2 0 1 6 Nov. 7-9

13:30 - 17:00

Venue **♀** E2-222

地點:臺灣科技大學工程二館



講者/ Dan M. Frangopol

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線上報名/

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國立臺灣科技大學 臺灣建築科技中心

密集課程

公共工程生命週期之 系統分析、評估與最佳化

Life-Cycle of Civil Infrastructure Systems

Dan Frangopol 博士為理海大學結構工程與建築首位Fazlur R. Khan特聘教授。於2006年加入在理海大學前,他是科羅拉多大學波德分校(Boulder)土木工程系教授。於1976年,於比利時列日大學(Liege)之博士學位。他是土木及海洋結構工程生命週期領域之領導者。他主要研究興趣為土木及海洋工程或然率概念及方法上的應用,其中包括結構可靠度、建築物與橋梁可靠度設計及最佳化、海軍船舶和結構健康檢測、生命週期性能維護、不確定性下結構和公共建設之成本和管理、風險評估和決策、公共建設的永續性、以及抗災和隨機力學。 Dan Frangopol 博士為橋梁維護及安全(IABMAS)和生命週期工程(IALCCE)國際協會的創辦主席。他也獲得許多來自ASCE、IABMAS、IASSAR的獎章及獎項,亦於其他專業組織,如Alfredo Ang Award、OPAL Award、Newmark Medal、T.Y. Lin Medal、F.R. Khan Medal、Croes Medal(兩次)等獲得多項獎章。他擁有4個榮譽博士學位、12所大學的榮譽教授。

Dr. Dan Frangopol is the first holder of the Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University. Before joining Lehigh University in 2006, he was Professor of Civil Engineering at the University of Colorado at Boulder, where he is now Professor Emeritus. In 1976, he received his doctorate in Applied Sciences from University of Liege, Belgium. He is recognized as a leader in the field of life-cycle engineering of civil and marine structures. His main research interests are in the application of probabilistic concepts and methods to civil and marine engineering including structural reliability ,probability-based design and optimization of buildings ,bridges and naval ships, structural health monitoring ,life-cycle performance maintenance ,management and cost of structures and infrastructures under uncertainty ,risk-based assessment and decision-making ,infrastructure sustainability and resilience to disasters and stochastic mechanics. Dr.Frangopol is the Founding President of the international Associations for Bridge Maintenance and Safety (IABMAS) and Life-Cycle Civil Engineering (IALCCE).He is the recipient of several medals ,awards,and prize ,from ASCE, IABSE, IASSAR, and other professional organizationsm, such as the Alfredo Ang Award ,the OPAL Award ,the Newmark Medal, the T.Y. Lin Medal ,the F.R. Khan Medal, and the Croes Medal (twice),to name a few. He holds 4 honorary doctorates and 12 honorary professorships from major universities.

課程時間 Course Schedule (13:30-17:00 / Break Time:15:00-15:30)

Life Cycle Evaluation and Condition Assessment of Structures 結構生命週期在不同條件下之評估 **Bridge Reliability Assessment Based on Monitoring** Nov. 7th 橋梁監測與可靠度評估 Mon. System Reliability and redundancy in structural design and evaluation 結構系統可靠度、贅餘設計與評估 Reliability-based life-cycle management of highway bridges 1d. 以可靠度為基礎之高速公路橋梁生命週期管理 Life-cycle cost design of deteriorating structures 2a. 劣化結構之生命週期成本設計 Nov. 8th Life-cycle performance, management, and optimisation of structural systems under uncertainty: 2b. accomplishments and challenges Tue. 不確定性下結構系統生命週期性能、管理以及最佳化:成果與挑戰 Life-cycle of structural systems: recent achievements and future directions 2c. 結構系統生命週期:近期成果及未來方向 Resilience and Sustainability of Civil Infrastructure: Toward a Unified Approach 3a. 民生公共建設之復原力和永續性:具有普遍性的方法 Resilience as Optimization Criterion for the Rehabilitation of Bridges Belonging to a Transportation Network Nov. 9th 3b. **Subject to Earthquake** 以復原力作為受地震影響的交通網路的橋梁修復之最佳化標準 Wed. Life cycle utility-informed maintenance planning based on lifetime functions:

3c. optimum balancing of cost, failure consequences and performance benefit

基於壽命函數之生命週期公用事業維護計畫:成本平衡最佳化、失效後果以及性能優勢