



School of Data Science

香港城市大學
City University of Hong Kong

SEMINAR SERIES

Building a Cardiorespiratory Fitness Knowledge Base for Adolescent Boys & Girls

DATE 12 July 2019 (Friday)

TIME 3:00pm to 4:00pm

VENUE P7510, 7/F, Yeung Kin Man Academic Building (YEUNG),
City University of Hong Kong

Abstract

CardioRespiratory Endurance (CRE) represents a person's ability to provide the oxygen and energy for muscle activity during exercise. With adolescents, CRE is a predictor of cardiovascular disease risk and can be used to link childhood to adulthood, where the measurement and surveillance of CRE in children can predict the health status of adult populations. It has been shown that low fitness in childhood and adolescence is substantially linked with increased cardiometabolic disease risk and obesity. The motivation behind our study (7 years and counting) is to obtain a deeper understanding of positive and negative CRE, and to determine if other factors may contribute to CRE measures. We developed an Extract-Transform-Load (ETL) architecture where data acquisition involves both participants (12-18 year-old boys and girls) and demographics related to the background and geographical location of the schools involved. Our method of data acquisition facilitates very high numbers of participants to enable wider predictive capabilities. This research collaboration with sports scientists, attempts to build a knowledgebase to understand the differences across geographic regions, socio-economic characteristics, peer groupings in education and ultimately, auto-classify the health of young adolescents according to a range of dimensional variables.



Professor Mark Roantree
School of Computing
Dublin City University (Ireland)

GUEST SPEAKER'S PROFILE

Prof. Mark Roantree is a senior academic at the School of Computing at Dublin City University (Ireland) and a Funded Investigator at Insight, DCU. His research programme includes data interoperability, XML optimisation, data warehousing and data mining. He has secured almost 3.5 million euros in funding, publishing 120+ papers, often in high impact journals and conferences, graduating 20 research students. Mark's research has a strong enterprise focus, establishing a number of key industrial and public sector collaborations. His current team of post-docs and PhD students work in the areas of on-demand data warehousing, data marts for online streams, and predictive analytics for insurance, health and agri sectors. Mark's current international collaborations are with City University of New York, University of Michigan and University of Pittsburgh. Nationally, he is collaborating with sports scientists (DCU), agri researchers (Teagasc, Ireland) and with Ireland's largest sporting organisation, the Gaelic Athletic Association.

The Insight Centre for Data Analytics is a joint initiative between researchers at Dublin City University, NUI Galway, University College Cork, University College Dublin and other partner institutions. Insight brings together more than 400+ researchers from these institutions, 100m+ euros in funding, and with over 80+ industry partners, to position Ireland at the heart of global data analytics research.

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All are welcome