

# 112 學年度論文研究方向

## Research/Thesis Direction (Academic Year 2023-2024)

更新日期 2022/12/01

※ 本系各教師論文研究領域包括(但不限於)以下主題：  
Research/Thesis Direction including, but not limited to these topics below:

管理組 Construction Management

大地組 Geotechnical Engineering

結構組 Structural Engineering

材料組 Construction Material

資訊組 Information Technology

碩士在職專班 In-service Master Program

### ■ 管理組 Construction Management

教授姓名 Professor Name	論文研究方向 Research/Thesis Direction	研究所需 研究生人數 Number of Students Required	備註 Remarks
楊亦東 I-Tung Yang	計算智慧應用 Applications of Computational Intelligence	2	
	決策分析 Decision Analysis	1	
周瑞生 Jui-Sheng Chou	Engineering Applications of Artificial Intelligence	1	
	Project Financial Management	1	
	Building Energy Management	1	
李欣運 Hsin-Yun Lee	營建規劃與策略 Construction Planning and Strategy	3	
洪嫦闡 Cathy C.W. Hung	上市櫃建材營造業(國內外)對 ESG 的實踐、不當行為、股東忠誠度與財務績效的關係探究 Investigating ESG disclosure, ESG controversies, and financial performance for public listed construction companies	1	References: DasGupta, R. (2022). Financial performance shortfall, ESG controversies, and ESG performance: Evidence from firms around the world. Finance Research Letters, 46, 102487. Yoo, S., & Managi, S. (2022). Disclosure or action: Evaluating ESG behavior towards financial performance. Finance Research

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			Letters, 44, 102108. Nollet, J., Filis, G., & Mitrokostas, E. (2016). Corporate social responsibility and financial performance: A non-linear and disaggregated approach. Economic Modelling, 52, 400-407. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. Journal of sustainable finance & investment, 5(4), 210-233.
	以文字探勘技術應用在營造業重大職災案例探究其影響關鍵因子與後果 The Use of Text Mining in Construction Accident and Disaster Investigation	1	References: Na, X. U., Ling, M. A., Liu, Q., Li, W. A. N. G., & Deng, Y. (2021). An improved text mining approach to extract safety risk factors from construction accident reports. Safety science, 138, 105216. Goh, Y. M., & Ubeynarayana, C. U. (2017). Construction accident narrative classification: An evaluation of text mining techniques. Accident Analysis & Prevention, 108, 122-130.

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	大宗建材製程的碳排放評估與衝擊	1	參考文獻: Na, H., Sun, J., Qiu, Z., Yuan, Y., & Du, T. (2022). Optimization of energy efficiency, energy consumption and CO2 emission in typical iron and steel manufacturing process. Energy, 257, 124822. Ryan, N. A., Miller, S. A., Skerlos, S. J., & Cooper, D. R. (2020). Reducing CO2 emissions from US steel consumption by 70% by 2050. Environmental Science & Technology, 54(22), 14598-14608. Xu, B., & Lin, B. (2017). Assessing CO2 emissions in China's iron and steel industry: a nonparametric additive regression approach. Renewable and Sustainable Energy Reviews, 72, 325-337. Jing, R., Cheng, J. C., Gan, V. J., Woon, K. S., & Lo, I. M. (2014). Comparison of greenhouse gas emission accounting methods for steel production in China. Journal of cleaner production, 83, 165-172.

■ 大地組 Geotechnical Engineering

教授姓名 Professor Name	論文研究方向 Research/Thesis Direction	研究所需 研究生人 數 Number of Students Required	備註 Remarks
歐章煜 Chang-Yu Ou	無支撐開挖之研究	2	

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林宏達 Horn-Da Lin	不飽和土壤之工程特性及應用 Engineering Characteristics and Application of Unsaturated Soils	1	
	支撐開挖引致之土壤與鄰房互制 Interaction of Soil and Adjacent Building Induced by Braced Excavation	1	
	鑽掘樁及其在邊坡工程之應用 Drilled Pile and its Application in Slope Engineering	1	
李安叡 An-Jui Li	人工智慧在大地工程應用 AI application in geotechnical engineering	1	
	影像處理在大地應用技術開發 Use of image processing in geotechnical engineering	1	
	土壤液化問題 Soil liquefaction	1	
	岩石隧道 Rock Tunnel	1	
	不飽和土壤力學 Unsaturated soil slopes	1	
何嘉浚 Chia-Chun Ho	智慧城市水管理監測與性能評析 Smart water management monitoring and performance evaluation at urban city	2	

