

台灣省土木技師公會-曾煥郁

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主旨: 中華民國地震工程學會代轉發：基礎設施之永續發展與災害回復力:新興需求、工程對應工具與跨領域評估密集課程資訊  
附件: 短期課程海報v0925.pdf

各位會員您好，

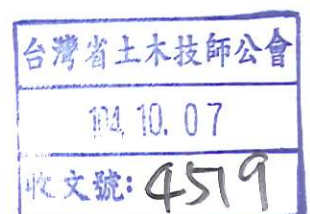
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28由台灣科技大學營建系主辦「基礎設施之永續發展與災害回復力:新興需求、工程對應工具與跨領域評估密集課程」，課程資訊如附件，請踴躍報名參加。

報名網址：<http://goo.gl/forms/SxoW3DEtIi>

聯絡人：國立臺灣科技大學 臺灣建築科技中心吳孟娟小姐 (02)2737-6295 /  
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地震工程學會代轉發2015/10/7



# 設施之永續發展與災害回復力：

## 需求、工程對應工具與跨領域評估密集課程

Course on "Sustainable and Resilience Infrastructure:  
Needs, Engineering Tools and Interdisciplinary Considerations"

September 26-28, 2015 // 13:30-17:30 **Venue: IB302**

Instructor  
Gardoni, Ph.D.



Professor, Department of Civil and Environmental Engineering  
Director, MAE Center: Creating a Multi-hazard Approach to Engineering  
Co-director, Societal Risk Management (SRM) Program  
Associate Director, NIST Community Resilience Center of Excellence  
University of Illinois at Urbana-Champaign

Paolo Gardoni is a Professor in the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign. Professor Gardoni's research focuses on the development of probabilistic methods to model the impact of natural and human-made hazards on interdependent infrastructural systems. He has been working on several multidisciplinary projects in areas including structural engineering, geotechnical engineering, hydrology, construction materials, public policy, and engineering ethics. Professor Gardoni is the author of over 100 journal publications related to risk and reliability. He is the director of the Mid-America Center, established in 1997 by the National Science Foundation as one of three engineering research centers. Since becoming director, Professor Gardoni has expanded the center, which now is to create a Multi-hazard Approach to Engineering by conducting research to characterize different hazards and estimate damage and vulnerability of national networks. He is also the associate director of the Community Resilience Center, funded by the National Institute of Standards and Technology (NIST). Professor Gardoni is the editor-in-chief of the international journal Sustainable and Resilient Infrastructure, a member of a number of national and international committees and associations that focus on risk and

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### Course Description

設施之永續性與災害回復力的基本概念，並基於現狀進行評估。此外，課程中亦將討論其所使用之工程分析工具與方法，包括結構工程、大地工程、水資源工程、公共政策和工程倫理。Gardoni教授擔任超過10種跨領域經嚴格評審的期刊作者，並擔任美國中西部地區由美國國家科學基金會成立於1997年，是三個國家級工程研究中心之一。自從成為該中心主任之後，Gardoni教授積極推動跨領域研究，在跨區域及跨國界間進行不同災害脆弱性的預估，來建立複合災害潛勢在工程上的應用。該中心由美國國家標準與技術研究院(NIST)資助成立，並出版國際期刊Sustainable and Resilient Infrastructure。Gardoni教授也擔任許多國家級與國際上專注風險與可靠度分析

The course introduces the concepts of sustainability and resilience as two of the most critical attributes of infrastructure based on current societal needs. It discusses some of the engineering tools and methods for the development of sustainable and resilience infrastructure including concepts from probability, risk analysis, and life-cycle analysis. The course also includes a broader discussion of interdisciplinary considerations that should be accounted for to achieve sustainable and resilient infrastructure that address current societal needs.

### Course Schedule

風險與可靠度之介紹 / 複合災害潛勢分析 / 元件、系統與網狀分析

Introduction to risk and reliability / Multi-hazards analysis / Component, system and network analysis

災害回復力與生命週期分析之定義 / 社會基礎設施之老化與劣化及復原時間 / 以水之網絡系統為例

Definition of resilience and life-cycle analysis / Aging and deterioration of infrastructure and recovery time / Examples considering water network

永續性之定義 / 基於社會需求與氣候變遷之跨領域整合 / 相關課題之未來挑戰