



RESEARCH

Postgraduate Research Opportunity

The Institute of Technology Blanchardstown (ITB) has established the Graphics and Gaming Research Group to investigate both innovations in, and applications of, computer gaming technology. We conduct high-quality research projects that aim to provide first-class postgraduate education to students and valuable results and expertise to the growing game development industry in Ireland.

We now invite applications from students who are interested in obtaining a Masters Degree by research. The studentship is being offered as part of the Technological Sector Postgraduate R&D Skills Programme which is concerned with the provision of research and development training for young, highly skilled graduates leading to the award of a Masters Degree. This is an exciting opportunity for those who have an ambition to pursue a research career in industry or higher education.

Automatic Building Generation for 3D Applications

Development costs for computer games, and other interactive graphics applications, have spiraled in recent years, and this trend is set to continue for the foreseeable future. The main reason for this is that increases in computing power, on both desktop computers and dedicated game consoles, allow the manipulation and display of more and more complex graphics. This in turn means that the underlying geometry of the game world becomes more detailed and therefore the time and cost of producing it increases accordingly.

The goal of this project is to address this problem by researching methods of automatically generating game geometry. Specifically the intention is to design and implement a software system that can automatically generate 3D models of buildings that are suitable for use in an interactive real time graphics application. Our approach is to do this using procedural methods. These are computer graphics techniques that use algorithms to dynamically generate geometry.

The project is designed to complement an existing project underway at ITB, *Procedural City Generation*, and the successful applicant will work closely with the researchers involved. Full details on this, and other research work being carried out by the Graphics and Gaming Group can be found at the following URL:

<http://www.gamesitb.com>

Supervisor:
Mr Hugh McCabe
email: hugh.mccabe@itb.ie tel: 01 885 1089

Applicants should have a first or second class honours degree in Computing or a related discipline and be able to give full time commitment to the project. Experience of computer graphics programming (C++/OpenGL) and/or game development would be an advantage. Participating students are paid a grant of €900 per month for the duration of the project, which is 24 months.

For an informal discussion on the project please feel free to contact the project supervisor.

To apply for the post please send a CV and a covering letter expressing interest to:

Ms. Marion Devlin,
Development Office,
Institute of Technology Blanchardstown,
Dublin 15.

Tel: 01 8851035 email: marion.devlin@itb.ie

Closing Date is 5pm Friday July 14th 2006.