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## Annual Scientific Meeting

### **An intelligent anti-sprain sport shoe - an example of ergonomics application in injury analysis and prevention in sport**

**Speaker: Dr Daniel Fong**

**Date: 28<sup>th</sup> May 2011(Saturday)**

**Time: 5:00 to 6:00 pm**

**Venue: ST 523, The Hong Kong Polytechnic University, Hung Hom**

The application of biomechanics and ergonomics analysis technique on injury analysis in sport is a hot topic in sports medicine. It is also an essential element before one could design injury prevention measures tackle the problem. This talk will summarize a series of investigation on ankle sprain injury analysis and prevention. It first presents the injury epidemiology in the recent 35 years, and elaborates related experiments to identify the risk factor and to understand the injury aetiology and mechanism. It also highlights a recent innovative invention, which is an intelligent anti-sprain sport shoe, to prevent the injury with an active feedback correction system. Finally, it presents a prototype which has been tested in a biomechanics laboratory to be effective in preventing simulated ankle sprain injury.

Dr Daniel Fong was awarded the HKES Outstanding Project Award 2004 with his another previous project "Lower extremity biomechanics of gait on slippery surfaces in simulated construction worksite environments". Since 2006, he has gained more than HKD 9 million research grants, and he is now the Director of Sport Performance and Biomechanics Laboratory at Department of Orthopaedics and Traumatology of The Chinese University of Hong Kong. He has published 29 journal articles and delivered over 120 presentations in local and international seminars and conferences. Besides being a member in HKES, he was also fellow of International Society of Biomechanics in Sports (ISBS), life member of World Association of Chinese Biomedical Engineers (WACBE), member of The Hong Kong Association of Sports Medicine and Sports Science (HKASMSS), Institute of Electrical and Electronics Engineers (IEEE), Engineering in Medicine and Biology Society (EMBS), and China Sport Science Society (CSSS).

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