

國立交通大學應用數學系

學術演講公告

主講人：周鼎羸 博士(英國 牛津大學)

講 題：Cerebral transport phenomena: from hydrocephalus to dementia

時 間：106 年 5 月 23 日(星期二) 下午 2:00 –3:00

地 點：(光復校區) 科學一館 223 室

茶 會：當天下午 1:30 (科學一館 205 室)

Abstract

The world population is expected to increase to approximately 11 billion by 2100. The ageing population (aged 60 and over) is projected to exceed the number of children in 2047. This will be a situation without precedent. The number of citizens with disorders of old age like Dementia will rise to 115 million worldwide by 2050. The estimated cost of Dementia will also increase, from \$604 billion in 2010 to \$1,117 billion by 2030. At the same time, medical expertise, evidence-driven policymaking and commissioning of services are increasingly evolving the definitive architecture of comprehensive long-term care to account for these changes.

Technological advances, such as those provided by computational science and biomedical engineering, will allow for an expansion in our ability to model and simulate an almost limitless variety of complex problems that have long defied traditional methods of medical practice. Numerical methods and simulation offer the prospect of improved clinically relevant predictive information, and of course optimisation, enabling more efficient use of resources for designing treatment protocols, risk assessment and urgently needed management of a long-term care system for a wide spectrum of brain disorders. Within this paradigm, the importance of the relationship of senescence of cerebrospinal fluid transport to dementia in the elderly makes the cerebral environment notably worthy of investigation through numerical and computational modelling.

敬請公告 歡迎參加

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