國立臺灣大學工學院土木工程學系

Department of Civil Engineering

National Taiwan University

教師研究概況及成果

Research Summary

(2019-2023)

2024 年 3 月

土木工程學系 (Department of Civil Engineering)

（本資料由教師本人提供彙集而成）

大地工程組 (Geotechnical Engineering)

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Soil Dynamics, Slope Stability, Ground Settlement Analysis, Debris Flow

期刊論文(Journal Papers)

1. 林美聆*，洪鳳儀，賴達倫，溫惠鈺，鄭曙耀，2021，“台灣地區的土石流潛勢溪流潛勢資料建立與應用”，災害防救科技與管理學刊，2022 年 第 11 卷 第 1 期。DOI：https://doi.org/10.6149/JDM, ISSN：2227-0515
2. Lin, Meei-Ling, Chen, Yen-Cheng, Tseng, Yao-Hsien, Chang, Kuo-Jen, Wang, Kuo-Lung, “Investigation of Geological Structures Using UAV Lidar and Its Effects on the Failure Mechanism of Deep-Seated Landslide in Lantai Area, Taiwan”, Applied Sciences, 2021 Vol. 11 Issue 21 Pages 10052. (SCI) DOI: https://doi.org/10.3390/app112110052, ISSN: 2076-3417
3. Tsai, Wu-Nan, Chen, Chien-Chih, Chiang, Chih-Wen, Chen, Pei-Yuan, Kuo, Chih-Yu, Wang, Kuo-Lung, Lin, Meei-Ling, Chen, Rou-Fei, “Electrical Resistivity Tomography (ERT) Monitoring for Landslides: Case Study in the Lantai Area, Yilan Taiping Mountain, Northeast Taiwan”, Frontiers in Earth Science, 2021, 9(929).(SCI), DOI: https://doi.org/10.3389/feart.2021.737271, ISSN: 2296-6463
4. Lin, Meei-Ling and Chen, Te-Wei, “Estimating volume of deep-seated landslides and mass transport in Basihlan river basin, Taiwan”, Engineering Geology, 2020, 278: 105825. (SCI), DOI: https://doi.org/10.1016/j.enggeo.2020.105825, ISSN: 2076-3417
5. 林美聆，陳德偉，陳彥澄，民國 108 年 9 月，“大規模崩塌判釋圈繪方法之建立及驗證”，地工技術，第 161 期，第 53-62 頁。ISSN：1023-0327。

專書論文

1. Lin, Meei-Ling, Wang, Jian-Fang, Chen, Yen-Cheng, and Chen, Te-Wei, Springer, 2021. Potential Analysis of Deep-seated Landslides Caused by Typhoon Morakot
2. Using Slope Unit. Understanding and Reducing Landslide Disaster Risk: Volume 2 From Mapping to Hazard and Risk Zonation, (5th World Landslide Forum), Springer Nature Switzerland AG, pp.173-183, ISBN 978-3-030-60226-0, ISBN 978-3-030-60227-7 (eBook), https://doi.org/10.1007/978-3-030-60227-7

研討會論文(Conference Papers)

1. Meei-Ling Lin,* and Te-Wei, Chen. “Extreme Rainfall Caused by Climate Change and its Effects of on Debris Flow Hazard in Taiwan.”, 2nd International Conference on Construction Resources for Environmentally Sustainable Technologies, CREST 2023, Fukuoka, Japan, Keynote Lecture, Fukuoka, Japan, Nov 2023.

2. Meei-Ling Lin,*, Te-Wei Chen. “Monitoring evolution of the deep-seated landslide in Lushan area, Taiwan, using particle image velocimetry analysis”, 6th World Landslide Forum, Florence, Italy, Nov 2023.
3. M. L. Lin and P. H. Huang. “Assessing shallow landslide susceptibility using the random forest algorithm”, the 17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, Astana, Kazakhstan, Aug 2023.
4. Meei-Ling Lin, Sheng-Yu Chiu, Kuo-Lung Wang, Yo-Ming Hsieh. “Detecting Deep-seated Landslide Movement Using Seismic Signal Analysis of MEMS”, EGU General Assembly, 2023, Viena, Austria, Apr 2023.
5. Lin, Meei-Ling,, Wang, Jian-Fang, Chen, Yen-Cheng, and Chen, Te-Wei, “Potential Analysis of Deep-seated Landslides Caused by Typhoon Morakot Using Slope Unit”, 5th World Landslide Forum in Kyoto, Japan, 3 November 2021, Invited Lecture.
6. 林美聆、曾耀賢，”蘭台地區大規模崩塌破壞機制與崩塌演化分析“，第 18 屆大地工程學術研究討論會論文集(Geotech2020)，民國 109 年 9 月 1 日~9 月 3 日，屏東，台灣。
7. Lin, Meei-Ling, Chen, Yen-Chen, and Liu, Te-Chu, “A regional susceptibility assessment for shallow landslides in central Taiwan” SCG-XIII INTERNATIONAL SYMPOSIUM ON LANDSLIDES. CARTAGENA, COLOMBIA- JUNE 15th-19th-2020.
8. Meei-Ling Lin, and Ting-Kuo Chiang, “Long term effects of landslides induced by catastrophic events”, The 16th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, invited lecture, IS-07, 2019.
9. 林美聆、陳德偉，”利用衛星影像進行崩塌長期監測－以廬山及蘭台大規模崩塌為例”，第 38 屆測量及空間資訊研討會，民國 108 年 8 月 29 日~8 月 30 日，桃園，台灣。
10. Meei Ling Lin, and Te Wei Chen, “Effects of Extreme Rainfall on Debris Transportation by Debris Flow in Taiwan”, Symposium Climate Change and Natural Hazards: coping with and managing hazards in the context of a changing climate, Italy, 2019.02.

技術報告

1. 林美聆，陳彥澄，2021.12，臺灣地區沉積岩地質區淺層崩塌與土石流潛勢關聯性分析，行政院農業委員會水土保持局研究創新研究計畫報告。
2. 林美聆，謝有忠，王國隆，2021.7，霧社水庫集水區大規模崩塌物聯網多元多尺度遙測調查監測及災害潛勢模型建立-霧社水庫集水區大規模崩塌潛勢評估與重大案例演化模式建立(總計畫及子計畫四)(I)，科技部計畫報告。
3. 王國隆，林美聆、倪春發、陳建志、陳柔妃、陳宏宇、陳昭維、郭志禹、張國楨、許雅儒、黃信樺、謝佑明，2021.2，109年蘭台大規模崩塌潛勢示範區觀測科技整合與分析，行政院農業委員會水土保持局研究委託研究計畫報告。
4. 林美聆，陳彥澄，2020.12，建立淺層崩塌通用潛勢評估模式可行性研究－南部沉積岩地區（2），行政院農業委員會水土保持局研究創新研究計畫報告。
5. 林美聆，陳彥澄，2021.12，臺灣地區沉積岩地質區淺層崩塌與土石流潛勢關聯性分析，行政院農業委員會水土保持局研究創新研究計畫報告。
6. 林美聆，謝有忠，王國隆，2021.7，霧社水庫集水區大規模崩塌物聯網多元多尺度遙測調查監測及災害潛勢模型建立-霧社水庫集水區大規模崩塌潛勢評估與重大案例演化模式建立(總計畫及子計畫四)(I)，科技部計畫報告。

7. 林美聆、倪春發、陳建志、陳柔妃、陳宏宇、陳昭維、郭志禹、張國楨、許雅儒、黃信樺、謝佑明，2021.2，109年蘭台大規模崩塌潛勢示範區觀測科技整合與分析，行政院農業委員會水土保持局研究委託研究計畫報告。
8. 林美聆，陳彥澄，2020.12，建立淺層崩塌通用潛勢評估模式可行性研究－南部沉積岩地區（2），行政院農業委員會水土保持局研究創新研究計畫報告。
9. 林美聆，王國隆，張國楨，2020.10，集水區大規模崩塌多尺度先進遙測技術整合監測與崩滑行為模擬-總計畫暨子計畫:集水區大規模崩塌高精度地表演化分析及滑移行為模擬之研究(III)，科技部計畫報告。
10. 王國隆，林美聆，倪春發，陳建志，陳柔妃，陳宏宇，陳昭維，郭志禹，許雅儒，張國楨，黃信樺，謝佑明，林柏宏，李苡宣，2020.1，蘭台大規模崩塌潛勢示範區觀測科技整合研究，行政院農業委員會水土保持局研究委託研究計畫報告。
11. 林美聆，劉德礎，2019.12，建立沉積岩地質區帶廣域性淺層崩塌潛勢模式，行政院農業委員會水土保持局研究創新研究計畫報告。
12. 林美聆，王國隆，張國楨，2019.10，集水區大規模崩塌多尺度先進遙測技術整合監測與崩滑行為模擬-總計畫暨子計畫:集水區大規模崩塌高精度地表演化分析及滑移行為模擬之研究(II)，科技部計畫報告。

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Rock Mechanics, Numerical Analysis, Engineering Geology

期刊論文(Journal papers)

(一) SCI期刊論文 (*表通訊作者)

1. Weng, M.C., T.T. Wang, F.S. Jeng, H.J. Le, G.L. Lin (2023, Apr). Discrete element analysis on rock wedge failure considering tensile-shear composite failure of rock bridges, Journal of Geoengineering, 18(1):11-20.
2. Weng, M.C., C.L. Lin*, F.S. Jeng, H.C. Ou (2022, Feb). Evaluating the hydraulic conductivity of dense nonaqueous phase liquid in a single fracture of rock-like material. Sustainability, 14 (4), 2288.
3. Wang, T.T., O.L.A. Kwok, F.S. Jeng (2021, Jun). Seismic response of tunnels revealed following the Chi-Chi earthquake: a review. Engineering Geology, 287, 106090. (SCI, 2/41，ENGINEERING, GEOLOGICAL). MOST 102-2221-E027-071-MY3.
4. Wang, T.T., F.S. Jeng, T.T. Lee (2020, Oct). Environmental impact of Hsuehshan Tunnel on water quality at Feitsui Reservoir and its tributaries. Environmental Monitoring and Assessment, 192, 700..
5. Weng, M.C., C.Y. Chang, F.S. Jeng, H.H. Li (2020, Sep). Evaluating the stability of anti-dip slate slope using an innovative failure criterion for foliation. Engineering Geology, 275, 105737.. (SCI, 2/41, ENGINEERING, GEOLOGICAL). MOST 106-2625-M-390-001.
6. Weng, M.C., F.S. Jeng, C.C. Chiu, Y.C. Lin (2020, Sep). Modeling rock bolt reinforcement by using the particulate interface model of DEM. Journal of Geoengineering, 15(3), 123-134..

(二) 非SCI期刊論文：

1. 李紫彤、陳玟伶、楊宜蓉、鄭富書、王泰典、劉曉樺、曹孟真、黃奉琦(2021)：精細測繪於岩坡脆弱度評估及監測應用，*中國土木水利工程學刊*，33(2)，151-162。(EI)
2. M.C. Weng*, F.S. Jeng, C.C. Chiu, Y.C. Lin (2020): Modeling rock bolt reinforcement by using the particulate interface model of DEM. Journal of Geoengineering. (EI)
3. 曹孟真、陳玟伶、李文正、鄭富書、王泰典(2019)：中橫公路大沙溪路段工程地質特性對公路養護之影響，*工程環境會刊*，39，131-159。

研討會論文(Conference papers)

1. Huang, Y.J., T.T. Wang, F.S. Jeng (2023, Nov). Equalization method of slate discontinuity in discrete element numerical simulation, 6th World Landslide Forum, Florence, Italy.
2. 陳羿帆、鄭富書、王泰典 (2023, Oct). 卵礫石層潛盾切刃磨損影響因素數值模擬, 2023 岩盤工程暨工程地質研討會, 新竹, 臺灣。
3. 黃詠智、羅百喬、王泰典、鄭富書 (2023, Oct). 無人載具於山坡地分層建置數值地表模型解析度探討, 2023 岩盤工程暨工程地質研討會, 新竹, 臺灣。
4. 陳柏愷、鄭富書、王泰典 (2023, Oct). 裂隙岩體力學-水力耦合模式應用於豎井開挖滲流行為, 2023 岩盤工程暨工程地質研討會, 新竹, 臺灣。
5. Huang, Y.Z. T.T. Wang, F.S. Jeng (2023, Sep). A study on point cloud interpretation of fracture intensity and its spatial variability, 15th ISRM Congress, Salzburg, Austria.
6. Wang, T.T., W.L. Chen, F.S. Jeng, M.C. Tsao, W.Lo, W.J Lee (2020, Oct). Engineering geological factors affect maintenance of Dasha River section of Taiwan No. 8 highway. Eurock-2020 (Cancelled due to COVID-19 pandemic, with proceeding available) , Trondheim, Norway.
7. Tsao, M.C., W.L. Chen, F.S. Jeng, T.T. Wang (2019, Dec). Influence of engineering geological characteristics on highway maintenance: Example of Dasha River section of Central Cross-Island Highway. The 5th ISRM Young Scholars' Symposium on Rock Mechanics and International Symposium on Rock Engineering for Innovative Future (YSRM 2019& REIF 2019), Okinawa, Japan..
8. 李紫彤、劉曉樺、鄭富書、王泰典（2022 年 11 月）。岩石隧道依時變形案例及 其考量應力門檻之數值模擬探討。第二十屆海峽兩岸隧道與地下工程學術與 技術研討會，台北。
9. 李嚴勝、王泰典、鄭富書（2022 年 08 月）。應用邊界積分法於地表變位反算邊 坡潛在滑動面初探。第 19 屆大地工程學術研究討論會論文集，淡水。
10. 郭威廷、鄭富書、王泰典（2022 年 08 月）。考慮空間變異離散裂隙網路之岩體 水力特性代表性單元體積評估。第 19 屆大地工程學術研究討論會論文集，淡水。
11. 黃詠智、王泰典、鄭富書（2022 年 08 月）。點雲模型解析度對於判釋成果影響 探討-以露頭調查為例。第 19 屆大地工程學術研究討論會論文集，淡水。
12. 黃宥傑、鄭富書、王泰典（2022 年 08 月）。非連續體數值模擬方法中板岩不連 續面等值化評估方法。第 19 屆大地工程學術研究討論會論文集，淡水。
13. 黃詠智、王泰典、鄭富書（2022 年 05 月）。先進測繪點雲探討褶皺中不連續面 之空間變異性-以台 20 線 186.5k 處露頭為例。2022 岩盤工程研討會，桃園。
14. 黃宥傑、王泰典、鄭富書（2022 年 05 月）。三維水力破裂試驗顆粒流模擬技術 開發。2022 岩盤工程研討會，桃園。
15. 楊宜蓉、Johnson, K.M.、王泰典、鄭富書（2020 年 09 月）。利用震源機制解與 大地震同震應力變化量逆推地殼三維應力場與軸差應力絕對值，以日本 311 大地震為例。第 18 屆大地工程學術研究討論會，台灣，墾丁。
16. 陳玟伶、曹孟真、王泰典、鄭富書（2020 年 09 月）。岩坡上潛在移動岩塊辨識 與視覺化技術。第 18 屆大地工程學術研究討論會，台灣，墾丁。
17. 黃宥傑、蘇仁偉、蘇芳郁、王泰典、鄭富書（2020 年 09 月）。板岩邊坡穩定受不 連續面影響探討－以田古爾溪口附近為例。第 18 屆大地工程學術研究討論 會，台灣，墾丁。

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Engineering Geology, Rock Mechanics, Slope Stability

期刊論文 (Journal Papers)

1. Shiu, W.-J., Lee, C.-F., Chiu, C.-C., Weng, M.-C., Yang, C.-M., Chao, W.-A., Liu, C.-Y., Lin, C.-H., Huang, W.-K., & GeoPORT Working Group. (2023) Analyzing landslide-induced debris flow and flow-bridge interaction by using a hybrid model of depth-averaged model and discrete element method, Landslides, 20(2), 331–349.
2. 柳鈞元、劉育良、林承翰、謝沛宸、林銘郎. (2023) 從關山-池上地震地表破裂跡回饋評東里地區跨活動斷層橋樑結構物之容許位移性能, 地工技術, 176，53-62.
3. Hung, C.H., Chan, P.J., Lin, C.H., **Lin, M.L.** (2022) Numerical Investigation of Roles of Gravel Fabric on Composite Strata Deformation Induced by Thrust Faulting. Engineering Geology, 106921. https://doi.org/10.1016/j.enggeo.2022.106921. (SCI)
4. Liu, Chun-Yuan Li Chien-Hung , Chan Pei-Chen, Hung, Chien-Hui, **Lin, Ming-Lang** (2021) 3D sandbox and numerical modeling of coseismic surface rupture induced by oblique-slip faulting and its interaction with embedded shallow foundation. Engineering Geology. https://doi.org/10.1016/j.enggeo.2021.105990. (SCI)
5. **Lin, M.L**., Lin, C.H., Li, C.H., Liu, C.Y., Hung, C.H., (2021) 3D modeling of the ground deformation along the fault rupture and its impact on engineering structures: Insights from the 1999 Chi-Chi earthquake, Shigang District, Taiwan. Engineering Geology. https://doi.org/10.1016/j.enggeo.2021.105993. (SCI)
6. 林承翰、林邵儒、張育瑄、**林銘郎** (2022) 節理岩坡之楔型破壞調查與分析案例介紹。地工技術，173，7-16。
7. 謝沛宸、詹佩臻、鍾春富、朱聖心、李健宏、柳鈞元、林承翰、洪千惠、方儒雅、彭昱熙劉育良、**林銘郎** (2022) 工程設施如何面對與因應調適近斷層錯動：過去、現況、未來。地工技術，172，7-16。
8. 謝沛宸、朱聖心、楊貴三、**林銘郎**（2021）整合古文獻及無人機攝影測量技術：考察臺北水道原取水口之百年演變，臺北文獻，215，163-210。
9. **林銘郎** (2020) 穿越一甲子-細說地質專業對臺灣道路建設的貢獻，地質，39 卷，第 3-4 期，11-15 頁。
10. 董家鈞、 陳天健、 陳江淮、**林銘郎** (2020) 大地工程發展史-天然災害，地工技術，164 期，101-116 頁。
11. Yang, Kuo-Hsin, Chiang, Jung, Lai, Chao-Wei, Han, Jie, **Ming-Lang Lin** (2020) Performance of geosynthetic-reinforced soil foundations across a normal fault. Geotextiles and Geomembranes 48 (2020) 357–373. (SCI)。
12. Lin, Hsi-Hung, Lin, Ming-Lang, Lu, Jia-Hao, Chi, Chung-Chi, Fei, Li-Yuan (2020) Deep-seated gravitational slope deformation in Lushan, Taiwan: transformation from

cleavage-controlled to weakened rockmass-controlled deformation. Engineering Geology, 264 https://www.sciencedirect.com/science/article/pii/S0013795218319586(SCI)

