



Position Title	PhD Studentship - Soft Bio-inspired Micro-robotics
Project Abstract	<p>Scientists have endeavoured for decades to synthetically imitate the movement and functionalities exhibited by living organisms, in a bid to develop vehicles capable of movement at the micro-scale. Approaches to date lack mechanical compliance, resulting in a mismatch between the synthetic and the biological. In this regard, the field of robotics requires an immediate and drastic rethink, moving from engineering to bio-inspired concepts.</p> <p>This project will address such a need, through the development of artificial micro- “vehicles” which possess life-like behaviours such as movement, sensing, signalling and reporting. Generating life-like micro-vehicles which have the potential to transport chemicals and act as chemical messengers, could offer a viable route towards the creation of effective platforms for personalised drug delivery and regenerative medicine within the body.</p> <p>In this project, advanced micro-vehicles will be fabricated using recently developed high resolution three-dimensional (3D) printing technologies, namely Direct Laser Writing Fabrication (DLW).</p> <p>Furthermore, these biomimetic structures will incorporate stimuli-responsive materials into the pre-designed 3D polymeric networks.</p>
Experience	The PhD position is funded for 4 years, including a monthly stipend and materials and travel budget. Applicants should hold a minimum of an honours bachelor’s degree at 2:1 level or equivalent in a relevant subject such as Chemistry/Materials Science/Physics. Candidates should also have a strong interest in Additive Manufacture.
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	DCU
Closing Date	Friday 29 th June 2018
For more information contact	Larisa.Florea@dcu.ie

AMBER,
CRANN Institute,
Trinity College Dublin,
Dublin 2, Ireland

T + 353 (0) 1 8963030
W ambercentre.ie
twitter @ambercentre

