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Automatic
Control and
Systems
Engineering

The Department of Automatic Control & Systems Engineering
is pleased to announce the following seminar:

Development of Micro-surgical Robotic Devices for Regenerative Therapies in the Eye

Dr Christos Bergeles

*Senior Lecturer and Director of the Robotics and Vision in Medicine Lab
King's College London*

Wednesday, 20 February 2019 at 14:00

Pam Liversidge Building, LT01

Abstract

Delivering cellular and gene therapies to the retinal layers requires dexterity that is beyond human capabilities. This talk will present design considerations and control strategies for the engineering of robotic systems capable of accessing all locations within the human eye, via multiple access routes. We will discuss the development of a co-manipulated robotic system and transmission mechanism modelling, the design of a dexterous continuum robot that acts like a micro-metre wrist inside the human eye, and a multi-arm continuum robot that will one day provide access to the human eye in an incision-less fashion.

Biography

Dr. Christos Bergeles (King's College London), Senior Lecturer, directs the "Robotics and Vision in Medicine Lab" whose mission is to develop micro-surgical robots that deliver regenerative therapies deep inside the human body. Dr Bergeles has been awarded an ERC starting grant and holds i4i NIHR funding for the development of instrumentation that delivers stem cells to diseased retinal layers.