13. 黃韋凱、魏倫瑋、李璟芳、周姿良、楊丞勳、陳世元、林劭儒、**林銘郎** (2019) 手持式光達應用於海蝕洞岩體不連續面位態量測之初探--以龍洞海蝕洞為例. 地工技術，159 期，13-20 頁。
14. Weng, Meng-Chia, **Lin, Ming-Lang**, Lo, Chia-Ming, Lin, Hsi-Hung, Lin, Cheng-Han, Lu, Jia-Hao , Tsai, Shang-Jyun (2019) Evaluating failure mechanisms of dip slope using a multiscale investigation and discrete element modelling. Engineering Geology, 263, 105303 (SCI)
15. Lin, Cheng-Han, Hung, Ching, Weng, Meng-Chia, **Lin, Ming-Lang**, Uzuoka,Ryosuke (2019) Failure mechanism of a mudstone slope embedded with steep anti-dip layered sandstones: case of the 2016 Yanchao catastrophic landslide in Taiwan. Landslides, 16 (11) 2233-2245 (SCI)
16. Li, Chien-Hung, Lin, **Ming-Lang, Huang**, Wen-Chao (2019) Interaction between pile groups and thrust faults in a physical sandbox and numerical analysis. Engineering Geology, 252, 65-77. (SCI)

研討會論文 (Conference Papers)

1. Chang, K. Y., Huang, W. K., Lin, C. H., Lin, M. L. (2023) A comparative study of UAV-based 3D point cloud analyses on landslide volume estimation for progressive rockslide. The EGU General Assembly 2023, Vienna, Austria.
2. Lin, C.-H. & Lin, M.-L. (2023) Activity and kinematic behaviors of gravitational slope deformation in the slate belt of Taiwan. 15th ISRM Congress, Salzburg.
3. Lin, C.-H. & Lin, M.-L. (2023) Analyzing gravitational deformation kinematics of slate slopes by PSInSAR analysis and DEM simulation. 112 年台灣地質地物學術研討會，桃園，臺灣.
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13. 林承翰、林銘郎 (2023) 臺灣清境地區板岩邊坡重力變形特徵與過程研究. 2023 岩盤工程暨工程地質研討會，新竹，臺灣.
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Hung Chien-Hui, Lin, Cheng-Han and **Ming-Lang Lin** (2020). Discrete Element Modeling on Deformation Pattern of Comp osite Strata Induced by Repeated Thrust Faulting: Case Study of Chushan Site, Central Taiwan. 2020 EGU-6377.

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期刊論文 (Journal Papers)

✉corresponding author

1. Ching, J.✉, Chen, Z.Y., and Phoon, K.K. (2023). Homogenization of spatially variable hydraulic conductivity in the presence of a geotechnical structure. Computers and Geotechnics, 156, 105255. (SCI)
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4. Sharma, A., Ching, J.✉, and Phoon, K.K. (2023). A spectral algorithm for quasi-regional geotechnical site clustering. Computers and Geotechnics, 161, 105624. (SCI)
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6. Ching, J.✉, Uzielli, M., Phoon, K.K., and Xu, X.J. (2023). Characterization of autocovariance parameters of detrended cone tip resistance from a global CPT database. ASCE Journal of Geotechnical and Geoenvironmental Engineering, 149(10), 04023090. (SCI)
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1. Ching, J. (2023). Spatial variability - from point process, spatial average, to mobilized value. 7th Suzanne Lacasse Lecture, ASCE Geo-Risk 2023. (**ISSMGE Honour Lecture**)
2. Ching, J. (2022). Recent advancement on data-centric geotechnical modeling (ISM Symposium on Environmental Statistics). (**invited lecture**)
3. Ching, J., Phoon, K.K., and Wu, S. (2022). Hierarchical Bayesian model for geotechnical transfer learning – A framework for transferring experiences in geotechnical database to site-specific property estimation. 4ICITG. (**keynote lecture**)
4. Ching, J., Phoon, K.K., and Wu, S. (2022). Global, regional, or municipal database? Which is better? ISGSR2022. (**keynote lecture**)
5. Ching, J. (2022). Hierarchical Bayesian model – A model for site uniqueness in geotechnical engineering. 2022 EDIARR. (**keynote lecture**)
6. Ching, J. (2021). Recent developments on data-driven geotechnics. 6th National Symposium on Engineering Risk & Insurance Research (6th NSERIR 2021). (**keynote lecture**)
7. Ching, J. (2021). MUSIC-3X: A case history. Machine Learning & Risk Assessment in Geoengineering (MLRA 2021). (**keynote lecture**)
8. Ching, J. (2021). MUSIC-3X: A case history. TVSeminars.com. (**keynote lecture**)
9. Ching, J. and Phoon, K.K. (2020). Learning about a site using sparse site-specific data - recent advancements. 7th Asian-Pacific Symposium on Structural Reliability and Its Applications. (**keynote lecture**)

10. Ching, J. (2020). Value of geotechnical BIG DATA – Soil/rock property estimation & geotechnical structure performance prediction. (大地工程講座, Taiwan Geotechnical Society)
11. Ching, J. and Phoon, K.K. (2019). Making use of a generic geotechnical database for site-specific purposes. 13th Chinese National Conference on Soil Mechanics and Geotechnical Engineering. (**invited lecture**)
12. Ching, J. and Phoon, K.K. (2019). Role of generic soil database in site-specific soil property estimation. 16th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering. (**keynote lecture**)
13. Phoon, K.K. and Ching, J. (2019). Managing uncertain ground truth using Bayesian machine learning. 29th European Safety and Reliability Conference. (**keynote lecture**)
14. Phoon, K.K. and Ching, J. (2019). The "site challenge" in geotechnical engineering. 13th International Conference on Applications of Statistics and Probability in Civil Engineering. (**keynote lecture**)
15. Phoon, K.K., Ching, J., and Wang, Y. (2019). Managing risk in geotechnical engineering – from data to digitalization. 7th International Symposium on Geotechnical Safety and Risk. (**Suzanne Lacasse lecture**)
16. Ching, J. (2019). Constructing site-specific multivariate probability distribution model: Hybridization versus hierarchical Bayesian analysis. International Symposium on Reliability of Multi-disciplinary Engineering Systems under Uncertainty. (**keynote lecture**)

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2. Ching, J. (2022). Summary Report for "TC304 Time Capsule Project." International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) - Technical Committee TC304 'Engineering Practice of Risk Assessment and Management', April 26., 2022.
3. Ching, J. and Schweckendiek, T. (2021). Technical Report "State-of-the-art review of inherent variability and uncertainty in geotechnical properties and models." International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) - Technical Committee TC304 'Engineering Practice of Risk Assessment and Management', March 2nd., 2021.
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5. Ching, J., Li, D. Q. & Zhang, J. (Eds) (2019). Proceedings, 7th International Symposium on Geotechnical Safety and Risk, Research Publishing, 11-13 December 2019, Taipei, Taiwan, 899pp.

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(A) 期刊論文(Journal Papers)

1. Ko, YY (Ko, Yung-Yen)[1];Tsai, CC(Tsai, Chi-Chin)[2];Hwang, JH(Hwang, Jin-Hung)[3];Hwang, YW(Hwang, Yu-Wei)[4];Ge, L(Ge, Louis)[5];Chu, MC(Chu, Min-Chien)[2] (2023) Geotechnical reconnaissance associated with the failure of engineering structures during the 2022 ML 6.8 Chihshang earthquake, Taiwan. NATURAL HAZARDS, 118, 1. 10.1007/s11069-023-05993-0

2. Yeh, F.H., Tafili, M., Prada-Sarmiento, L.F., Wichtmann, T., and Ge, L. (2023), Inspection of two sophisticated models for sands based on generalized plasticity: monotonic loading and Monte Carlo analysis, International Journal for Numerical and Analytical Methods in Geomechanics.

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Slope Stability and Earth Retaining Structures, Application of Geosynthetics, Geotechnical Engineering Modeling, Geo-Environmental and Geo-Disaster Engineering

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Structural Mechanics, Sound & Vibration, Boundary Elements, Lie Groups, Clifford Analysis

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Passive Structural Control, Dynamic Structural Tests, Earthquake Resistance Design

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23. 周中哲*，鍾秉庭，粘評，陳威霖，柯鎮洋，王志誠，陳景誠(2020)「板橋浮洲高層住宅以外覆鋼板及鋼造雙 K 型斜撐耐震補強評估」，土木水利，第四十七卷，第六期(12 月)，35-40 頁。(**鋼結構專輯**)

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4. Chou, C. C. (2020). "Effects of Self-Centering Brace and Buckling-Restrained Brace on Seismic Response of Steel Frames." ***17th World Conference on Earthquake Engineering***, Special Session for Towards Earthquake Resilience: Recent Developments in Self-Centering Structural Systems and Devices. Sep. 13-18, Sendai, Japan. **(Invited Speaker for Special Session)**

5. Lin, T. H., Chou, C. C., Chen, G. W. (2020). A Seven-Story Steel BRBF under Far-Field and Near-Fault Earthquakes: Loading Protocols and Seismic Tests of Columns. ***8th International Conference on Advances in Experimental Structural Engineering,*** Feb. 3-5, Christchurch, New Zealand. **(Invited Speaker for Special Session)**

6. 周中哲，鍾秉庭，凌郁婷(2020)「預力自復位系統的應用與研究:摩擦接合板結合自復位斜撐耐震性能」，2020 鋼筋混凝土與鋼結構設計技術研討會，12 月 17~18 日，臺北市**(Invited Speaker)**

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8. 周中哲(2020)「兩層樓高強度鋼構架之鋼柱於高軸力下的側向耐震實驗」，2020 國家地震工程研究中心實驗成果研討會，11 月 30 日，臺北市

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10. 周中哲，陳冠維，林德宏(2020)「高強度銲接箱型鋼柱於中高軸力下之側向耐震實驗與背骨曲線發展」，中華民國第 15 屆結構工程暨第 5 屆地震工程研討會，9 月 2~4 日，臺南市

11. 林德宏，周中哲(2020)「七層樓挫屈束制斜撐構架受遠域與近斷層地震之鋼柱載重歷程發展: 高強度鋼柱實驗驗證」，中華民國第 15 屆結構工程及第 5 屆地震工程研討會，9 月 2~4 日，臺南市

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24. Liu, Y. F., Lin, J. L., Chou, C. C., Weng, Y. T., Chao, S. H., Kuo, C. H. (2019). "Analytical Modeling of a Half-Scale Seven Story Reinforced Concrete Building Shaken Near-Fault Earthquake Motions", ***International Conference in Commemoration of 20th Anniversary of the 1999 Chi-Chi Earthquake***. Taiwan. Sep. 15-19.

25. 周中哲(2019)「長週期脈衝地震與自復位結構」，台科大高階科技研發碩士學程，5 月 18 日，臺北市**(Invited Speaker)**

26. 周中哲，鍾秉庭，粘評，陳威霖，劉郁芳，柯鎮洋，王志誠，陳景誠(2019)「板橋鋼筋混凝土高層建築鋼構件補強效益:實驗及 ETABS 非線性動力分析」,2019 高層建築發展及補強研討會，臺北市

研究報告(Research Reports)

1. 周中哲、劉郁芳、周德光 (2021)「鋼骨鋼筋混凝土構造設計規範柱及接合設計之修正研擬」內政部建築研究所委託研究期末報告。(in Chinese)

2. 謝承翰(2021)「風機鋼管圓柱在彎矩與軸力作用下之行為:實驗與有限元素分析」碩士論文指導教授：周中哲，國立臺灣大學土木工程學系。(in Chinese)

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4. 歐昱辰、周中哲、王威儒、賴柏丞(2021)「新型鋼骨預鑄混凝土複合式構架接頭試驗報告」，Report NCREE-21-003，國家地震工程研究中心。(in Chinese)

5. Pham, D. H. (2020)「Stability of Sandwiched Buckling Restrained Braces in a Steel Full-Scale Two-Story Steel Frame」, Ph. D. Thesis Advisor：周中哲，國立臺灣大學土木工程學系。(in English)

6. 劉郁芳、周中哲、曾郡于、孫琛琛（2020）「國內外規範之鋼骨鋼筋混凝土構造梁柱接合設計」，Report NCREE-20-017，國家地震工程研究中心。(in Chinese)

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8. 賴耘川(2020)「H 型鋼柱耐震行為: 兩層樓子構架與固接柱之試驗」碩士論文指導教授：周中哲，國立臺灣大學土木工程學系。(in Chinese)

9. 熊厚淳(2020)「兩層樓子構架高強度箱型鋼柱耐震試驗與模擬分析」碩士論文指導教授：周中哲，國立臺灣大學土木工程學系。(in Chinese)

10. 劉琨耀(2020)「評估風機鋼管圓柱撓曲強度與鋼板受腐蝕影響之行為」碩士論文指導教授：周中哲，國立臺灣大學土木工程學系。(in Chinese)

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3. Y.Y. Tsai, Y. Chiang, J. L. Buford, M.L. Tsai, H.C. Chen, and **S.W. Chang**. (2021, Nov 29-Dec 2). *Mechanical properties and fracture behavior of Sierpinski carpet fractal composites*. 2021 MRS Fall Meeting, Boston, MA, USA.
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5. Y.Y. Lai, D. Li, and **S.W. Chang**. (2021, Nov 18-19). *Molecular mechanism of cartilage extracellular matrix degradation*. 45th Conference on Theoretical and Applied Mechanics (CTAM2021), Taipei, Taiwan.
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3. Huang, S. K., Lai, Y. A., **Chang, C. M.**, Yang, C. Y., and Loh, C. H. (2020). "Experimental investigation of an active mass damper with acceleration feedback sliding mode control." Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems. (**EI**)
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1. 周肇昱、劉倢妤、**張家銘**，2023，「人工智慧應用於建物損傷診斷」，技師期刊，第 102 期，43-49 頁。
2. 許舜翔、許筠曼、洪昊天、林禹齊、**張家銘**、陳宗瑊、陳俊仲，2022，「含巡檢規劃、劣化辨識、損傷量化之進階建物劣化檢測架構」，結構工程，第三十七卷第四期，6-26 頁。
3. 周肇昱、**張家銘**、莊奕婕、楊卓諺、宋裕祺、蘇建國、林世豪、翁偉誠，2022，「基於模態特徵之風力機監測可行性研究：以一林口風力機為例」，中國土木水利學會學刊，第三十四卷第四期，307-318 頁。
4. 陳致融、陳儀諺、陳致源、賴明俊、蘇進國、宋裕祺、**張家銘**、楊卓諺、林世豪、翁偉誠，2022，「陸域風力機支撐結構監測與分析」，中國土木水利學會學刊，第三十四卷第四期，319-330 頁。
5. 楊耀畬、**張家銘**、康世仲、葉芳耀，2021，「施工導向之結構接頭設計應用於快速組裝便橋之研究」，中國土木水利工程學刊，第三十三卷第七期，529-534 頁。
6. 周肇昱、**張家銘**，2021，「基於影像量測之模態萃取技術之探討與比較」，三聯技術期刊，第 121 期，20-25 頁。
7. 周肇昱、黃謝恭、**張家銘**，2021，「利用深度學習進行訊號異常識別之方法比較及在線識別」，土木水利學會會刊，第四十八卷第二期，32-39 頁。
8. 張庭維、許筠曼、吳亭諺、許舜翔、**張家銘**，2021，「影像分析方法應用於構造物外觀異狀自動化偵測之發展」，土木水利學會會刊，第四十八卷第二期，40-47 頁。
9. 葉芳耀、楊耀畬、李柏翰、蕭勝元、**張家銘**、張國鎮，2020，「桁架式複合材料節塊結構應用於救災輕便橋之研究」，中國土木水利工程學刊，第三十二卷第八期，683-691 頁。
10. 許舜翔、張庭維、**張家銘**、陳俊杉、韓仁毓、林曜滄、林魁士、張廷瑩，2020，「深度學習應用於影像裂縫辨識：發展智慧維運系統以監控結構安全性」，中華技術，第 128 期，76-87 頁。

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1. **Chang, C. M.** and Yen, K. (2023). “Framework of UAV bridge inspection with computer vision and deep learning.” The 24th Japan-Korea-Taiwan Joint Seminar on Earthquake Engineering for Building Structures, Taipei, Taiwan.
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3. Yen, K. and **Chang, C. M.** (2023). “Preliminary study of tunnel defect recognition using lidar images.” The 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand. (EXTENDED ABSTRACT)

