TASC Talk – Computers in Medicine

Dr Hisham Al-Assam of Buckingham University – Thursday 17th November. 2016

In his talk Dr Al-Assam discussed the work being carried out at the department of Applied Computing at Buckingham University in the development of automated algorithms to identify some diseases at their very early stages. In particular he gave examples of some of the basic strategies used to detect and quantify cancer of the uterus or womb. At this early stage of development, this relies on gathering and analysing hundreds of ultra-sound images of the uterus, both healthy and abnormal and by allowing the algorithm to learn which images were normal and which were not.

It appears, however, that there has been a certain amount of resistance to this research in the UK as many medical staff are fearful that once a system such as this becomes fully functional their skills, and therefore their jobs, will be redundant. In fact images used to train the system had to be obtained from Belgium as they could not be gotten from the UK medical authorities as this would have evidently contravened the UK's Data Protection Laws. Dr Al-Assam explained that these systems were not intended to replace expert clinical diagnoses but to aid in the initial investigation freeing up clinicians and specialists to concentrate their valuable time and skills on the difficult and more problematic cases.

I believe that the success rate for detecting cancers of the womb is over 90% and getting better however there is still a lot of work to be done on this and other types of cancer such as breast and testicular cancer which are much more difficult to analyse.