for Global Health Research Awards scheme offered by the Health Research Board (HRB) in conjunction with Irish Aid. This project will enable Gerald to visit Uganda, Ethiopia, Kenya, Tanzania, Malawi, Mozambique, Zambia and Zimbabwe during 2009. His aim will be to develop a network of contacts with prosthetic and orthotic practitioners, workshop technicians, rehabilitation centres and amputees that will enable better communication and facilitate two-way transfer of information and innovation in his specific area.

What other activities are you involved in that concern DE?

Gerald was involved in starting a local branch of the NGO 'Engineers Without Borders' and is active with this organisation having recently organised a project in Ghana for some Irish engineers.

On a local level Gerald is involved in a group called the Galway Space Group which is seeking to actively address a deficit of public space through organising to secure an autonomously-controlled space that may be used for community purposes.

Recent events /Publications:

Gerald presented a paper at two conferences last year; The 12th World Congress of the International Society for Prosthetics and Orthotics, Vancouver August 2007 and the Sir Bernard Crossland Symposium, University of Limerick April 2007.

He also took part in the Development's futures conference where he presented a poster on Jaipur Foot.