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5. Chen, W. K. and **Chang, C. M.** (2023). "Preliminary study of isolation bearings with discontinuous inerters for seismic protection of essential equipment and components." The 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand. (EXTENDED ABSTRACT)
6. Liao, C. J. and **Chang, C. M.** (2023). "Indoor inspection of building safety using object detection from YOLO algorithm." The 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand. (EXTENDED ABSTRACT)
7. **Chang, C. M.** (2023). "Integration of defect detection and augmented reality for indoor inspection in buildings" The 14th Taiwan-Japan Workshop on Structural and Bridge Engineering, Kyoto, Japan. [ABSTRACT ONLY]
8. **Chang, C. M.** (2023). "Development and experimental verification of machine learning damage detection for seismically-excited buildings." Canada-Taiwan Workshop on Earthquake Engineering, Decarbonisation Construction and Digitalization Construction Technologies, Taipei, Taiwan. [ABSTRACT ONLY]
9. **Chang, C. M.** and Chou, J. Y. (2023). "Use of two-stage optimization to estimate deformations of scaled truss bridge from cameras." The 2023 World Congress on Advances in Structural Engineering and Mechanics (ASEM23), Seoul, Korea. [ABSTRACT ONLY]
10. **Chang, C. M.** and Liu, C. C. (2023). "Semi-active control algorithm with control-structure interaction for magnetorheological damper used in seismically-excited buildings." The Third International Nonlinear Dynamics Conference (NODYCON 2023), Rome, Italy. [EXTENDED ABSTRACT]
11. **Chang, C. M.** (2023). "Framework of bridge surface damage inspection using computer vision and deep learning." 13th Taiwan-Japan Workshop on Structural and Bridge Engineering, Taipei, Taiwan. [ABSTRACT ONLY]
12. **Chang, C. M.** and Kao, T. L. (2023). "Investigation of track nonlinear energy sink with mass moment of inertia for buildings against earthquakes." IMAC-XLI Conference and Exposition on Structural Dynamics, Austin, TX, USA.
13. **Chang, C. M.** and Liu, C. Y. (2023). "Investigation of seismic isolation with geometrically nonlinear damper for essential equipment and components." 2023 10th International Conference on Geological and Civil Engineering (ICGCE 2023), Tokyo, Japan. [ABSTRACT ONLY]
14. **Chang, C. M.** and Kao, T. L. (2022). "Development of geometrically nonlinear mass damper with mass moment of inertia for seismically-excited buildings." The 23rd Taiwan-Korea-Japan Joint Seminar on Earthquake Engineering for Building Structures, Nagoya, Japan.
15. Liu, C. C. and **Chang, C. M.** (2022). "Seismic protection of essential components and equipment using isolation with geometrically nonlinear viscous damper." 8th Asia Conference on Earthquake Engineering, Taipei, Taiwan.
16. Hung, H. T., Hsu, S. H., and **Chang, C. M.** (2022). "Indoor building visual inspection tool for target environment understanding and defects detection with combination of SLAM and deep learning model." The 33rd KKHTCNN Symposium on Civil Engineering, Singapore. [ABSTRACT ONLY]

17. Chou, J. Y. and **Chang, C. M.** (2022). "Applications of deep learning models to frequency-domain phase responses for damage detection of building structures." International Symposium on Emerging Developments and Innovative Applications of Reliability Engineering and Risk Managements (EDIARR2022), Taipei, Taiwan. [ABSTRACT ONLY]
18. Kao, T. L. and **Chang, C. M.** (2022). "Numerical and experimental investigation of track nonlinear energy sink with rotational mass for seismic mitigation of buildings." International Symposium on Emerging Developments and Innovative Applications of Reliability Engineering and Risk Managements (EDIARR2022), Taipei, Taiwan. [ABSTRACT ONLY]
19. **Chang, C. M.** and Chou, J. Y. (2022). "Full-field modal property extraction from motion video measurement: considering out-of-plane motions." The International Symposium on Nondestructive Testing in Civil Engineering, Zurich, Switzerland. [ABSTRACT ONLY]
20. **Chang, C. M.** and Liu, C. C. (2022). "Semi-active control for seismic protection of buildings using magnetorheological dampers with control-structure interaction included." Engineering Mechanics Institute Conference 2022, Baltimore, MA, USA. [ABSTRACT ONLY]
21. Wu, T. Y., Hsu, S. H., and **Chang, C. M.** (2022). "Application of pixel-wise component recognition and change detection on in-situ bridge inspection." 10th European Workshop on Structural Health Monitoring, Palermo, Italy. [ABSTRACT ONLY]
22. **Chang, C. M.** and Liu, C. Y. (2022). "Design and experimental verification of geometrically nonlinear viscous damper in seismic isolation for protection of essential equipment in buildings." The 8th World Conference on Structural Control and Monitoring (8WCSCM), Orlando, FL, USA.
23. **Chang, C. M.** and Hsu, T. W. (2020). "Performance evaluation and design of seismic isolation systems with geometric nonlinearity for important equipment." 17th World Conference on Earthquake Engineering, Sendai, Japan.
24. **Chang, C. M.** and Chou, J. Y. (2020). "Near real-time building damage detection based on a bank of Kalman estimators." IMAC-XXXVIII, Texas, USA.
25. **Chang, C. M.** and Chou, J. Y. (2019). "Damage detection of seismically excited building using banks of Kalman filters." The 21st Japan-Taiwan-Korea Joint Seminar on Earthquake Engineering for Building Structures, Hsinchu, Taiwan.
26. Yu, J. W., Chou, J. Y., and **Chang, C. M.** (2019). "Crack detection based on deep learning and computer vision algorithms." The 32nd KKHTCNN Symposium on Civil Engineering, Daejeon, Korea.
27. Wang, X. and **Chang, C. M.** (2019). "Development and experimental verification of dual-length nonlinear pendulum for seismic protection of buildings." The 32nd KKHTCNN Symposium on Civil Engineering, Daejeon, Korea.
28. Chou, J. Y. and **Chang, C. M.** (2019). "3D modal feature extraction based on video measurement." The 32nd KKHTCNN Symposium on Civil Engineering, Daejeon, Korea.
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30. Yang, C. Y., Su, C. K., **Chang, C. M.**, and Hsu, C. C. (2019). "Effective use of lead rubber bearing for an isolated bridge in Taiwan through parametric study." Bridge Engineering Institute Conference 2019, Honolulu, HI.
31. Su, C. K., **Chang, C. M.**, Yang, C. Y., and Hsu, C. C. (2019). "Investigation of pounding effect for a seismically isolated bridge based on a simplified model." Bridge Engineering Institute Conference 2019, Honolulu, HI.
32. **Chang, C. M.**, Chiang, H. F., and Chou, J. Y. (2019). "Assessment of mode shapes based damage detection methods for building structures." IX ECCOMAS Thematic Conference on Smart Structures and Materials, Paris, France.
33. Yang, Y. Y., **Chang, C. M.**, Kang, S. C., and Yeh, F. Y. (2019). "Study of construction-oriented structural connectors for a temporary bridge." Proceedings of the 36th International Symposium on Automation and Robotics in Construction, Banff, Alberta, Canada.
34. Chou, J. Y. and **Chang, C. M.** (2019). "Modal property extraction based on frequency domain stochastic subspace identification." 13th International Conference on Damage Assessment of Structures, Porto, Portugal.

中文會議論文

1. 王迎芃、邱聰智、張家銘、林子為、宋隆洧，2023，「結合電腦視覺與深度學習於建物耐震性能初步評估」，第一屆台灣計算力學學會年會與第十四屆台灣邊界元素法會議暨學術研討會，基隆，臺灣，28-29 Oct. (摘要)
2. 周肇昱、劉倢妤、**張家銘**，2023，「Story drift and damage level estimation of buildings using relative acceleration responses with multi-target deep learning models under seismic excitation」，第一屆台灣計算力學學會年會與第十四屆台灣邊界元素法會議暨學術研討會，基隆，臺灣，28-29 Oct. (摘要)
3. 許謹柔、嚴寬、**張家銘**、韓仁毓 ，2023，「結合無人機與深度學習影像檢測技術的智慧化橋梁安全評估實例」，測量及空間資訊研討會 (SG2023)，新竹，臺灣，31 Aug. (摘要)
4. **張家銘**、高子倫，2023，「具旋轉飛輪之質量阻尼器研發與實驗驗證」，複合實驗技術發展研討會，台南，臺灣，30 Aug. (摘要)
5. 高子倫、宋冠諭、**張家銘**，2022，「軌道式幾何非線性旋轉型質量阻尼器於受地震下之建築物的研發與實驗驗證」，中華民國力學學會第四十六屆全國力學會議 (CTAM2022)，高雄，臺灣，18-19 Nov. (長摘要)
6. 張庭維、嚴寬、**張家銘**，2022，「應用深度學習及電腦視覺於橋梁表面劣化檢測之架構」，中華民國力學學會第四十六屆全國力學會議 (CTAM2022)，高雄，臺灣，18-19 Nov. (長摘要)
7. 賴煜仁、楊卓諺、鍾立來、**張家銘**，2022，「偏心滾動隔震系統輔以凸面導軌之數值分析」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
8. 宋冠諭、**張家銘**，2022，「應用調諧質量阻尼與慣質於受震建築之初步研究」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
9. 鄭棋、**張家銘**，2022，「以狀態空間積分法分析車橋之動態互制效應」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
10. 許筠曼、許舜翔、陳宗琄、**張家銘**，2022，「基於深度學習模型執行目視建築結構偵測之研究」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
11. 張庭維、吳庭諺、許舜翔、**張家銘**，2022，「應用深度學習及電腦視覺於橋梁表面劣化檢測」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)

12. 劉倢妤、**張家銘**，2022，「具斜交黏滯阻尼器之幾何非線性隔震系統」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
13. 林禹齊、**張家銘**，2022，「以慣質為基底之消能裝置裝置於基底隔震系統」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
14. 莊奕婕、**張家銘**，2022，「改良式資料型隨機子空間系統識別」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
15. 洪昊天、許舜翔、**張家銘**，2022，「結合深度學習模型與空間定位於建築物及室內結構劣化辨識」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
16. 巫宜謙、**張家銘**、楊卓諺，2022，「鉛心橡膠支承之基底隔震建築行為研究：考慮剪切、撓曲與軸向複合作用」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
17. 高子倫、**張家銘**，2022，「軌道式幾何非線性旋轉型質量阻尼器於受地震下之建築物的研發與實驗驗證」，第十六屆結構工程及第六屆地震工程研討會，新北市，臺灣，24-26 Aug. (長摘要)
18. 楊卓諺、喬丹、鍾立來、**張家銘**，2021，「滾輪慣性對偏心滾動隔震系統之性能影響研究」，中華民國力學學會第四十五屆全國力學會議 (CTAM 2021)，新北市，臺灣，18-19 Nov.
19. 賴勇安、羅偉宸、常珮慈、黃謝恭、楊卓諺、張家銘(2021)，「相位控制主動調諧質量阻尼器於結構減震之研究」，中華民國力學學會第四十五屆全國力學會議，新北市，臺灣，18-19 Nov.
20. 賴勇安、楊卓諺、**張家銘**，2021，「最佳被動調諧質量阻尼器設計-直接輸出回饋設計方法」，2021 電子計算機於土木水利工程應用研討會，桃園，臺灣，30-31 Aug.
21. 張庭維、許筠曼、吳亭諺、許舜翔、**張家銘**，2021，「影像分析方法應用於構造物外觀異狀自動化偵測之發展」，2021 電子計算機於土木水利工程應用研討會，桃園，臺灣，30-31 Aug.
22. 楊耀畬、葉芳耀、**張家銘**、康仕仲，2020，「自動化施工之模組化結構接頭設計」，第 24 屆營建工程與管理學術研討會，臺北，臺灣，5 Aug.
23. 許維倫、**張家銘**，2020，「利用振動時頻域資料解析模式進行列車車輪即時狀態識別」，第 20 屆非破壞檢測技術研討會，高雄，臺灣，22-23 Oct.
24. 巫宜謙、楊卓諺、**張家銘**，2020，「基底隔震建築上部構造高寬比上限值之探討」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
25. 莊奕婕、黃謝恭、**張家銘**，2020，「感測器融合用於軌跡重建慣性測量單元」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
26. 劉倢妤、**張家銘**，2020，「具斜交黏滯阻尼器之幾何非線性隔震系統」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
27. 劉峻呈、**張家銘**，2020，「基於磁流變阻尼器之新型半主動控制方法」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
28. 張庭維、許舜翔、**張家銘**，2020，「利用機器學習影像辨識技術於隧道裂縫偵測」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
29. 莊智豪、**張家銘**，2020，「結合隨機遞減法與頻率域分解法之結構常時模態分析」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
30. 周肇昱、**張家銘**，2020，「基於相機影像捕捉之模態動力特性萃取」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
31. 黃謝恭、**張家銘**、趙品鈞，2020，「以生成對抗網路製造人造地震」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
32. 葉芳耀、楊耀畬、李柏翰、蕭勝元、**張家銘**、張國鎮，2020，「桁架式複合材料組合結構應用於救災用輕便橋之研究」，第十五屆結構工程及第五屆地震工程研討會，臺南，臺灣，2-4 Sep.
33. 謝承穎、周肇昱、**張家銘**，2019，「結合影像處理、電腦視覺與人工智慧之混凝土結構表面裂縫識別研發」，2019 電子計算機於土木水利工程應用研討會，臺北，臺灣，9 Sep.

專利 (Patents)

類別	專利名稱	國別	專利號碼	發明人	專利權人	專利核准日	科技部計畫編號
發明專利	起重機負載之減盪系統	中華民國	I671256	康仕仲、**張家銘**、楊耀畬、陳鵬元	祐彬營造股份有限公司	201909~203808	
發明專利	Geometrically Nonlinear Vibration Isolation System	美國	US 10,655,704	**Chia-Ming Chang**, Shieh-Kung Huang, Cho-Yen Yang	國震中心	202005~203901	
發明專利	Vertical Vibration Isolation System	美國	US 10,670,109	**Chia-Ming Chang**, Cho-Yen Yang, Shieh-Kung Huang, Chen-Hao Hsu	國震中心	202006~203902	
發明專利	幾何非線性隔振系統	中華民國	I706095	**張家銘**、黃謝恭、楊卓諺	國震中心	202010~203808	
發明專利	垂直向隔振系統	中華民國	I733050	**張家銘**、楊卓諺、黃謝恭、徐振豪	國震中心	202107~203808	
發明專利	幾何非線性隔振系統	中國	ZL 2018 1 11711718	**張家銘**、黃謝恭、楊卓諺	國震中心	202106~203810	
發明專利	垂直向隔振系統	中國	ZL 2018 1 1186702.8	**張家銘**、楊卓諺、黃謝恭、徐振豪	國震中心	202102~203810	
發明專利	接頭結構以及接頭組裝方法	中華民國	I739649	楊耀畬、**張家銘**、葉芳耀、康仕仲	國震中心	202109~204011	

類別	專利名稱	國別	專利號碼	發明人	專利權人	專利 核准日	科技部 計畫編號
發明專利	鋼筋框架自動查驗系統、電腦可讀取儲存裝置及其運作方法	中華民國	I766376	陳俊杉、 韓仁毓、 陳柏華、 **張家銘**、 張書瑋、 陳翊翔、 陳鵬元、 莊仕杰、 黃政維	國立臺灣大學	202206~ 204009	
發明專利	Joint Structure and Method for Assembling a Joint Structure	美國	US 11,635,100	Yao-Yu Yang, **Chia-Ming Chang**, Fang-Yao Yeh, and Shih-Chung Kang	國家實驗研究院國家地震工程研究中心	202304~ 204102	

技術移轉 (Technology Transfers)

技術名稱	專利名稱	授權單位	被授權單位	簽約日期	權利金,衍生利益金等	科技部計畫編號
應用加速度資訊進行建築震後快速安全診斷技術	無	國立臺灣大學	中保防災科技股份有限公司	201904~202403	授權金為350,000元	
道岔裂紋缺陷成長趨勢分析工作(先期技轉)	無	國立臺灣大學	臺北大眾捷運股份有限公司	20210325~20220320	授權金為241,304元	

吳東諭 助理教授 Tung-Yu WU

Assistant Professor

學歷/ 博士/密西根大學

專長/ 鋼結構耐震設計、結構崩塌模擬、建築物震災韌性評估

Steel Structure, Earthquake Resistance Design, Structural Collapse Simulation, Seismic Loss Assessment

期刊論文(Journal Papers)

3. Tung-Yu Wu; Partha Sarathi Pal; Hsuan-Chieh Wang (2023, Jun). Collapse risk of steel framed buildings with deep columns under tri-directional excitation. *Journal of Constructional Steel Research*, 208. nstc 109-2222-E-002-001-MY2. 本人為第一作者、通訊作者. **SCI**
4. Omar A. Sediek; Tung-Yu Wu; Jason McCormick; Sherif El-Tawil (2022, Jun). Prediction of Seismic collapse behavior of deep steel columns using Machine learning. *Structures*, 40, 163-175. **SCI**
5. Omar A. Sediek; Tung-Yu Wu; Ting-Hao Chang; Jason McCormick; Sherif El-Tawil (2021, Jun). Measurement, Characterization and Modeling of Initial Geometric Imperfections in Wide-Flange Steel Members Subjected to Combined Axial and Cyclic Lateral Loading. *Journal of Structural Engineering*, 147(9). 本人為通訊作者. **SCI**
6. Tung-Yu Wu; Sherif El-Tawil; Jason McCormick (2020, Jun). Influence of Seismic Design Evolution on the Seismic Collapse Behavior and Losses of Prototype Steel Buildings with Moment-Resisting Frames. *Journal of Structural Engineering*, 146(9). 本人為第一作者、通訊作者. **SCI**
7. Omar A. Sediek; Tung-Yu Wu; Jason McCormick; Sherif El-Tawil (2020, Mar). Collapse Behavior of Hollow Structural Section Columns under Combined Axial and Lateral Loading. *Journal of Structural Engineering*, 146(6). **SCI**
8. Tung-Yu Wu; Sherif El-Tawil; Jason McCormick (2019, Oct). Effect of cyclic flange local buckling on the capacity of steel members. *Engineering Structures*, 200. 本人為第一作者、通訊作者. **SCI**
9. 羅元佑、吳東諭、汪向榮（2024 年 03 月）。新型隔減震技術：共振筒形地震超材料。**結構工程**。（已接受）。本人為通訊作者。
10. 蘇于琪，汪向榮，張文忠，林子剛，林正洪，吳東諭，張國鎮，陳東陽（2022 年 09 月）。地震超材料的隔減震技術。**結構工程**，37(3), 66-80。國科會：110-2221-E-011-033-MY3。
11. 張廷晧，吳東諭（2020 年 12 月）。幾何初始缺陷對具深寬翼鋼柱之抗彎矩鋼構架其

耐震崩塌性能之影響。**結構工程**，35(4), 37-56。本人為通訊作者。

研討會論文(Conference Papers)

1. Tung-Yu Wu, Chien-Ting Weng, and Chi-Rung Jiang (2023, Dec). Seismic Modeling of HSS Columns with Initial Imperfections. 23nd Korea-Japan-Taiwan Joint Seminar on Earthquake Engineering for Building Structures, Taipei, Taiwan. 本人為通訊作者.
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3. Wen-Yu Xiao and Tung-Yu Wu (2023, Nov). Seismic Fragility of Circular Steel Bridge Piers. 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand. 本人為通訊作者.
4. Yu-Wen Teng, Tung-Yu Wu, Chien-Ting Weng, and Chi-Rung Jiang (2023, Nov). Seismic Performance of Square HSS Columns. 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand. 本人為通訊作者.
5. Yuan-Yo Lo, Nathan Wenzel, Tung-Yu Wu, and Shiang-Jung Wang (2023, Nov). Theoretical, Numerical, and Experimental Analysis and Design of Tube-Type Resonator Seismic Metamaterials. 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand. 本人為通訊作者.
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9. Hsuan-Chieh Wang; Tung-Yu Wu (2022, Jul). Collapse Assessment of Steel Buildings with Deep Columns under Tri-directional Seismic Excitations. 15th World Congress on Computational Mechanics & 8th Asian Pacific Congress on Computational Mechanics, Yokohama, Japan. 本人為通訊作者.
10. Omar A. Sediek; Tung-Yu Wu; Jason McCormick; Sherif El-Tawil (2022, Jul). Classification of Seismic Failure Modes of Deep Steel Columns Using Machine Learning. 15th World

Congress on Computational Mechanics & 8th Asian Pacific Congress on Computational Mechanics, Yokohama, Japan.

