



Institute of Technology

Ciência sem Fronteiras / Science Without Borders

Postgraduate Project Template

Institution:	Institute of Technology Sligo
Title of Postgraduate Opportunity: (include level of study)	Development of robust laser welding processes for bioresorbable and advanced low melting-point polymers MSc (level 9) leading to PhD (level 10)
PI Name & Contact Details:	Dr. Richard Sherlock sherlock.richard@itsligo.ie +353-71-9155256
Department/School:	Department of Life Science School of Science
Research Centre /Group:	N/A
Research Centre/Group website:	None
Brief Summary of PI research / research group /centre activity PI's research expertise is in the area of industrial laser application particularly for medical device applications.	
Brief Description of Masters or PhD Project Bioresorbable and low melting-point polymers are increasingly finding application in the medical device and pharmaceutical sectors. Convergence of these sectors will further drive the demand for advanced manufacturing processes involving these materials. This project will seek to develop robust laser-welding processes that will meet emerging technical demands.	
Key Attributes of Project for Brazilian Postgraduate Students <ul style="list-style-type: none"> • Background in physics/materials science/mechanical engineering or other cognate discipline • Record of academic achievement in career to date • Demonstrated flair for “hands on” experimental work • Self-started and ability to work independently • Some knowledge of relevant industry sectors would be desirable 	

- Project offers the opportunity to work in close proximity to one of the top 4 medical device industry clusters in the world in an area that will be of topical interest into the future.

Name and contact details for project queries, if different from PI named above:

As above

Please indicate graduate disciplines which are eligible for application:

Physics, Materials Science, Biomedical Science, Biomedical Engineering, Mechanical Engineering or other cognate disciplines

Alignment with Science Without Borders Priority Areas:

Engineering and other technological areas	✓
Pure and Natural Sciences (e.g. mathematics, physics, chemistry)	
Health and Biomedical Sciences	
Information and Communication Technologies (ICTs)	
Aerospace	
Pharmaceuticals	
Sustainable Agricultural Production	
Green Chemistry	
Oil, Gas and Coal	
Renewable Energy	
Minerals	
Biotechnology	
Nanotechnology and New Materials	
Climate Change	
Biodiversity and Bioprospection	
Marine Sciences	
Productive Inclusion and Social Technologies	
Housing and Sanitation	