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Automatic
Control and
Systems
Engineering

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

“Surviving in an uncertain world with slow communication pathways”

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Wednesday, 27 March 2019 at 14:00

LT2, The Diamond

Abstract

The neuroscience community has long been trying to understand how the central nervous system is managing the concurrent control of the whole body with many degrees of freedom to survive in situations that need fast responses, but with slow communication pathways. The robotics community too has addressed the same problem of surviving in uncertain environments by efficiently solving the concurrent computation problems. In this talk, I will show some recent findings in my lab that show the physical structures in the body work in conjunction with neural controllers to solve control problems locally. We call this phenomenon - “morphological computation” – the computation that spans across neural, musculo-skeletal, and environmental circuits. I will show how we test some of these hypotheses using laboratory made robotic devices.

Biography

Thrish is a Reader in Design Engineering and Robotics, and the Head of the Robotics and Manufacturing Theme at the Dyson School of Design Engineering, Imperial College London. Thrish has been a Senior Lecturer in robotics at King’s College London, Radcliffe Fellow, Harvard University, USA, research affiliate at the Computer Science and Artificial Intelligence Laboratory, MIT, USA, and a postdoctoral research fellow in the department of Biomedical Engineering, Johns Hopkins University, USA. His research interests are in morphological computation, soft robotics, and human-robot interaction. For more information, please visit: thrish.org