Project proposal template
Summer 2015

Project title	Characterising Liver Lesions in Contrast Enhanced Ultrasound
First Supervisor	Dr — Dimitrios Makris
Second Supervisor	Gordon Hunter
School	Computing and Information Systems
Other member of supervisory team (no more than three KU supervisors in total)	
Specific requirements beyond 2:1 degree	Strong programming skills

Project summary

(max 4,000 characters)

Contrast Enhanced Ultrasound (CEUS) is a relatively new method that is used to distinguish between malignant and benign liver lesions. When the medical guidelines of the method are properly followed by clinicians, CEUS is the recommended method for this purpose. However, only well-trained clinicians are able to practice it, due to its complexity.

This medical imaging project will build on previous research collaboration on the topic and Kingston University has collaborated with clinicians in London and Athens. Specifically, Computer Vision and Machine Learning methods will be investigated with the aim to develop techniques for automatic analysis of CEUS videos and characterise liver lesions reliably.