■ 結構組 Structural Engineering

教授姓名 Professor Name	論文研究方向 Research/Thesis Direction	研究所 需研究生人數 Number of Students Required	備註 Remarks
陳瑞華 Rwey-Hua Cherng	結構耐風動力反應及可靠度	1	
	CFD 在風工程之應用	2	
	人工智慧應用於風速預測	1	

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許丁友 Ting-Yu Hsu	結合強震預警、健康監測、半主動控制之地震減災技術研發 Integrating Earthquake Early Warning, Health Monitoring, and Semi-active Control for Seismic Loss Reduction	4	
陳沛清 Pei-Ching Chen	時變結構系統振動控制之研究 Vibration control of time-variant structural systems	1~2	
	深度學習於結構振動控制之研究 Deep learning-based structural vibration control methods	1~2	
	新型減震元件之研發 Development of innovative devices for vibration suppression	1	
蕭博謙 Po-Chien Hsiao	刀板接合型鋼板消能元件試驗研究 Experimental Investigations of Knife-Plate Connected Steel Panel Dampers	1	
	裝配式鋼結構系統梁柱接合設計開發與試驗研究 Development and Testing of Prefabricated beam-to-column connections	1	
	裝配式鋼結構系統柱基接合開發與試驗研究 Development and Testing of Prefabricated Column-base Connections	1	
	鋼木合成構造建築結構系統開發與設計 Development and Design of Steel-Timber Composite Structural Systems	1	
許士昱 XU, Shi-Yu	平面圖自動化辨識 Application of AI technology in floor plan recognition	3	
	廟宇結構耐震評估法 Seismic assessment of temple structures	2	
	廟宇結構地震反應模擬 Seismic response simulation of temple structures	2	
柴駿甫 Juin-Fu Chai	非結構耐震性能分析與測試驗證 Seismic analysis and testing qualification of nonstructural components and systems	2	

■ 材料組 Construction Material

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何嘉浚 Chia-Chun Ho	地工合成材料碳盤查與碳匯能力研究 Research on carbon inventory and carbon sink capacity of geosynthetic	2	

■ 資訊組 Information Technology

教授姓名 Professor Name	論文研究方向 Research/Thesis Direction	研究所 需研究生人數 Number of Students Required	備註 Remarks
陳鴻銘 Hung-Ming Chen	整合 BIM 與擴增實境(AR)之施工/設施維護管理系統 A visualized construction / facility management system based on the integration of BIM and Augmented Reality technologies	1	
	基於 AI 影像辨識技術之施工進度管控自動化 Automation of construction schedule control based on AI image recognition technology	1	
	室內環境監測物聯網資料之擴增實境呈現模式 Augmented Reality presentation paradigms of indoor environment monitoring data collected using IoT	1	
謝佑明 Yo-Ming Hsieh	資訊科技於土木營建之應用 Application of Information Technology in Civil and Construction Engineering	3	面議 / face-to-face discussion
蔡孟涵 Meng-Han Tsai	資料視覺化、防災資訊	3	

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楊亦東	營建管理實務課題		3	
周瑞生	Construction Engineering and Project Management		2	
李欣運	營建規劃與策略 Construction Planning and Strategy		2	
洪嫦蘭	營造業職業災害之成本探究 Evaluating the true costs of construction accidents		1	探討重大職業傷害之整體成本，包括停工期間損失、商譽損失、潛在停權的風險、保險給付、衍生成本以及補償與賠償金額之研究，企圖歸納特定職業災害(以墜落為主)的成本分析及敏感度分析。 參考文獻: 1. Construction accidents in Australia: Evaluating the true costs (2019) 2. 營造業職災特性關聯性分析與知識庫建立之研究 (民 106 年碩士論文) 3. 營造業職業災害補償與賠償金額之研究 (民 106 年碩士論文)
李安叡	討論確定	根據研究題目討論	1	
何嘉浚	韌性永續防災城市 Resilient Sustainable Disaster Resistant City	智慧市水管理	2	
許丁友	結合強震預警、健康監測、半主動控制之地震減災技術研發		1	
陳沛清	振動控制技術於結構補強之應用 Application of vibration control methods to structural retrofitting	結構動力學	1	
蕭博謙	鋼結構行為實務與分析研究		1	
許士昱	廟宇結構耐震性能評估 Seismic assessment of temple structures		1	
	平面圖自動化辨識 Application of AI technology in floor plan recognition		1	

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柴駿甫	非結構耐震性能分析與測試驗證 Seismic analysis and testing qualification of nonstructural components and systems		1	