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12. Tung-Yu Wu (2020, Sep). Collapse Behavior of Steel Buildings with Deep Columns under Horizontal and Vertical Ground Motions. 17th World Conf. on Earthquake Engineering, Sendai, Japan. 本人為第一作者、通訊作者.
13. Omar A. Sediek; Tung-Yu Wu; Jason McCormick; Sherif El-Tawil (2019, Sep). Seismic behavior of HSS columns under lateral loading. International Conference in Commemoration of 20th Anniversary of the 1999 Chi-Chi Earthquake, Taipei, Taiwan.
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19. 許巧臻、吳庭雅、朱鴻瑋、陳家漢、吳東諭、張國鎮、汪向榮（2022 年 08 月）。亞波長共振地震超材料結構之分析研究。中華民國第十六屆結構工程研討會暨第六屆地震工程研討會，台北，台灣。
20. 張豐選、吳東諭（2021 年 11 月）。台北盆地鋼構抗彎矩構架之震損與風險評估。中華民國力學學會第四十五屆全國力學會議，台北，台灣。國科會：109-2222-E-002-001-MY2。本人為通訊作者。
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學學會第四十四屆全國力學會議，宜蘭，台灣。國科會：109-2222-E-002-001-MY2。本人為通訊作者。

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7. **Puranam, A.**, Pujol, S. (2019) "Reinforcement Limits in RC Elements with High-Strength Steel," ACI Structural Journal, V. 116, No. 5.
8. **Puranam, A.**, Pujol, S. (2019) "Investigation of Corner Column Axial Failure in a 14-Story RC Building," American Concrete Institute Structural Journal, V. 116, No. 1

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1. Yang, Y-H., Puranam, A., Pujol, S. (2021) "Seismic Drift Demands in Concrete Structures Reinforced with High-Strength Steel", 17th World Conference on Earthquake Engineering, Sendai, Japan.
2. Suzuki, T., **Puranam, A.**, Elwood, KJ., Lee, H-J., Hsiao, F-P., Tsai, R-J., Hwang, S-J. (2019), "Seismic response of a half-scale seven-story reinforced concrete structure with

torsional and damage irregularities", International Conference in Commemoration of 20th Anniversary of the 1999 Chi-Chi Earthquake.

3. **Puranam, A.**, Bueker, F., and Elwood, KJ. (2019). "Assessment of Reinforced Concrete Buildings with Hollow-core Floors". Pacific Conference on Earthquake Engineering, Paper 0148, Auckland, NZ.

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期刊論文 (Journal Papers)

1. Wang, JH (Wang, Jhih-Huang)[1];Lin, GF(Lin, Gwo-Fong)[1];Huang, YR(Huang, Yun-Ru)[1];Huang, IH(Huang, I-Hang)[1];Chen, CL(Chen, Chieh-Lin)[1] (2023), Application of hybrid machine learning model for flood hazard zoning assessments, STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT, Vol 37, 10.1007/s00477-022-02301-3.
2. Zeng, YF(Zeng, Yuan-Fu)[1];Chen, CT (Chen, Ching-Tien)[2];Lin, GF(Lin, Gwo-Fong)[1] (2023), Practical application of an intelligent irrigation system to rice paddies in Taiwan, AGRICULTURAL WATER MANAGEMENT.
3. Chang, MJ(Chang, Ming-Jui)[1];Huang, IH(Huang, I-Hang)[2];Hsu, CT(Hsu, Chih-Tsung)[3];Wu, SJ(Wu, Shiang-Jen)[4];Lai, JS(Lai, Jihn-Sung)[5],[6];Lin, GF(Lin, Gwo-Fong)[1] (2022), Long-Term Flooding Maps Forecasting System Using Series Machine Learning and Numerical Weather Prediction System, Water, Vol 14, 3346.
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6. Huang IH, Chang MJ, Lin GF*, 2021, An optimal integration of multiple machine learning techniques to real-time reservoir inflow forecasting, Stochastic Environmental Research and Risk Assessment. (SCI) https://doi.org/10.1007/s00477-021-02085-y
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12. Lee FZ, Lai JS, Tang YC, Chang MJ, Chen PA, Lin GF, 2019, Turbidity Current Plunge Mechanism Analysis and Simulation System Application, Taiwan Water Conservancy, Vol. 67, No. 4, pp. 1-15. (EI)

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1. 黃詣翔、林國峰、張明瑞、曾元福 (2023)，運用深度學習於德基水庫入庫流量預報之研究，第二十六屆水利工程研討會，台中。
2. 楊政霖、曾元福、張明瑞、林國峰 (2023)，利用深度學習技術進行淹水影像辨識，第二十六屆水利工程研討會，台中。
3. 盧政霖、林國峰、張明瑞、黃一航、曾元福 (2023)，影像辨識應用於河川堰塞湖形成之研究，第二十六屆水利工程研討會，台中。
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11. Lin GF, 2019, Real time forecasting of turbidity current arrival time in reservoirs, The Fourth International Conference on Computational Science and Engineering (ICCSE-4), Ho Chi Minh City, Vietnam. (Invited Lecture)
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1. 林國峰, 2021, 頭前溪流域洪水機率預報與洪災管理之研究－人工智慧颱風定量降雨預報應用於洪水機率預報(子計畫三), 科技部研究計畫進度報告, 國立台灣大學土木工程學系. MOST 109-2625-M-002-014-MY2
2. 林國峰, 2021, 推動多元農業灌溉技術－智慧地下水水情之研究, 農委會農田水利署研究計畫報告, 國立台灣大學土木工程學系.
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對水庫集水區未來降雨之衝擊評估(II), 農委會研究計畫報告, 國立台灣大學土木工程學系.

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期刊論文(Journal Papers)

(A) 期刊論文

1. H.C. Ho, Y.M. Chiang, C.C. Lin, H.Y. Lee, C.C. Huang* (2021) " Development of an Interdisciplinary Prediction System Combining Sediment Transport Simulation and Ensemble Method", Water 2021, 13(18), 2588.
2. C.Y. Liang, Gene J.Y. You, H.Y. Lee (2019) “Investigating the effectiveness and optimal spatial arrangement of low-impact development facilities”, Journal of hydrology 577 (2019) 124008.
3. H.C. Ho, S.W. Lin, H.Y. Lee, C.C. Huang* (2019) “Evaluation of a Multi-Objective Genetic Algorithm for Low Impact Development in an Overcrowded City”, Water 2019, 11(10), 2010.
4. Y.J. Chiu, H.Y. Lee, T.L. Wang, J. Yu, Y.T. Lin*, Y. Yuan (2019) “Modeling Sediment Yields and Stream Stability Due to Sediment-Related Disaster in Shihmen Reservoir Watershed in Taiwan”, Water 2019, 11(2), 332 (SCI)

(B) Other Publication

1. 李鴻源、邱昱嘉，2021、「霧社水庫集水區大規模崩塌物聯網多元多尺度遙測調查監測及災害潛勢模型建立-應用斜坡單元之崩壞比於崩塌潛感分析對崩塌量面積與體積之推測(子計畫五)(I)，科技部。
2. 李鴻源、何昊哲，2021，「坡地水砂觀測技術推動評估計畫」，行政院農業委員會水土保持局，國立臺灣大學水工試驗所。
3. 李鴻源、邱昱嘉、林永峻、柯凱元，2019、「氣候變遷下高精度山地水砂災害預測與應對之合作研究(第二、三年)(兩岸合作研究)(2/2)」，科技部。
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1. 李鴻源，2019，「台灣必須面對的真相」，時報出版，224 頁，台灣。(ISBN：9789571379388)

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Debris Flow, Environmental Fluid Mechanics, Wave Dynamics

期刊論文((Journal Paper)

1. Chae B.G., K.-F. Liu, Y.-H. Wu, J.h. Choi, and H.-J. Park (2020) Simulation of Debris-Flow Runout Near a Construction Site in Korea, **Appl. Sci**. 10, 6079; doi:10.3390/app10176079 (SCI, IF=1.23)
2. Hsu, Y.-C., Liu, K.-F., Shu, H.-M. (2019): Combining TRIGRS and DEBRIS-2D Models for A Debris Flow Simulation from Rainfall Infiltration Induced Shallow Landslides: A Case Validation of Daniao Tribe, **Water** doi:10.3390/w11050890 (SCI, IF=2.56, ci=78)
3. Shih-Chao Wei, Ko-Fei Liu (2019, Dec). Automatic debris flow detection using geophones. **Landslides** DOI 10.1007/s10346-019-01258-9..(SCI, IF=3.81, ci=11)
4. Liu K.F., Jhou J.M., Wei S.C. and Chien C.H. (2019, Jun). Tipping Bucket Rain Gauge Performance Analysis under Heavy Rain fall. **Advancements in Civil Engineering & Technology** DOI 10.31031/ACET.2019.03.000564. (SCI, IF=1.14, ci=3)

研討會論文(Conference Papers) (2019-2023)

1. Wei, S.-C., Liu, K.-F., & Regmi, S. (2023) Debris flow seismo-acoustic wave in a finite layer waveguide, 8th Debris Flow Hazard Mitigation, June. 26-29, Turin, Italy.
2. Regmi, S., Liu, K.-F., & Wei, S.-C. (2023) Experimental study of seismo-acoustic frequency and flow velocity of debris flow, 8th Debris Flow Hazard Mitigation, June. 26-29, Turin, Italy.
3. Liu, K.F. and S.H. Wei (2021) Debris Flow Detection Using a Video Camera， World landslide forum， Tokyo
4. Liu K.F., Jhou J.M., Wei S.C.*, Chien C.H. (2019) Tipping Bucket Rain Gauge Performance Analysis under Heavy Rainfall. 7th International Conference on Debris-Flow Hazards Mitigation, (EI)
5. Yu Charn - Hsu, Ko Fei Liu, Hung Ming Shu (2019,). Debris flow assessment from rainfall infiltration induced landslide. 7th International Conference on Debris Flow Hazards Mitigation , Colorado - School of Mine, Colorado, USA. (EI).。
6. 劉格非, 2019 “流域土砂運移監測”。災害感知新技術國際學術研討會，北京。
7. Liu, K.F. (2019). Risk Assessment and Mitigation Strategy of Large Scale Potential Landslide. Nature Based Landslide Risk Management Training May 30-31, 2019, Hotel Taj Samudra, Colombo - Sri Lanka by WORLD BANK **(KEYNOTE)**

專書專章 (2019-2023)

1. Liu， K.F.， L.T. Kuo and S.H. Wei (2021) Debris Flow Detection Using a Video Camera， Understanding and Reducing Landslide Disaster Risk pp 141-147
2. Liu K.F.*, Kuo T.I., Wei S.C.(2020) Debris flow detection using a video camera. In (Sassa K. et al. ed) Understanding and Reducing Landslide Disaster Risk, 2, 305-413

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Experimental and Computational Fluid Mechanics, River Hydraulics

A.期刊論文 (Journal Papers)

1. Capart, H (Capart, Herve)[1],[2] (2023), Basal boundary conditions for granular surface flows over fragile and brittle erodible beds, JOURNAL OF FLUID MECHANICS.
2. Chen, TYK (Chen, Tzu-Yin Kasha) [1] , [2] ; Wu, YC (Wu, Ying-Chen) [1] , [2] ; Hung, CY (Hung, Chi-Yao) [3] ; Capart, H (Capart, Herve) [1] , [2] ; Voller, VR (Voller, Vaughan R.) [4] (2023), A control volume finite-element model for predicting the morphology of cohesive-frictional debris flow deposits, EARTH SURFACE DYNAMICS.
3. hen, TYK (Chen, Tzu-Yin Kasha) [1] , [2] ; Wu, YC (Wu, Ying-Chen) [1] , [2] ; Hung, CY (Hung, Chi-Yao) [3] ; Capart, H (Capart, Herve) [1] , [2] ; Voller, VR (Voller, Vaughan R.) [4] (2023), A control volume finite-element model for predicting the morphology of cohesive-frictional debris flow deposits, SMART STRUCTURES AND SYSTEMS.
4. Chen, T.Y.K., Capart H. (2022) Computational morphology of debris and alluvial fans on irregular terrain using the visibility polygon. *Computers and Geosciences*, *169*, art. no. 105228 (SCI).
5. Young, D.L., Li, J.-S., Capart, H., Chu, C.-R. (2022) Velocity measurements of vortex structures induced by sphere/wall interaction. *Experiments in Fluids*, *63*, art. no. 170 (SCI).
6. Chen, T.Y.K., Hung, C.-Y., Chiang, Y.C., Hsieh, M.-L., Capart, H. (2022) A stochastic model of geomorphic risk due to episodic river aggradation and degradation. *Engineering Geology*, *309*, art. no. 106845 (SCI).
7. Young, D.L., Lin, Y.C., Capart, H., Chu, C.-R. (2022) Vortex structures around two colliding spheres at high Reynolds number. *International Journal of Multiphase Flow*, *157*, art. no. 104246 (SCI).
8. Chen, T.Y.K., and Capart, H. (2020) Kinematic wave solutions for dam-break floods in non-uniform valleys. *Journal of Hydrology*, *582*, art. no. 124381 (Impact Factor = 5.722).

B.研討會論文(Conference Papers)

1. Ni, W.-J., and Capart, H. (2021) Lateral boundary influence on turbulent bed-load flows from refractive-index-matched experiments. Keynote Oral Presentation, Thematic Session on Granular Materials and Flows, *ICTAM 2020+1 International Congress on Theoretical and Applied Mechanics*, Milan, Italy, August 24, 2021.

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不確定性分析、風險評估、隨機過程

Stochastic Sediment Transport, Uncertainty Analysis, Risk and Reliability Analysis, Environmental Hydraulics, Extreme Event Analysis and Predictions

期刊論文 Refereed Journal Publications (* denoting corresponding author)

1. Tsai, C. W.* and Chen C.-K. (2023, Nov). River-Dust Induced Airborne Particulate Matter Forecasting Using a Hybrid Improved Complete Ensemble Empirical Mode Decomposition with Adaptive Noise and Radial Basis Function Neural Network. Atmospheric Environment.
2. Kumbhakar, M., Tsai, C.W.* and Singh, V. (2023, Aug). Improved Velocity Profile in Open Channels Using Incomplete Information Based Entropy Theory. ASCE Journal of Hydrologic Engineering, Vol. 28, Issue 10.
3. Kumbhakar, M., Tsai, C. W.* and Absi, R. (2023, Aug). Semi-Analytical Modelling of Sediment-Laden Open-Channel Flows with the Effects of Stratification, Hindered Settling, and Eddy Viscosities, Chaos: An Interdisciplinary Journal of Nonlinear Science (AIP), Aug 1;33(8):083113.
4. Huang, Y. Y. and Tsai, C.W.* (2023, Jul). Modeling Suspended Sediment Transport Under the Influences of Attached Eddies in Turbulent Flows, Stochastic Environmental Research and Risk Assessment, https://doi.org/10.1007/s00477-023-02458-5.
5. Kumbhakar, M. and Tsai, C.W.* (2023, Apr). Analytical Modelling of Vertical Distribution of Streamwise Velocity in Open Channels Using Fractional Entropy, Chaos, Solitons and Fractals.
6. Kumbhakar, M. and Tsai, C. W.* (2022, Dec). A Probabilistic Model on Streamwise Velocity Profile in Open Channels Using Tsallis Relative Entropy Theory. Chaos, Solitons and Fractals. (SCI).
7. Tsai, C. W.* , Chiang, C-H., and Shen, S. W. (2022, Dec). Probabilistic Eutrophication Risk Mapping in Response to Reservoir Remediation. Journal of Hydrology: Regional Studies, Volume 44, December 2022, 101213. (SCI)
8. K-T Wu , C. W. Tsai* , and M-J Wu (2022, May). Probabilistic Characterization of Sweep and Ejection Events in Turbulent Flows and its Implications on Sediment Transport. Water Resources Research. (SCI).

