Biomedical Data Analytics in the Knowledge Infrastructure Lab

**ABSTRACT**

This talk will present an overview of three research projects in the Knowledge Infrastructure Laboratory. Two are from a long term collaboration with The Children’s Hospital at Westmead focusing on childhood cancers. The first concerns the use of gene expression and genetic variation data to predict patient outcomes for paediatric acute lymphoblastic leukaemia. The second looks at the use of image processing methods to predict the aggressiveness of neuroblastoma. The third project is a collaboration with parasitologists where we have built the first reverse vaccinology bioinformatics pipeline for eukaryote pathogens and used it to identify vaccine candidates for Neospora caninum, an important parasite that causes abortions in cattle.

**BIOGRAPHY**

Paul Kennedy completed his PhD in Computing Science at the University of Technology Sydney in 1999 and is currently Head of the School of Software in the Faculty of Engineering and IT, UTS. He also directs the Knowledge Infrastructure Laboratory in the UTS Priority Centre for Quantum Computation and Intelligent Systems. Paul is the main data analytics teacher at UTS and has received national recognition for his teaching. His research interests are in the data analytics of biomedical data, collaborating with paediatric cancer researchers, since 2002, to better understand and predict treatment outcomes for childhood cancer sufferers and with pathologists since 2012 on developing bioinformatics pipelines to facilitate animal vaccine discovery. He also works in social network analysis. Paul has coauthored around 60 peer-reviewed publications and, since 2006, has been a part of the Organising Committee for the Australasian Data Mining Conference.

All are welcome!

In case of questions, please contact Prof Lusheng Wang at Tel: 3442 9820, E-mail: cswangl@cityu.edu.hk, or visit the CS Departmental Seminar Web at [http://www.cs.cityu.edu.hk/](http://www.cs.cityu.edu.hk/).