



Applications are invited for the following position: (Negotiable start date)

**POSTGRADUATE RESEARCHER (M.Sc. (Ing)) IN MACHINING,  
MONITORING AND MEASUREMENT OF COMPLEX GEARS**

Period of Research: 12 - 18 Months

The manufacture of gears is a well established field and is traditionally carried out by hobbing and shaving processes that are developed for volume production. Manufacturers are now considering novel approaches for prototype and batch manufacturing of complex gear profiles using 3 and 5 axis machining. This development presents a number of technical challenges such as:

- Machining of hard materials – therefore high tool wear rates
- Micro features and high surface finish requirements
- Accuracy and repeatability challenges in the machine tool
- Complex workpiece clamping arrangements
- Complex control strategies – coupled to tool wear and workpiece set-up

The researcher will implement fundamental and applied investigations into the machining, monitoring and measurement of complex gear geometries.

Applicants will ideally have a good undergraduate degree (minimum 2.1) in mechanical/manufacturing engineering or a related field. Specific skills that would enhance a candidate's application include a moderate level of German, strong team working skills, experience with NC coding, matlab, CAD software and NC machining.

For informal discussion and submission of CVs contact:

Dr. Garret O'Donnell  
Dept. of Mechanical and Manufacturing Engineering  
Parsons Building  
Trinity College Dublin  
Dublin 2  
Ireland  
Email:  
Tel. +353-1-896 1184

Applicants should submit their CV with the names and addresses of three referees, by either e-mail or send a hardcopy to the address above.