9. Ming-Liang Lin, Christina W. Tsai* and Chun-Kuang Chen (2021, Dec). Daily Maximum Temperature Forecasting in Changing Climate Using A Hybrid of Multi-dimensional Complementary Ensemble Empirical Mode Decomposition and Radial Basis Function Neural Network . ***Journal of Hydrology: Regional Studies***. 本人為通訊作者. (SCI)

10. Tsai, C.W.*, Yeh, T.-G., Y. Hsu, Wu, K.-T., and Liu, W.J. (2021, Jun). Risk analysis of reservoir sedimentation under non-stationary flows. ***Journal of Flood Risk Management*** , 14(2), e12756. MOST 104-2628-E-002-011-MY3. 本人為第 一作者、通訊作者. (SCI)

11. C C-H Liu, C. W. Tsai * and Y-Y Huang (2021, May). Development of a Backward-Forward Stochastic Particle Tracking Model for Identification of Probable Sedimentation Sources in Open Channel Flow . ***Mathematics***. MOST 107-2628-E-002-002-MY3. 本人為通訊作者. (SCI)

12. Tsai, C.W.*, Huang, S-H., Hung, S.Y. (2021, Mar). Incorporating the Memory Effect of Turbulence Structures Into Suspended Sediment Transport Modeling. ***Water Resources Research***, 57(3), e2020WR028475. MOST 107-2628-E-002- 002-MY3. 本人為第一作者、通訊作者. (SCI)

13. Huang, C.-H., Tsai, C.W.*, Mousavi, S.M. (2021, Feb). Quantification of probabilistic concentrations for mixed-size sediment particles in open channel flow. ***Stochastic Environmental Research and Risk Assessment***, 35 (2), 419-435. MOST 104-2628-E-002-011-MY3. 本人為通訊作者. (SCI)

14. C-H Huang , C W. Tsai* , and K-T Wu (2020, Oct). Estimation of near-bed sediment concentrations in turbulent flow beyond normality. ***Chaos, Solitons and Fractals***, 139, 109955. MOST 104-2628- E-002-011-MY3. 本人為通訊作者 . (SCI)

15. G Zhu, M. C. Chou*, and C. W. Tsai (2020, Jul). Lessons Learned from the COVID-19 Pandemic Exposing the Shortcomings of Current Supply Chain Operations: A Long-Term Prescriptive Offering. ***Sustainability***, 12 (14), 5858. MOST 108-2221-E-002-011-MY3. (SCI)

16. C. W. Tsai*, Y-R Hsiao, M-L Lin, and Y. Hsu (2020, Jun). Development of a noise-assisted multivariate empirical mode decomposition framework for characterizing PM 2.5 air pollution in Taiwan and its relation to hydro- meteorological factors. ***Environment International***, 139, 105669. MOST 104-2628-E-002-011-MY3. 本人為 第一作者、通訊作者. (SCI)

17. Hester, E.*, Lin, A. and Tsai, C. (2020, Mar). Effect of Floodplain Restoration on Photolytic Removal of Pharmaceuticals. ***Environmental Science and Technology***, 54, 6, 3278 – 3287. (SCI)

18. C. W. Tsai*, S. Y. Hung, and T-H Wu (2020, Feb). Stochastic sediment transport: anomalous diffusions and random movement. ***Stochastic Environmental Research and Risk Assessment***, 34, pages 397 – 413. MOST 107-2628-E-002-002- MY3. 本人為第一作者、通訊作者. (SCI)

19. C W. Tsai* and S-H Huang (2019, Jul). Modeling Suspended Sediment Transport Under Influence of Turbulence Ejection and Sweep Events. ***Water Resources Research***, 55 (7), 5379-5393. MOST 104-2628-E-002-011-MY3. 本人為第一作者、通訊作者. (SCI)

20. Tsai, C* and Treadwell, H (2019, May). Analysis of trends and variability of toxic concentrations in the Niagara River using the Hilbert-Huang transform method. *Ecological Informatics*, 51, 129-150. (SCI). 本人為第一作者、通訊作者. (SCI)

21. Tsai, C.W.*, Yeh, J.J. and Huang, C-H. (2019, Jan). Development of probabilistic inundation mapping for dam failure induced floods. *Stochastic Environmental Research and Risk Assessment*, 33 (1), 91-110. MOST 104-2268-E-002-011-MY3. 本人為第 一作者、通訊作者. (SCI)

研討會論文

International Conferences

1. Tung, Y.-J and Tsai, C. W. (2022): Spatiotemporal Analysis of the Influential Factors and Potential Harms of Wildfire in Taiwan, AGU Fall Meeting; 2022 December 12-16; Chicago, IL. Abstract ID: 1192833.
2. Chiu, Yu-Kai and Tsai, C. W. (2022): Investigation into the correlations of meteorological factors, acid rain compositions, and GHGs by EMD-based algorithm to achieve carbon neutrality in Taiwan, AGU Fall Meeting; 2022 December 12-16; Chicago, IL. Abstract ID: 1193123.
3. Lin, S.-W. and Tsai, C. W. (2022): Simulation of Stochastic Sediment Transport Considering the influence of Energy Cascade Process and Intermittency Singapore, KKHTCNN 2022, National University of Singapore, Singapore, 17-19 November 2022, H-1.
4. Shen, Stanley W. and Tsai, C. W. (2022): Path-dependent stochastic sediment particle transport analysis: Application Malliavin calculus to resuspension mechanism,Singapore, KKHTCNN 2022, National University of Singapore, Singapore, 17-19 November 2022, H-2. (Outstanding student paper award in the conference)
5. Chiu, Yu-Kai and Tsai, C. W. (2022): Carbon Footprint of Water Consumption in a Changing Climate, Singapore, KKHTCNN 2022, National University of Singapore, Singapore, 17-19 November 2022, CNS-3.
6. Tung, Y.-J and Tsai, C. W. (2022): Spatiotemporal Analysis of the Causes and Effects of Wildfire by Landsat Imagery and in situ Data: Case studies of Taiwan and California, USA, EGU General Assembly 2022, online, 23–27 May 2022, EGU22-6999, https://doi.org/10.5194/egusphere-egu22-6999, 2022.
7. Wu, M. J. and Tsai, C. W. (2022): Stochastic sediment transport modeling under the effects of intermittency and anisotropy of turbulent flow, EGU General Assembly 2022, online, 23–27 May 2022, EGU22-7008, https://doi.org/10.5194/egusphere-egu22-7008, 2022.
8. Chen, C.-K. and Tsai, C. W.: Aeolian River Dust in Central and Southern Taiwan Rivers: Spatial-Temporal Characterization and Public Health Implication, EGU General Assembly 2022, online, 23–27 May 2022, EGU22-7031, https://doi.org/10.5194/egusphere-egu22-7031, 2022.

9. Hung, S. Y., & Tsai, C. W. (2022). Stochastic Suspended Sediment Transport with Memories. ICHE World Congress, Izmir, Turkey, 26-27 May, 2022.

10. Hung, S. Y., & Tsai, C. W. (2021). "Stochastic Sediment Transport with Memories" Proceedings, 2021 World Water and Environmental Resources Virtual Congress, Jun 07-12, Online.

11. Tsai, C. and Wu, K.-T. (2021). "Characterization of Geometrical and Temporal Properties of Large-scale Motions in Turbulent Flows", EGU General Assembly 2021, online, 19 – 30 Apr 2021, EGU21-14221, https://doi.org/10.5194/egusphere-egu21-14221, 2021.

12. Liu, W.-J. and Tsai, C. W. (2021). "Incorporating Backward-forward Stochastic Particle Tracking Model into the EFDC model for Probable Sedimentation Source identification in Typhoon events", EGU General Assembly 2021, online, 19 – 30 Apr 2021, EGU21-11346, https://doi.org/10.5194/egusphere-egu21-11346, 2021.

13. Huang, Y.-Y. and Tsai, C. W. (2021). "Modeling of Lagrangian particles in turbulence boundary layer considering attached eddies: particle trajectories and concentration profiles", EGU General Assembly 2021, online, 19 – 30 Apr 2021, EGU21-9960, https://doi.org/10.5194/egusphere-egu21-9960, 2021.

14. Tang, C.-H. and Tsai, C. W. (2021). "Spatiotemporal Trend and Variability of Precipitation in Taiwan Based on Multi-dimensional Ensemble Empirical Mode Decomposition (MEEMD)", EGU General Assembly 2021, online, 19 – 30 Apr 2021, EGU21-10609, https://doi.org/10.5194/egusphere-egu21-10609, 2021.

15. Hester, E.T., D.T. Scott, D.L. Azinheira, K.E. Brooks, M. Calfe, C. Guth, B. Hammond, A.Y. Lin, and C.W. Tsai. (2020). "Can stream and river restoration solve the excess nitrogen problem?" River Flow 2020, Delft, Netherlands. July 8, 2020.

16. Tsai, C. W., Wu, K-T, and Huang, C-H. (2020). " Beyond Normality: Estimation of Near- Bed Sediment Concentrations Accounting for Asymmetric Distribution and Spatial Influence of Turbulence Coherent Structures" 2020 JpGU-AGU Joint Meeting, Abstract C000762, May 24-28, 2020, Chiba, Japan.

17. Tsai, C.W. and Wu, K.-T. (2020). "Beyond Normality: Estimation of Near-Bed Sediment Concentrations Accounting for Asymmetric Distribution and Spatial Influence of Turbulence Coherent Structures" EGU General Assembly, May 4-8, 2020, Abstract EGU2020-21416, Vienna, Austria.

18. Tsai, C.W. and Huang, C.H. (2020). "Improved Point Estimates of Probabilistic Moments for Non-Gaussian Multivariate Environmental Modeling and Uncertainty Analysis" the AMS 100th American Meteorological Society Annual Meeting, January 12-16, 2020, Boston, M.A., Abstract ID: 370283

19. Tsai, C.W. and Huang, S.H. (2019) "On the Memory Effect of Sediment Particles in Turbulence Structures" In: AGU Fall Meeting; 2019 December 9-13; San Francisco, CA. Abstract ID: 511955.

20. Lin, M.L., and Tsai, C.W. (2019) "Evolution of Air Temperature and Multiscale Characterization of Greenhouse Gases in Taiwan based on Multi-dimensional Ensemble Empirical Mode Decomposition and Noise-assisted Multivariate Empirical Mode Decomposition". In: AGU Fall Meeting; 2019 December 9-13; San Francisco, CA. Abstract ID: 541291.

21. Wu, K.T., and Tsai, C. W. (2019) “Improvement of Suspended Sediment Transport Analysis Considering the Spatial Influence of Turbulence Ejection”. In: AGU Fall Meeting; 2019 December 9-13; San Francisco, CA. Abstract ID: 540456.
22. Chiang, C.H., and Tsai, C.W. (2019) “Using EFDC hydrodynamic and water quality model for eutrophication prediction in Xindian River in Taiwan”. In: AGU Fall Meeting; 2019 December 9-13; San Francisco, CA. Abstract ID: 500822.
23. Hung, S. Y. & Tsai, C. W. (2019) “Stochastic Sediment Transport with Memories”, The Thirty-Second KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea
24. Hung, S. Y. & Tsai, C. W. (2019) “Stochastic Sediment Transport In Time Persistent Flow Events”, The Thirty-Eighth IAHR World Congress, September 1-6, 2019, Panama City, Panama
25. Tsai, C. and Hung, S.H. (2019). “On the Memory Effect of Sediment Particle Movement in Turbulent Flows by A Random Time Interval Brownian Motion (RTIB) Model”, 41st Stochastic Processes Conference, July 8-12, Evanston, IL.
26. Tsai, C. and Huang, S.H. (2019). “Development of A Stochastic Jump Diffusion particle Tracking Model for Sediment Transport”, Proceedings, 2019 World Water and Environmental Resources Congress, May 19-23, Pittsburg, PA.
27. Huang, C.H. and Tsai, C. (2019). “Uncertainty Analysis for Geological Drilling Data and development of Probabilistic Soil Liquefaction Potential Mapping”, Proceedings, 2019 World Water and Environmental Resources Congress, May 19-23, Pittsburg, PA.
28. Ahammed, F., Hewa, G. A., Argue, J. R. & Tsai, C. W. (2019). “ICSM – a new stormwater management strategy to support the structural growth of developing countries in Asia”. Proceedings of the World Environmental and Water Resources Congress, The American Society of Civil Engineers, pp: 80 - 92.
29. Tsai, C. and Hsiao, Y.-R. (2019). “Characterization of Air Quality and Hydro-Meteorological Factors based on Noise-assisted Empirical Mode Decomposition (NAMEMD) and Time-dependent Intrinsic Correlation (TDIC)”, EGU General Assembly, Abstract 2019-11791, Vienna, Austria.
30. Huang, C. H. and Tsai, C (2019). “Uncertainty Analysis for Geological Drilling Data and Development of Probabilistic Soil Liquefaction Potential Mapping”, EGU General Assembly, Abstract 2019-7559, Vienna, Austria.

Domestic Conferences

1. 1. Tung, Y.-J and Tsai, C. W. (2022): Spatiotemporal Analysis of Wildfire Occurrences in Taiwan and California, USA, 2022 Soil Hydrology and Water Resources Management Modeling Summit, Taichung, Taiwan, 19-20 March 2022.
2. Wu, M. J. and Tsai, C. W. (2022): Incorporating the Influences of Intermittency and Anisotropy of Turbulent Flow into Stochastic Sediment Transport Modeling, 2022 Soil Hydrology and Water Resources Management Modeling Summit, Taichung, Taiwan, 19-20 March 2022. (1st place in student paper competition)

3. Chen, C.-K. and Tsai, C. W. (2022): Spatial-Temporal Characterization of Aeolian River Dust in Central and Southern Taiwan Rivers based on Improved Complete Ensemble Empirical Mode Decomposition with Adaptive Noise, 2022 Soil Hydrology and Water Resources Management Modeling Summit, Taichung, Taiwan, 19-20 March 2022. (2nd place in student paper competition)
4. Hung, S. Y., & Tsai, C. W. (2021). Correlated Stochastic Sediment Transport in Open Channel Flows. 2021 Conference on Computer Applications in Civil and Hydraulic Engineering, Virtual Online Taiwan, 30-31 August 2021. (Outstanding student paper award in the conference)
5. Tang, C.-H. & Tsai, C. W. (2021). Spatiotemporal Characteristics, Trend and Variability of Drought events in Response to Hydro-Meteorological Changes for Reservoirs in Taiwan. 2021 Conference on Computer Applications in Civil and Hydraulic Engineering, Virtual Online Taiwan, 30-31 August 2021.
6. Huang, Y.-Y. & Tsai, C. W. (2021). Stochastic Sediment Transport in Turbulent Boundary Layers Under the Influence of Attached Eddies: Concentration Profiles and Anomalous Diffusion. 2021 Conference on Computer Applications in Civil and Hydraulic Engineering, Virtual Online Taiwan, 30-31 August 2021.
7. Liu, W.-J. & Tsai, C. W. (2021). Incorporating Backward-forward Stochastic Particle Tracking Model into the EFDC model for Probable Sedimentation Source identification in Typhoon events. 2021 Conference on Computer Applications in Civil and Hydraulic Engineering, Virtual Online Taiwan, 30-31 August 2021.

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Hydro-Meteorology, Hill-Slope Hydrology, Statistical Methods in Hydrology and Meteorology, Flood Forecasting

研討會論文 Conference Presentations)

1.吳秉澤、李天浩，2019，應用觀測系統實驗辨識移速場、雨胞和對流強度變化評估極短時外延定量推估降雨之研究，第 24 屆水利工程研討會論文。

2.林彥廷、李天浩，2019，斜板漫地流滯蓄水量－逕流量遲滯效應函數研究，第 24 屆水利工程研討會論文。

3.Matthias Diehl and Tim H. Lee, 2019, Stable modeling of transient flows in pipes, 第 24 屆水利工程研討會論文。

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Water resources economics and policy, Decision making process, Operational research approach, Stochastic Hydrology and its Use in Water Resources Systems, Hydroinformatics

期刊論文(Journal papers)

1. Chu, CC (Chu, Chia-Chu) [1] ; Su, HT (Su, Ho-Ting) [1] ; Wei, C (Wei, Cheng) [1] ; You, GJY (You, Gene Jiing-Yun) [1] , [2] , [3] (2023). Semi-quantitative evaluation of levees risk within the context of hydrology uncertainty. JOURNAL OF HYDROLOGY.
2. Liang, C. Y., Wang, Y. H., **You, G. J. Y***., Chen, P. C., & Lo, E. (2021). Evaluating the Cost of Failure Risk: A Case Study of the Kang-Wei-Kou Stream Diversion Project. *Water*, 13(20), 2881.
3. Chu, C.C., **You, G. J. Y*** (2021).Analytical one-dimensional conceptual model of channel evolution after dam removal based on diffusion framework, *Water Resources Research*, 57(5), e2020WR028306.
4. Su, H. T., **You, G. J. Y***., & Chu, C. C. (2020). Using two-dimensional modeling to evaluate strategies of sediment reduction and evacuation for Nanshi river under Guishan dam operations. *River Research and Applications, 36(10), 2063-2077.*
5. Huang, C. L., Hsu, N. S., Yao, C. H., & **You, G. J. Y**. (2020). Identification of hydrogeological evolution using hydrogeology-seismology analysis of groundwater head fluctuation related to the 1999 MW= 7.5 Chi-Chi earthquake. *Progress in Earth and Planetary Science*, 7(1), 1-28.
6. Wang, Y. H, Chu, C. C., **You, G. J. Y.*,** Gupta, H.Y & Chiu, P. H. (2020) Evaluating Uncertainty in Fluvial Geomorphic Response to Dam Removal. *Journal of Hydrologic Engineering* 25(6)
7. Wu, P. Y., **You, G. J. Y***., & Chan, M. H. (2020). Drought Analysis Framework based on Copula and Poisson Process with Nonstationarity. *Journal of Hydrology*, 125022.
8. Huang, C. L., Hsu, N. S., Hsu, F. J., **You, G. J. Y**., & Yao, C. H. (2020). Symmetrical Rank-Three Vectorized Loading Scores Quasi-Newton for Identification of Hydrogeological Parameters and Spatiotemporal Recharges. *Water*, 12(4), 995.
9. Liang, C. Y., **You, G. J. Y**.*, & Lee, H. Y. (2019). Investigating the effectiveness and optimal spatial arrangement of low-impact development facilities. *Journal of Hydrology, 577*, 124008.

