

THE UNIVERSITY



OF HONG KONG

**DEPARTMENT OF MECHANICAL ENGINEERING
AND
MEDICAL ENGINEERING PROGRAMME**

SEMINAR

Title: Interactions at Biomaterial Interfaces

**Speaker: Professor Bruce Milthorpe
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Date: July 22, 2015 (Wednesday)

Time: 11:00 a.m.

Venue: CPD-LG.34, Centennial Campus, HKU

The interactions that occur at the surface of any biomaterial construct on introduction into a body are many and complex. For devices that do not penetrate an epithelial layer, e.g., urinary catheters, the potential interactions may be tractable by current methods. For devices that are implanted, even for relatively short period, the interactions are not. By the act of implantation the device, whether a simple piece of metal or a complex tissue-engineered construct, is placed into a wound-site. From then on the time-course of events is dependent on a number of factors. We deal with this complexity by using simplified systems (e.g., simulated body fluids, single protein adsorption, and even cell culture) and concepts (e.g., water contact angle as a descriptor of surface chemistry). Whilst simplifying the system under investigation is reasonable, it is timely to review the simplifications used and assess the impact of the inherent assumptions on our understanding and interpretation of behaviour in more complex situations. I will give some examples from past and current research, as well as ways for defining boundaries for the interpretation of data from simplified systems.

ALL INTERESTED ARE WELCOME.

For further information, please contact Prof. Min Wang at 2859 7903.