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Ecohydraulics and Eco-DRR, River and Floodplain Hydrodynamics, Development of Ecohydrology Models, Wetlands Engineering and River Restoration

期刊論文 (Journal Papers)

1. **Shih, S.-S.***, Hsu, W.-C., Hsu, Y.-W. (2023). Waterline digital elevation model development for quantifying inundation duration and coastal protection of tidal wetlands, *Science of The Total Environment* 874, 162519. **[**SCI**]**
2. **Shih, S.-S.***, Lee, K.-Y. (2023). Time-series-based habitat model development for surface water management on endangered aquatic plant *Isoetes taiwanensis* conservation in mountain wetlands, *Ecological Indicators* 154, 110489. **[**SCI**]**
3. Shih, D.-S., **Shih, S.-S.**, Hsu, S.-M., Lin, S.-Y., Lin, Y.-C., Hung C.-T., Wang, K.* (2023). A Framework for the Sustainable Risk Assessment of In-river Hydraulic Structures: A Case Study of Taiwan's Daan River, *Journal of Hydrology* 617, 129028. **[**SCI**]**
4. Shih, S.-S.*, Liu, C.H., Nien, J.H. (2022, Dec). In-river weir effects on the alteration of flow regime and regarding structural stream habitat. *Journal of Hydrology*, 615, 128670. (**SCI**, 11/138, ENGINEERING, CIVIL). MOST 110-2621-M-002-009. 本人為第一作者、通訊作者.
5. Shih, S.S.*, Huang, Z.Z., Hsu, Y.W. (2022, Dec). Nature-based solutions on floodplain restoration with coupled propagule dispersal simulation and stepping-stone approach to predict mangrove encroachment in an estuary. *Science of The Total Environment*, 851, Part 1, 158097. (**SCI**, 26/279, ENVIRONMENTAL SCIENCES). MOST 110-2621-M-002-009. 本人為第一作者、通訊作者.
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7. **Shih, S.S.***, Cheng, T.Y. (2022, Feb). Geomorphological dynamics of tidal channels and flats in mangrove swamps. *Estuarine, Coastal and Shelf Science*, 265, 107704: 1-13.. (SCI, 21/110, Marine & Freshwater Biology). MOST 106-2621-M-002-004-MY3.
8. **Shih, S.S.***, Hsu, Y.W. (2021, Dec). Unit hydrographs for estimating surface runoff and refining the water budget model of a mountain wetland. *Ecological Engineering*, 173, 106435.. (SCI). MOST 110-2621-M-002-009.
9. **Shih, S.S.***, Wang, H.C. (2021, Dec). Spatiotemporal characteristics of hydraulic performance and contaminant transport in treatment wetlands. *Journal of Contaminant Hydrology*, 243, 103891. (SCI). MOST 109-2622-E-002-026.

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16. Yu, H.L., **S.S. Shih*** (2018, Oct). Using fish as an ecological indicator to assess the advantage and disadvantage of constructed groynes. *Journal of Wetlands*, 7 (1): 42-51.
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1. **Shih, S.-S.**, 2023, Tidal pumping and sea-level rise effects on the residence of estuarine high-concentration fine sediment from upstream reservoir effluent, *ISRS2023- 15th International Symposium on River Sedimentation*, Sep 5-0, 2023, Florence, Italy.
2. **施上粟**, 2022, 夢幻湖保護區地表地下水及土壤特性調查，土壤水文與水資源管理模式研討會，中興大學，台中。
3. **Shih, S.S.** *, 2021, Stormwater Detention and Ecological Conservation of Urban Ponds and Wetlands, 7th Cross-Strait Forum on Sustainable Urban Development.
4. 黃中澤、施上粟*, 2021, 關渡平原紅樹林擴散潛勢及洪災風險與復育權衡關係探討，第十一

居臺灣濕地生態系研討會，國立台灣師範大學，台北市。

5. 李冠穎、施上粟*, 2021, 夢幻湖生態保護區地下水流向分析與水位控管策略，第十一屆臺灣濕地生態系研討會，國立台灣師範大學，台北市。
6. 蘇雨乾、施上粟*, 2021, 通洪阻礙物模式應用於河川高灘地植生管理—以大漢溪人工濕地爲例，第十一屆臺灣濕地生態系研討會，國立台灣師範大學，台北市。
7. 徐偉銓、施上粟*, 2021, 應用遙測影像判釋分析潮間帶濕地水線位置變化研究，2021台灣地理資訊學會年會暨學術研討會，逢甲大學，台中市。
8. Huang, Z.Z., **S.S. Shih*** (2020, Sep). Tradeoffs Between Flood Protection and Ecological Conservation on Mangrove Restoration and Dyke Modification in Guandu Floodplain, Northern Taiwan. 2020 TWS Annual Meeting, Taipei City.
9. **Shih, S.S.** (2019, Aug). On developing an evolution model for simulating geomorphic dynamics of tidal waterways and mudflats. Joint Meeting for SWS Asia Chapter & Korean Wetlands Society, Korea. MOST 106-2621-M-002-004-MY3.
10. Cheng, T.Y. **S.S. Shih** (2019, Jul). A model for geomorphological changes of tidal creeks and mudflat. AOGS2019, Singapore. MOST 106-2621-M-002-004-MY3.
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13. Liu, C.H., **S.S. Shih** (2019, Jul). Flow Regime Analysis Using Wavelet Methods Considering Weir Effects. AOGS2019, Singapore . MOST 106-2625-M-002-011.
14. Wang, H.C., **S.S. Shih** (2019, Jul). Identification of dead zone in constructed wetlands for evaluating the related hydraulic performance. AOGS2019, Singapore.
15. **施上粟**（2019 年 05 月）。水科學與生命科學跨領域研究淺論。第十屆臺灣濕地生態系研討會，國立中山大學，高雄市。
16. **施上粟**、郭品含、吳諮育（2019 年 05 月）。裂隙岩層地下水流對夢幻湖濕地水文系統之影響。第十屆臺灣濕地生態系研討會，國立中山大學，高雄市。
17. 鄭庭宇、許耀文、**施上粟**（2018 年 05 月）。紅樹林對於溼地水動力及剪應力反應。第九屆臺灣濕地生態系研討會，國立台灣大學，台北市。

專書 (Monographs)

1.**施上粟**、郭品含，2021，「濕地水文學」: chp3 of 臺灣濕地學，台灣濕地學會發行。

技術報告 (Technical reports)

Project name	Funding information	PI/Co-PI	Yr
(2/2) 防砂壩小水力發電潛能評估模組之開發與技術驗證	:NSTC 112-2621-M-002-011	PI	2023
	臺大核心研究群計畫	PI	
	農委會水土保持局	PI	

Project name	Funding information	PI/Co-PI	Yr
基隆河藍色水路願景前期規劃	臺大產學交流發展協會	Co-PI	
因應氣候變遷衝擊之韌性永續城市 BGG 生態水利特性及優化研究	科技部：MOST 111-2621-M-002-010	PI	2022
大學校園永續水綠能開發(1/2)	臺大核心研究群計畫	PI	
觀新紅樹林地形高程量測、水位高程量測、通水斷面估算	國立中興大學(桃園市政府)	PI	
夢幻湖生態保護區生態水文長期監測計畫	陽明山國家公園管理處	PI	
二重疏洪道出口堰閘門拆除前之水文環境及生態調查分析	新北市政府高灘地工程管理處	Co-PI	
都市綠色基盤變遷對生態水文功能及水災緩解效益影響之評估	科技部：MOST 110-2621-M-002-009	PI	2021
複合型土砂災害對重要河川棲地結構及水生物的衝擊評估	科技部：MOST 110-2625-M-002-019	PI	
大漢溪右岸城林橋至鐵路橋段整體改善工程委託規劃設計技術服務計畫	創聚工程顧問公司	PI	
110 年度臺北水源特定區跨平台整合應用計畫	多采工程顧問公司	PI	
大臺北防洪水工試驗模場更新及檢定驗證	水利署水利規劃試驗所	Co-PI	
河川潭瀨流結構及穩定護甲層對生態系統防減災功能評估	科技部：MOST 109-2625-M-002-015	PI	2020
港口水質模式建置及水質管理運用-以基隆港為例	科技部：MOST 109-2622-E-002-026	PI	
氣候變遷及河川海岸治理工程效應下之紅樹林反應及調適機制（3/3）	科技部：MOST 106-2621-M-002 -004 -MY3	PI	2019
淡水河主流及其周邊河道減糙及疏濬策略研擬	水利署第十河川局	PI	
夢幻湖生態保護區地下水觀測及湖水位管控策略研擬	陽明山國家公園管理處	PI	

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Water wave mechanics、Coastal engineering、Coastal hazards

期刊論文 (Journal Papers)

1. Lo, P. H.-Y. & Chan, I-C. (2023). Analytical and numerical investigation on the effects of landslide acceleration in landslide-generated tsunamis. *J. Mech.* 39(20), 309. (SCI)
2. Zheng, K.-Y., Chang, C.-W. & Chan, I-C. (2022). Numerical investigation into the effects of a viscous fluid seabed on wave scattering with a fixed rectangular obstacle. *Mathematics* 10(20), 3911. (SCI)
3. Chan, I-C. (2022). Analytical solution for wave scattering by a surface obstacle above a muddy seabed. *Mathematics* 10(16), 2388. (SCI)
4. Chan, I-C. (2022). Theoretical model for nonlinear long waves over a thin viscoelastic muddy seabed. *Mathematics* 10(15), 2715. (SCI)
5. Huang, C.-S. & Chan, I-C. (2022). Effects of slide shape on impulse waves generated by a subaerial solid slide. *Water* 14(17), 2643. (SCI)
6. Wang, H.-E. & Chan, I-C. (2020). Numerical investigation of wave generation characteristics of bottom-tilting flume wavemaker. *J. Mar. Sci. Eng.* 8(10), 769. (SCI)
7. Yang, T.-Y. & Chan, I-C. (2020). Drag force modeling of surface wave dissipation by a vegetation field. *Water* 12(9), 2513. (SCI)
8. Li, Y., Mei, C.C. & Chan, I-C. (2019) Asymptotic analysis of dispersive tsunami from a slender fault. *J. Hydrodyn.* 31, 1073. (SCI)

研討會論文（Conference Papers）

1. Chan, I-C. Scattering of surface waves by an obstacle above a soft bed. International Symposium on Coastal Erosion and Resilience, Busan, South Korea, 3-5 Dec., 2023.
2. K.-Y. Zheng, Y.-K. Lin & I-C. Chan Wave scattering problem above a viscous fluid bed. 33rd KKHTCNN, Singapore, 17-19 Nov., 2022.
3. 黃瓊書、賴昀宗、詹益齊 斜坡滑落體所衍發之水波波形的探討。第44屆海洋工程研討會，高雄，17-18 Nov., 2022.
4. 詹益齊 Transient water waves due to bottom displacement. 第二十八屆微分方程年會，台北，26-29 Dec., 2019.
5. Chan, I-C. Modeling of long waves generated by a transient disturbance. International Workshop on Numerical Approaches in Water Researches, Goyang, South Korea, 12-13 Dec., 2019.
6. H.-E. Wang & I-C. Chan Numerical modeling of surface waves triggered by bottom disturbances. 32nd KKHTCNN, Daejeon, South Korea, 24-26 Oct., 2019.

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Open channel, Sediment transport, Hydrometric measurement

(A)期刊論文(Journal Papers)

1. Cheng-Chia Huang, Hao-Che Ho, Jihn-Sung Lai, Fong-Zuo Lee (2023) “Experimental study with hydraulic modeling of a reservoir desilting operation using a sediment bypass tunnel”, Environmental Earth Sciences, 82,313.
2. Hao-Che Ho, Kun-Che Chan, Shu-Hao Chang, Cheng-Chia Huang (2023) “Three-phase data augmentation for the prediction of sediment flux in mountain basins during typhoon events”, Journal of Hydroinformatics, 23(3), 1054-1071.
3. Hao-Che Ho, Yu-Wei Chiu, Ting-Yu Chen, Yen-Cheng Lin (2023) “Flow measurement in open channels using imaging techniques in conjunction with a convolutional neural network”, Journal of Hydrology, 618, 129183.
4. Ho, HC (Ho, Hao-Che) [1] ; Lee, HY (Lee, Hong-Yuan) [1] ; Tsai, YJ (Tsai, Yao-Jung) [1] ; Chang, YS (Chang, Yuan-Shun) [1] (2022) “Numerical Experiments on Low Impact Development for Urban Resilience Index” Sustainability 14 (14), 8696.
5. Chang, YS(Chang, Yuan-Shun)[1];Ho, HC(Ho, Hao-Che)[1];Huang, LY(Huang, Li-Ya)[1] (2022) “Evaluation of low impact development for resilient capacity in urban area with flood resilience index” Journal Of Flood Risk Management 10.1111/jfr3.12877.
6. Lin, YC(Lin, Yen-Cheng)[1];Ho, HC(Ho, Hao-Che)[1];Lee, TA(Lee, Tzu-An)[1];Chen, HY(Chen, Hsin-Yu)[1] (2022) “Application of Image Technique to Obtain Surface Velocity and Bed Elevation in Open-Channel Flow” Water 14 (12).
7. Ho, H-C., Chiang, Y-M., Lin, C-C., Lee, H-Y., Huang, C-C. (2021) “Development of an Interdisciplinary Prediction System Combining Sediment Transport Simulation and Ensemble Method” Water 13(8), 2588
8. Ho, H-C., Lin, Y-T., Muste M. (2020) “Velocimetry Based on Self-Generated Surface Wave Patterns”, Water 12(9), 2342
9. Ho, H-C, Lin, S-W, Lee, H-Y, Huang, C-C (2019) "Evaluation of Multi-Objective Genetic Algorithm for Low Impact Development in Overcrowded City", Water 11(10), 2010
10. Huang, C-C, Lin, W-C, Ho, H-C *, Tan, Y-C (2019) "Estimation of Reservoir Sediment Flux through Bottom Outlet with Combination of Numerical and Empirical Methods", Water 11 (7), 1353
11. Huang, C-C, Fang, H-T, Ho, H-C, Jhong, B-C (2019) "Interdisciplinary application of numerical and machine-learning-based models to predict half-hourly suspended sediment

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13. Feng, Q, Ho, H-C, Man, T, Wen, J, Jie, Y, Fu, X (2019) "Internal Stability Evaluation of Soils", Water 11 (7), 1439

(B)研討會論文(Conference Papers)

1. Cheng, Y-S, Ho, H-C (2021) “Role of Low Impact Development on Urban Flood Resilience Index” AGU, New Orleans, USA
2. 黃莉雅、何昊哲 (2021) “考量內外水動態模擬下之逕流分擔策略成效評估” 第 25 屆水利工程研討會，台南市，台灣
3. 張淵舜、黃莉雅、何昊哲 (2021) “利用洪患韌性指標評估低衝擊開發對於城市地區抗災能力之影響” 第 25 屆水利工程研討會，台南市，台灣
4. Wang, YD., and Ho, H-C. (2019) "Evaluation of Multi-Objective Genetic Algorithm for Low Impact Development in Planning Urban Area", International Conference on Smart Cities, Seoul, Korea
5. Wei, S., Ho, H-C., Lee, H-Y. (2019) "Optimization of Low Impact Development for Flood Mitigation in Highly Concentrated Region – Case Study for New Taipei City", International Conference on Smart Cities, Seoul, Korea
6. Tsai, Y-J., Ho, H-C., Lin, S-W., Lee, H-Y. (2019) "Optimization of LID practices on water quantity and quality for the overdeveloped city", EGU, Vienna, Austria
7. Chiu, and Ho, H-C. (2019) "Can Convolution Neural Network Improve the Discharge Measurement using Particle Image Velocimetry Method?", EGU, Vienna, Austria
8. Sung, C-Y., and Ho, H-C., (2019) "Estimation of Open Channel Surface Velocity with Faster Region-Convolutional Neural Networks", EGU, Vienna, Austria

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Public Transportation Planning and Operation, Active Mobility, Transit-Oriented Development, Sustainable Mobility Policy and Planning, Transportation Economics, Smart and Shared Mobility

期刊論文 (Journal Papers)

1. S.J. Wang, S.K. Jason Chang (2021, Jul). Autonomous bus fleet control using multi-agent reinforcement learning. Journal of Advanced Transportation. . *Journal of Advanced Transportation*. (SCI).
2. 張學孔、陳雅雯、吳紹謙 、蔡侑勛（2021 年 06 月）。預約式無障礙小客車駕駛員資格訓練制度之研究。**都市交通**，36(1), 11-15。本人為第一作者、通訊作者。
3. Amanda Fernandes Ferreira, Yuka Akasaka, Mirian Greiner de Oliveira Pinheiro and S.K. Jason Chang (2020). Information as the First Attribute of Accessibility: A Method for Assessing the Information Provided by Urban Rail Systems to Tourists with Reduced Mobility. *Sustainability*, 12(10), 1-28. (SCI).
4. 張學孔（2020 年 03 月）。高齡智慧行動之數位生活環境發展願景。**國土及公共治理**，8(1), 68-79。本人為第一作者、通訊作者。
5. 涂仁維、張學孔、陳雅雯（2020 年 01 月）。公共自行車系統站點區位優化之研究 (Improvement Strategies for Rental Stations of Public Bike System)。**運輸學刊**。（已接受）。（TSSCI）。
6. S.K. Jason Chang, Hou-Yu Chen, Hung-Chang Chen (2019, Dec). Mobility as a service policy planning, deployments and trials in Taiwan. *IATSS Research*, 43, 210-218. 本人為第一作者、通訊作者.
7. Hwa-chyi Wang, S. K. Jason Chang, Hans De Backer, Dirk Lauwers, Philippe De Maeyer (2019, Jul). Integrating Spatial and Temporal Approaches for Explaining Bicycle Crashes in High-Risk Areas in Antwerp (Belgium) . *Sustainability*, 11(13):3746, 1-28. (SCI).
8. Hwa-Chyi Wang, Hans De Backer, Dirk Lauwers, S. K. Jason Chang (2019, Feb). A Spatio-Temporal Mapping to Assess Bicycle Collision Risks on High-Risk Areas(Bridges)- A Case Study from Taipei (Taiwan) . *Journal of Transport Geography*, 75, 94-109. (SCI).
9. 張學孔、張朝能、陳雅雯、洪鈞澤、史習平、洪勝宇（2019 年 09 月）。無障礙小客車多元運輸服務系統平台之建立(Development of Accessible Mobility Smart Service Platform)。**運輸計劃季刊**，48(3), 179-217。（TSSCI）。本人為第一作者。
10. S.K. Jason Chang, Da-Wei Shen, Chia-Chu Kung,Yi-Hsuan Hung（2019 年 04 月）。國產自駕巴士實測經驗與展望 (The trial experience and future prospect of autonomous bus made in Taiwan)。**土木水利**，46(2), 25-31。本人為第一作者。

11. 張學孔、陳雅雯、周寬也、于立安（2019 年 04 月）。發展自動駕駛運具之衝擊影響評估 (Assessment of the Impact and Effects of Autonomous Vehicles)。**土木水利**，46(2), 66-72。本人為第一作者。

專書論文

1. S.K.Jason Chang Amanda Fernandes. Bike-sharing system: uncovering the “Success Factors”.. *International Encyclopedia of Transportation* (ISBN: 9780081026724). U.K.: Elsevier. May, 2021: 4, 355-362..
2. Amanda Fernandes-Ferreira, Aline Damaceno-Leite and S. K. Jason Chang. Accessible Tourism and the Role of Public Transport Provision: Comparing the Access to Attractions for Tourists with and without Disabilities in Bangkok. *Resilience and Sustainable Transportation Systems* (ISBN: 9780784482902). Washington, D.C., USA: American Society of Civil Engineers. Jun, 2020: 19-27.

研討會論文 (Conference Papers)

1. S.K. Jason Chang (2020, Sep). Trials and Deployments of Autonomous Bus System in Taiwan. Seminar on Asia Pacific ITS Development, Co-organized by ITS Korea and ITS Asia Pacific Forum., Seoul, Korea. 本人為第一作者、通訊作者.
2. S.K. Jason Chang (2020, Aug). Strategies of Autonomous Bus Development in Taiwan. International Symposium on Autonomous Bus Development, organized by KPMG and MOTC Taiwan, Taipei. 本人為第一作者、通訊作者. Invited Keynote .
3. S. K. Jason Chang, Ya-Wen Chen, Jacky Fu, Zhao-Neng Zhang, Hsi-Ping Shih (2018, Nov). Using Big Data to Analyze the Productivity of Accessible Transport Services. The 15th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED 2018), Taiwan. 本人為第一作者. Published by Transportation Research Board in 2019..

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Heavy Vehicle Size & Weight, Airport Engineering, Pavement Theory & Design

(A) 期刊論文 (Journal Papers)

1. **Chia-Pei Chou**; Yao-Xuan Lee; Ai-Chin Chen, "Applying Machine Vision Algorithm on Pavement Marking Retroreflectivity Measurement", Journal of Infrastructure System, August 2023 (SCI)
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(B) 研討會論文（Conference Papers）

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3. Chiapei Chou, Evaluation of Thermoplastic Road Markings with Dual Functional Performance,

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4. 周家蓓、曾翊瑄、董皓、林昆虎、劉家銘、李易、李佩耘，反光與抗滑雙效標線配比設計與施工法改良，第二十二屆中華民國鋪面工程學術研討會暨第五屆永續與創新基礎建設國際研討會，2023 年 10 月，臺東。

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(C) 技術報告(Technical reports)

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(D) 專利及標準申請(Patents)

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Railway Transportation System, Railway Operation and Management, Railway Signaling and Control, Railway Capacity Analysis and Planning, Railway Safety

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4. Hsueh, K.C., and Lai, Y.C., Safety and Reliability Assessment of Dual Train Detection Systems, Proceedings of the 9th International Symposium on Speed-up and Sustainable Technology for Railway and Maglev Systems (STECH 2021), Chiba, Japan, 2021

5. Huang, S.H., Jong, J.C., Hu, C.W., Lai, Y.C., Lin, C.M., Chang, S.Y., and Liou, J.R., Continuous Section Rail Capacity Analysis for Light Rail Transit, Proceedings of 2020 Conference and Annual Meeting of Chinese Institute of Transportation, Tainan, Taiwan, 2020.

6. Chen, Y.F., Hsueh, K.C., Lai, Y.C., Risk Analysis of High-Risk Driving Behavior and Section for Railway System, Proceedings of 2020 Conference and Annual Meeting of Chinese Institute of Transportation, Tainan, Taiwan, 2020.

7. Shih, H.C., and Lai, Y.C., Development of Multi-Period Rail Procurement Optimization Model, Proceedings of 2020 Conference and Annual Meeting of Chinese Institute of Transportation, Tainan, Taiwan, 2020.

8. Lin, Y.C., Yeh, C.H., and Lai, Y.C., Developing Rail Wear Model for Metro System Based on Multiple Regression and Neural Network Analysis, Proceedings of 2020 Conference and Annual Meeting of Chinese Institute of Transportation, Tainan, Taiwan, 2020.

9. Chien S.C., Lai, Y.C., Huang, K.L., and Tsui, K.L., Maintenance Task Generation and Assignment for Rail Infrastructure with Predictive Maintenance, Proceedings of the 24th International Conference of Hong Kong Society for Transportation Studies (HKSTS), Hong Kong, 2019.

10. Xu, Y., Chen, A., and Lai, Y.C., Measuring Network Capacity of Urban Rail Transit Network, Proceedings of the 24th International Conference of Hong Kong Society for Transportation Studies (HKSTS), Hong Kong, 2019.

11. Lin, T.Y., Lin, Y.C., and Lai, Y.C., Computing Base Train Equivalents for Delay-Based Capacity Analysis with Multiple Types of Trains, Proceedings of the 8th International Conference on Railway Operations Modelling and Analysis, Norrkoping, Sweden, 2019.

12. Wu, M.R., and Lai, Y.C., Train-set Assignment Optimization with Predictive Maintenance, Proceedings of the 8th International Conference on Railway Operations Modelling and Analysis, Norrkoping, Sweden, 2019.

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Traffic Engineering, Traffic Simulation & Control, Traffic Safety & Design

期刊論文 (Journal Papers)

A1. Hsu, TP (Hsu, Tien-Pen) [1] ; Wu, YW (Wu, Yuan-Wei) [1] ; Chen, AY (Chen, Albert Y.) [1], "Temporal stability of associations between crash characteristics: A multiple correspondence analysis" *Accident Analysis And Prevention*, 168 (106590), Apr. 2022 (SCI)

A2. Hsu, TP (Hsu, Tien-Pen) [1] ; Wen, KL (Wen, Ku-Lin) [1], "Using multinomial regression to explore the spatial factors affecting left-turn oncoming accidents involving motorcycles" *Traffic Injury Prevention*, 23, 10.1080/15389588.2021.2009115.

A3. Hsu, Tien-Pen; Ku-Lin Wen; "Effect of novel divergence markings on conflict prevention regarding motorcycle-involved right turn accidents of mixed traffic flow" *Journal of Safety Research*, vol. 69, pp. 167–176, Jun. 2019.(SCI)

研討會論文(Conference Papers)

B1. Hsu, Tien-Pen; Ming-Wei Chang, Ku-Lin Wen,(2019, Sep). Survival Analysis of Accident Occurrence After Traffic Violation. *Proceeding of Eastern Asia Society for Transportation Studie*s, Sri Lanka, Sept, 2019

B2. Hsu, Tien-Pen; Hsiu-Yuan Chen, Hsin-Hsuan Wu, Ku-Lin Wen, (2019, Sep). Using Survival Theory to Investigate the Characteristics of Violation and Accident Occurrence of Motorcyclist and Car Driver. Eastern Asia Society for Transportation Studies. *Proceeding of Eastern Asia Society for Transportation Studie*s, Sri Lanka, Sept, 2019

B3. Hsu, Tien-Pen; Liu, Chin-Hung, Hsiao, Wei-Lun; Liao, Yu-Ting; Wang, Muhan; Liu, Chien-Pang; Effect of V2X Motorcycle safety warning system on approaching speed at intersection, *Proceeding of ITS World Congress*, Singapore, Oct. 2019.

B4. Hsu, Tien-Pen; Zhang, Taiyi; Hsiao, Wei-Lun ; Prediction Model of the Trajectory of Motorcycle Movement for V2V Collison Avoidance System at Intersection, Proceeding of ITS world congress, Singapore, Oct. 2019

研討會論文(中文)

C1 許添本,溫谷琳,程楷祐,李炘哲, 非號誌化路口標誌標線設計與機動車輛減速效益分析。中華民國運輸學會 2019 年學術論文研討會，2019 年 12 月。

C2 許添本、黃郁倫，號誌時制設計適用之機車小客車當量值分析，中華民國運輸學會 2019 年學術論文研討會，2019 年 12 月。

C3 許添本、張洺瑋，以存活理論分析駕駛人交通違規舉發未來事故發生時間之影響，中華民國運輸學會 2019 年學術論文研討會，2019 年 12 月。

C4 許添本、蔡牧融、張開國、孔垂昌，非號誌化路口肇事特性與改善策略研擬，中華民國運輸學會 2019 年學術論文研討會，2019 年 12 月。

C5 許添本，溫谷琳，程楷祐，李炘哲，非號誌化路口標誌標線設計與機動車輛減速效益分析，中華民國運輸學會 2019 年學術論文研討會，2019 年 12 月。

C6 許添本、張太乙，基於車輛運動學之機車路段微觀車流模型，中華民國運輸學會 2019 年學術論文研討會，2019 年 12 月。

C7 許添本、陳怡婷，輕軌優先號誌時制補償方法之研究，中華民國運輸學會 2019 年學術論文研討會, 2019, 12 月

C8 許添本、許晟松，混合車流下圓環儀控方法研究，中華民國運輸學會 2019 年學術論文研討會, 2019, 12 月

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Public Transit Planning and Operation, Logistics Management, Modeling and Applications of Pedestrian Dynamics, Transportation Infrastructure Life-Cycle Management, Urban Transportation Planning

A. 期刊論文 (Journal Papers)

a. SCI/SSCI 期刊論文

1. **Chu, J. C.***, Lin, H.-C., Liao, F.-Y., and Yu, Y.-H., (2023) Dynamic repositioning problem of dockless electric scooter sharing systems, , Transportation Letters, 15(9), 1066–1082 (SCI). 本人為第一作者、通訊作者.
2. SUNG, Y.-W., **Chu, J. C.***, CHANG, Y.-J., YEH, J.-C., and CHOU, Y.-H. (2022), Optimizing Mix of Heterogeneous Buses and Chargers in Electric Bus Scheduling Problems, Simulation Modelling Practice and Theory, 119, 102584 (SCI). 本人為通訊作者.
3. **Chu, J. C.***, Chen, A. Y., and Shih, H.-H. (2022) Stochastic Programming Model for Integrating Bus Network Design and Dial-a-ride Scheduling, Transportation Letters, 14(3), 245-257 (SCI). 本人為第一作者、通訊作者.
4. Yan, S., **Chu, J. C.***, and Hung, W.-C. (2020) A customer selection and vehicle scheduling model for moving companies, Transportation Letters, 12(9), 613-622 (SCI). 本人為通訊作者.
5. **Chu, J. C.**, Korsesthakarn, K., Hsu, Y.-T.*, and Wu, H.-Y. (2019) Models and a solution algorithm for planning transfer synchronization of bus timetables, Transportation Research Part E, 131, 247-266 (SCI). 本人為第一作者.

b. TSSCI 期刊論文

1. 林幸加、**朱致遠***、李承威(2023)，臨時性公車路網調整之多目標最佳化模式，運輸計劃季刊，已接受。
2. 朱致遠、**宋奕緯***、施安隆(2021)、公車路網即時滯站與速度控制策略之最佳化與模擬研究，運輸學刊，第33卷第3期(TSSCI)。
3. 朱致遠、**黃耀國***、魏妤庭、施安隆(2021)、中觀行人模式於大規模疏散模擬之應用，運輸學刊，第33卷第1期，第353-378頁(TSSCI)。

4. 陳韻如、朱致遠*、Kanticha Korsesthakarn (2019). Discrete-event System Simulation of Battery Swapping Behaviors for Electric Scooter Drivers. 運輸計劃季刊, 48(1), 63-86. (TSSCI). 本人為通訊作者.

B. 研討會論文 (Conference Papers)

a.國外會議論文

1. Lan-Hsin Tseng, Yi-Chen Chou, and **James C. Chu**, Combining Fixed-Route Buses and Truck-Drone Delivery For Freight Logistics in Rural Areas, The 33rd KKHTCNN Symposium on Civil Engineering, Singapore, November 17-18 2022 (presentation only)
2. An-Ni Chang , Min-Xuan Huang, and **James C. Chu**, Optimization of Truck-Drone Delivery Considering En Route Operations, The 33rd KKHTCNN Symposium on Civil Engineering, Singapore, November 17-18 2022 (presentation only)
3. An-Long Shih, Chih-Yu Liu and **James C. Chu**, Optimization and simulation of real-time holding and speed control strategies in a bus network, The 33rd KKHTCNN Symposium on Civil Engineering, Singapore, November 17-18 2022 (presentation only)
4. **Chu, J. C.**, Location Optimization of Battery Swapping Stations for Electric Scooters, 3rd International Symposium on Infrastructure Asset Management (SIAM3), Abu Dhabi, United Arab Emirates, Mar. 31-Apr. 1, 2019
5. Yang, S.-K., **Chu, J. C.**, Chou, Y.-H., Wang, M.-H., Liu, C.-P. and Xiao, Y.-A., Comparison of solution methods of dial-a-ride problems for rural areas, The Thirty-Second KKHTCNN Symposium on Civil Engineering, Daejeon, Korea, Oct. 24-26, 2019.
6. Yeh, J.-C., **Chu, J. C.**, Chou, Y.-H., Huang, H.-P., and Chang, Y.-J., Scheduling and Charging Optimization of Electric Buses, The Thirty-Second KKHTCNN Symposium on Civil Engineering, Daejeon, Korea, Oct. 24-26, 2019.
7. Wei, Y.-T., **Chu, J. C.**, and Shih, A.-L., A mesoscopic model for large-scale pedestrian simulation, The Thirty-Second KKHTCNN Symposium on Civil Engineering, Daejeon, Korea, Oct. 24-26, 2019.
8. Liao, F.-Y., **Chu, J. C.**, and Yu, Y.-H., Optimization of Deployment and Repositioning in Dock-less Electric Scooter Sharing Systems, The Thirty-Second KKHTCNN Symposium on Civil Engineering, Daejeon, Korea, Oct. 24-26, 2019.

b.國內會議論文

1. Li, C.-W., Chu, J. C., and Lin, H.-C., Optimization of Temporary Bus Network Adjustment, 2022 International Conference and Annual Meeting of Chinese Institute of Transportation, Keelung City, Taiwan, Dec. 1-3, 2022 (in Chinese).
2. Tsai, C.-S., Sung, Y.-W., and **Chu, J. C.**, Vehicle Routing Problem Considering Failed Deliveries and Collection-and-Delivery Points, 2021 International Conference and Annual Meeting of Chinese Institute of Transportation, Taipei City, Taiwan, Dec. 2-3, 2021.
3. Shih, A.-L., Sung, Y.-W., and **Chu, J. C.**, Optimization and simulation of real-time holding and speed control strategies in a bus network, 2020 International Conference and Annual Meeting of Chinese Institute of Transportation, Tainan City, Taiwan, Dec. 3-4, 2020 (in Chinese).
4. Yang, S.-K., **Chu, J. C.**, Chou, Y.-H., Wang, M.-H., Liu, C.-P. and Xiao, Y.-A., Comparison and improvement of solution methods of dial-a-ride problems for rural areas, 2019 International Conference and Annual Meeting of Chinese Institute of Transportation, Hsinchu City, Taiwan, Dec. 5-6, 2019 (in Chinese).
5. Yeh, J.-C., **Chu, J. C.**, Chou, Y.-H., Huang, H.-P., and Chang, Y.-J., Optimization of Scheduling and Charging of Electric Buses using Discrete-event Simulation, 2019 International Conference and Annual Meeting of Chinese Institute of Transportation, Hsinchu City, Taiwan, Dec. 5-6, 2019 (in Chinese).
6. Wei, Y.-T., **Chu, J. C.**, and Shih, A.-L., A mesoscopic pedestrian model for large-scale evacuation simulation, 2019 International Conference and Annual Meeting of Chinese Institute of Transportation, Hsinchu City, Taiwan, Dec. 5-6, 2019 (in Chinese).

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Disaster and Emergency Transportation Planning, Image Sensing in Traffic Engineering Applications, Medical Response Operations

期刊論文(Journal Papers)

* denotes corresponding author, and # indicates student under my supervision.

1. Fei, Y.-H., Hsiao, T.-C. and Chen*, A. Y. (2023) Spatio-temporal Estimation of Traffic-Related Air Pollution (TRAP) with Low-Quality Dash Cameras: Can Transfer Learning with Public Annotated Datasets Assist? ASCE, Journal of Computing in Civil Engineering.
2. Chen*, A. Y., Wang, C. R., and Liao, S.-T. (2023) System-wide Planning with Branch-and-Price for Pavement Marking Assessment Data Collection via the Mobile Retroreflectivity Unit Routing Model, ASCE, Journal of Computing in Civil Engineering.
3. Wu, C.-A., Chen, Y.-T., Young, L.-H., Chang, P.-K., Chou, L.-T., Chen, A. Y., and Hsiao, T.-C. (2023) Ultrafine particles in urban settings: A combined study of volatility and effective density revealed by VT-DMA-APM, Atmospheric Environment.
4. Ho, Y.-H., Hsiao, T.-C., Chen*, A. Y. (2023) Emission Analysis of Electric Motorcycles and Assessment of Emission Reduction with Fleet Electrification, IEEE, Transactions on Intelligent Transportation Systems.
5. Chen, T.-L., Lai, C.-H., Chen, Y.-C., Ho, Y.-H., Chen, A. Y., Hsiao, T.-C. (2023) Source-oriented risk and lung-deposited surface area (LDSA) of ultrafine particles in a Southeast Asia urban area, Science of The Total Environment, 870, 161733.
6. Tseng, PY (Tseng, Po-Yen) [1] ; Lin, JJ (Lin, Jacob J.) [1] ; Chan, YC (Chan, Ying-Chieh) [1] ; Chen, AY (Chen, Albert Y.) [1] (2022) “Real-time indoor localization with visual SLAM for in-building emergency response” Automation In Contruction, 140 (104319).
7. Chou, CC (Chou, Chang-Chi) [1] , [4] ; Chiang, WC (Chiang, Wen-Chu) [2] , [3] , [5] , [6] ; Chen, AY (Chen, Albert Y.) [1] , [7] (2022) “Emergency medical response in mass casualty incidents considering the traffic congestions in proximity on-site and hospital delays” Transportation Research E-Logistic And Transportation Review, 158 (102591).
8. Lee, YC(Lee, Yu-Ching)[1];Chen, YS(Chen, Yu-Shih)[2];Chen, AY(Chen, Albert Y.)[2] (2022) “Lagrangian dual decomposition for the ambulance relocation and routing considering stochastic demand with the truncated Poisson” Transportation Reseaarch Part B-Methodological, 157, 10.1016/j.trb.2021.12.016.
9. Hsieh, CM(Hsieh, Ching-Mei)[1];Chen, S(Chen, Sheryl)[2];Peng, TT(Peng, Tsu-Te)[3];Chen, PH(Chen, Po-Han)[3];Chen, A(Chen, Albert)[4];Chen, CJ(Chen, Chieh-Jan)[5],[6] (2022) “Relationships among burnout, job dissatisfaction, psychosocial work conditions and minor

mental disorders of precarious employment in Taiwan" Journal Of Mens Health, 18 (7), 10.31083/j.jomh1807146.

10. Lee, Y.-C., Chen[#], Y.-S., and Chen[*], A. Y. (2021) "Lagrangian Dual Decomposition for the Ambulance Relocation and Routing Considering Stochastic Demand with the Truncated Poisson." Transportation Research Part B: Methodological, Accepted. [SCI]
11. Chou[#], C.-C., Chiang, W.-C., and Chen[*], A. Y. (2021) "Emergency Medical Response in Mass Casualty Incidents Considering the Traffic Congestions in Proximity On-Site and Hospital Delays." Transportation Research Part E: Logistics and Transportation Review, Accepted. [SCI]
12. Hsiao[*], T.-C., Chou, L.-T., Chi, K.-H., Young, L.-H., Pan, S.-Y., and Chen, A. Y. (2021) "Chemically and Temporally Resolved Oxidative Potential of Urban Fine Particulate Matter." Environmental Pollution, Accepted. [SCI]
13. Chin, K.-C., Hsieh[#], T.-C., Chiang, W.-C., Chien, Y.-C. Sun, J-.T., Lin, H.-Y., Hsieh, M.-J., Yang, C.-W., Chen[*], A. Y., Ma[*], M. H.-M. (2021) "Early Recognition of a Caller's Emotion to Potentially Accelerate the Dispatcher-assisted Cardiopulmonary Resuscitation Protocol: An Artificial Intelligence Approach." Resuscitation, Accepted. [SCI]
14. Qiu[#], W.-X., Han, J.-Y. and Chen[*], A. Y. (2021) "Measuring In-building Spatial-temporal Human Distribution through Monocular Image Data Considering Deep Learning Based Image Depth Estimation." ASCE, Journal of Computing in Civil Engineering, Accepted. [SCI]
15. Lin[#], T.-H., Chen[*], A. Y. and S.-H. Hsieh (2020) "Temporal Image Analytics for Abnormal Construction Activity Identification." Automation in Construction, Accepted (SCI).
16. Chen[#], C.-H., Lee, Y.-C., and Chen[*], A. Y. (2020) "A Building Information Model Enabled Multiple Traveling Salesman Problem for Building Interior Patrols." Advanced Engineering Informatics, Accepted (SCI).
17. Hsiao, C.-C., Sun, M.-C., Chen, A. Y., and Hsu[*], Y.-T. (2020) "Location Problems for Shelter-in-place Deployment: a Case Study of Vertical Evacuation upon Dam-break Floods." International Journal of Disaster Risk Reduction, Accepted. (SCI)
18. Chu[*], J. C., Chen, A. Y., and Shih, H.-H. (2020) "Stochastic Programming Model for Integrating Bus Network Design and Dial-a-ride Scheduling." Transportation Letters, Accepted (SCI/SSCI).
19. Chen[*], A. Y., Chiu[#], Y.-L., Hsieh[#], M.-H., Lin[#], P.-W., and Angah[#], O. (2020) "Conflict Analytics through the Vehicle Safety Space in Mixed Traffic Flows using UAV Image Sequences." Transportation Research Part C: Emerging Technologies (Accepted) (SCI).
20. Angah[#], O., and Chen[*], A. Y. (2020) "Removal of Occluding Construction Workers in Job Site Image Data using U-Net Based Context Encoders." Automation in Construction, 119, 103332 (SCI).
21. Angah[#], O., and Chen[*], A. Y. (2020) "Tracking Multiple Construction Workers through Deep Learning and Gradient Based Methods with Re-matching Based on Multi-Object Tracking Accuracy." Automation in Construction, 119, 103308 (SCI).
22. Lee[#], C.-D., Lee, Y.-C., and Chen[*], A. Y. (2019) "In-Building Automated External Defibrillator Location Planning and Assessment through Building Information Models," *Automation in Construction*, 106, 102883 (SCI).

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1. Qiu, W.-X. and Chen, A. Y. (2020) “Image Sensing-based Occupancy Estimation for Demand of Installation of Automated External Defibrillators,” The 24th Symposium on Construction Engineering and Management, Taipei, Taiwan August 5. (**Best Paper Award**.)
2. Qiu, W.-X., Chen, A. Y., and Hsieh, T.-Y. (2020) “Image Sensing-Based In-Building Human Demand Estimation for Installation of Automated External Defibrillators,” International Conference on Civil and Building Engineering Informatics (ICCBEI), Brazil, 2020.
3. Lin, Y.C., Wang, C.R., and Chen A.Y. (2020) “Optimizing Routing of Mobile Retroreflectivity Units for Pavement Marking Performance Assessment,” Proceedings of 99th Transportation Research Board, Washington, DC.
4. Lin, Y.C., Liao, S.T., Wang, C.R., and Chen A.Y. (2019) “VRP-based Model for Lane Marking Assessment with MRU Vehicle,” The Thirty-Second KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, KAIST Mun-Ji Campus, Daejeon, Korea
5. Qiu W.-X., and Chen A.Y. (2019) “Computer Vision-based In-building Human Demand Estimation for Installation of Automated External Defibrillators,” International Conference on Civil and Building Engineering Informatics (ICCBEI), nd Building Engineering Informatics November 7-8, 2019, Sendai, Japan.
6. Lin, Y.C., Liao, S.T., Wang, C.R., and Chen A.Y. (2019) “TSP-based Model for Lane Marking Assessment with MRU Vehicle,” International Conference on Civil and Building Engineering Informatics (ICCBEI), nd Building Engineering Informatics November 7-8, 2019, Sendai, Japan.

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(A) 期刊論文(Journal Papers) (*: 通訊作者)

a. SCI/SSCI 期刊論文

1. Hsin-Cheng Shih, Yu-Ting Hsu, Yung-Cheng (Rex) Lai (2023) "Modeling non-compensatory strategies on path choices in a complex urban rail transit network considering characteristics of transfer passengers and trips", Travel Behaviour and Society, 35, 100733.
2. 樓軒宇、許文瑜、許聿廷，應用深度學習自編碼於高速公路國定假期之旅次分析，中國土木水利工程學刊，2023 年 9 月。
3. Sun, MC (Sun, Min-Ci) [1] ; Sakai, K (Sakai, Katsuya) [1] ; Chen, AY (Chen, Albert Y.) [1] ; Hsu, YT (Hsu, Yu-Ting) [1] (2022) "Location problems of vertical evacuation structures for dam-failure floods: Considering shelter-in-place and horizontal evacuation" *International Multidisciplinary*, 77, 103044.
4. Shen, CW(Shen, Chung-Wei)[1];Mao, MN(Mao, Mei-Neng)[2];Hsu, YT(Hsu, Yu-Ting)[2];Miralinaghi, M(Miralinaghi, Mohammad)[3] (2022) "Research on Features of Pedestrians Using Smartphones at Transit Stations Based on Social Force Model" *Transportation Research Record*, 2676 (10), 10.1177/03611981221090939.
5. Chou, CY(Chou, Chi-Ya)[1];Lin, SY(Lin, Szu-Yun)[1];Yang, CT(Yang, Cheng-Tao)[2];Hsu, YT(Hsu, Yu-Ting)[1] (2022) "Risk perception of earthquakes: Modeling conception of willingness to pay and prospect theory" *International Journal Of Disaster Risk Reduction*, 77, 103058.
6. Su, Y.M., Chen, J.H.*, Cheng, J.Y., **Hsu Y.T.**, Huang, M.C. (2021) "Rough-set based association rules toward performance of high friction road markings." *Journal of Transportation Engineering: Part B, Pavements* (accepted).
7. **Hsu, Y.T.**, Yan, S.*, Huang, P. (2021) "The depot and charging facility location problem for electrifying urban bus services." *Transportation Research Part D: Transport and Environment*, 100, 103053.
8. Hsiao, C.C., Sun, M.C., Chen, A.Y., **Hsu, Y.T.*** (2021) "Location problems for shelter-in-place deployment: A case study of vertical evacuation upon dam-break floods." *International Journal of Disaster Risk Reduction*, 57, 102048.
9. Wang, P.C., **Hsu, Y.T.***, Hsu, C.W. (2021) "Analysis of waiting time perception of bus passengers provided with mobile service." *Transportation Research Part A: Policy and Practice*, 145, 319–336.

10. Ni, Y.C., Lo, H.H., **Hsu, Y.T.***, Huang, H.J. (2020) “Exploring the effects of passive transit signal priority design on bus rapid transit operation: a microsimulation-based optimization approach.” *Transportation Letters*, pp. 1–14.
11. Miralinaghi, M., Seilabi, S.E., Chen, S., **Hsu, Y.T.**, Labi, S. (2020). “Optimizing the selection and scheduling of multi-class projects using a Stackelberg framework.” *European Journal of Operational Research*, 286(2), pp. 508–522.
12. Lee, W.Y., **Hsu, Y.T.***, Suen, C.S., Wu, M.H., Ni, Y.C. (2020). “Exploring intercity trip patterns of railway systems on national holidays using deep auto-encoder.” *Transportation Research Record*.https://doi.org/10.1177/0361198120917385
13. Chu, J.C., Korsesthakarn, K., **Hsu, Y.T.***, Wu, H.Y. (2019). “Models and a solution algorithm for planning transfer synchronization of bus timetables.” *Transportation Research Part E: Logistics and Transportation Review*, 131, pp.247–266.

b. 非屬 SCI/SSCI 之 EI 或 TSSCI 期刊論文

1. 李弘亦、許聿廷 (2021) 基於事件隨機性考量之國道緊急應變派遣模式。運輸計劃季刊(已接受)。

c. 其他期刊論文

1. Wu, Y.H., Kang, L., **Hsu, Y.T.***, Wang, P.C. (2019) “Exploring trip characteristics of bike-sharing system uses: effects of land-use patterns and pricing scheme change.” *International Journal of Transportation Science and Technology*, 8(3), pp. 318–331.

(B) 研討會論文(Conference Papers) (*: 通訊作者)

a. 國外會議論文

1. Chou, Y.H., Hsu, Y.T. “A freeway dispatch model by considering redeployment of response teams over temporary sites”, 15th International Conference of The Eastern Asia Society for Transportation Studies (@Shah Alam, Malaysia, Sep. 2023)
2. Huang, H.K., Hsu, Y.T. “A real-time coordinated transit signal priority control based on queue length prediction in a V2X environment”, 15th International Conference of The Eastern Asia Society for Transportation Studies (@Shah Alam, Malaysia, Sep. 2023)
3. Chen, W.H., Hsu, Y.T. “Exploring cyclists’ perception of cycling environments: how about building cyclist-friendly shared space over narrow streets” 15th International Conference of The Eastern Asia Society for Transportation Studies (@Shah Alam, Malaysia, Sep. 2023)
4. Hsiao, C.K., Hsu, Y.T. “Exploring impact patterns of freeway incidents: estimation time delay using Tobit model, machine learning, and deep learning framework” 15th International Conference of The Eastern Asia Society for Transportation Studies (@Shah Alam, Malaysia, Sep. 2023)
5. Huang, H.K., Hsu, Y.T. “A real-time transit signal priority control based on queue estimation in a V2X environment” 16th World Congress on Transport Research (@Montreal, Canada, Jul 2023)

6. Yu, K.J., Chu, H.J., Yu, P.Y., Shih, H.C., Hsu, Y.T. “Research on interactions between transportation and region development- a case study of Taoyuan Region, Taiwan” 16th World Congress on Transport Research, Montreal (@Montreal, Canada, Jul 2023)
7. Shih, H.C., Hsu, Y.T., Lai, Y.C. “Study of passengers’ non-compensatory path choice behavior considering characteristics of transfer trips in a complex metro network” 102th Transportation Research Board (@Washington D.C., U.S.A., Jan 2023)
8. Huang, Y.W., Wu, W.Y., Dai, P.C., Yang, C.T., Chen, P.A., Hsu, Y.T., Shih, H.C. “Urban fire response enhancement: from the perspective of network modeling and infrastructure optimization” 102th Transportation Research Board (@Washington D.C., U.S.A., Jan 2023)
9. 翁瑎錵、鄒昀瑾、許聿廷「大眾運輸導向型發展下之轉乘行為研究」第 29 屆海協兩岸都市交通學術研討會 (南京，中國大陸，2021 年 10 月)。
10. Chang, R.Y., Sakai, K., **Hsu Y.T.*** “Optimization of dock distribution in a bike-sharing system considering travelers’ multi-station choices.” 14th International Conference of the Eastern Asia Society for Transportation Studies (online @Hiroshima, Japan, Sep. 2021).
11. Su, Y.C., **Hsu Y.T.*** “Signal offset design based on upstream vehicle speeds: considering vehicle behavior in dilemma zones.” 14th International Conference of the Eastern Asia Society for Transportation Studies (online @Hiroshima, Japan, Sep. 2021).
12. Mao, M.N., Ni, Y.C., **Hsu, Y.T.***, Wang, S.H., Hong, C.W, Lai, C.M. “Investigating passengers’ perspectives on transfer station design of urban railway systems: a case study in Taipei Metro.” 100th Transportation Research Board (online @Washington, DC, Jan. 2021).
13. Chou, C.Y., **Hsu, Y.T.*** “Study of societal resilience against natural disasters: perspectives of risk perception and prospect theory.” 26th International Sustainable Development Research Society Conference (online @Budapest, Hungary, Jul. 2020).
14. Lee, W.Y., **Hsu, Y.T.***, Suen, C.S., Wu, M.H., Ni, Y.C. “Exploring intercity trip patterns of railway systems on national holidays using deep auto-encoder.” 99th Transportation Research Board (Washington, DC, Jan. 2020).
15. Miralinaghi, M.*, Tabesh, M.T., Seilabi, S.E., **Hsu, Y.T.**, Labi, S., Fricker, J.D. “Bi-Level Multi-Objective Optimization of Urban Road Project Scheduling Considering Contract Bundling.” 98th Transportation Research Board (Washington, DC, Jan. 2020).
16. Lee, K.C., **Hsu, Y.T.***, Yeh, N.T. “Exploring smart card data of an urban railway system: investigation of spatiotemporal patterns of trip distribution and demand-side characteristics.” 12th World Congress on Railway Research (Tokyo, Japan, Oct. 2019).
17. Lee, K.C., **Hsu, Y.T.*** “Exploring urban trip-activity patterns based on smart card data and land-use characterization.” 32nd KKHTCNN Symposium on Civil Engineering (Daejeon, Korea, Oct. 2019).
18. Chang, C., **Hsu, Y.T.***, Lai, J.S., Ke, K.Y. “Dynamic traffic assignment upon short-duration intense rainfall events.” 32nd KKHTCNN Symposium on Civil Engineering (Daejeon, Korea, Oct. 2019).
19. Li, H.Y., **Hsu, Y.T.*** “Stochastic dynamic dispatch model for freeway incident response.” 32nd KKHTCNN Symposium on Civil Engineering (Daejeon, Korea, Oct. 2019).
20. Cheng, S.H.*, Wang, J.Y., **Hsu, Y.T.**, Chen, C.H., Chen, C.Y. “Development of a vehicle monitoring system for low emission zone application based on OBD technology.” 3rd

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24. Patel, H., **Hsu, Y.T.***, Chang, S.K. "Analysis of the demand-side characteristics of Mumbai Dabbawala service." 13th International Conference of the Eastern Asia Society for Transportation Studies (Colombo, Sri Lanka, Sep. 2019).
25. Hsu, C.W., **Hsu, Y.T.*** "Exploring the propagation pattern of traffic congestion through analyzing and visualizing vehicle detector data." 15th World Conference on Transport Research (Mumbai, India, May 2019).
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28. Tai, C.Y., Chen, W.H., **Hsu, Y.T.*** "Using dynamic vehicle routing model to dispatch emergency response teams for freeway incidents." 98th Transportation Research Board (Washington, DC, Jan. 2019).
29. Miralinaghi, M.*, Seilabi, S.E., Chen, S., **Hsu, Y.T.**, Labi, S. "Optimizing the selection and scheduling of multi-class projects." 98th Transportation Research Board (Washington, DC, Jan. 2019).

b.國內會議論文

1. 王思涵*、洪晨瑋、賴建名、毛美能、**許聿廷**「以旅客為導向之捷運轉乘舒適空間資訊技術建立與人流分析」第 26 屆電子計算機於土木水利工程應用研討會 (桃園，臺灣，2021 年 9 月)。
2. 陳璽煌*、洪詮盛、王晉元、**許聿廷**、陳其華、陳志岳「運用 OBD-II 實作車輛駕駛工作時間和出勤紀錄系統之研究」第 25 屆臺灣網際網路研討會 (高雄，臺灣，2019 年 9 月)。
3. 陳璽煌*、洪詮盛、王晉元、**許聿廷**、陳其華、陳志岳「使用 OBD 車上診斷系統與 TensorFlow DNN 分類器於油電混合車之動力電池故障預警系統實作」第 9 屆網路智能與應用研討會 (雲林，臺灣，2019 年 10 月)。[大會佳作論文獎]

(C) 技術報告

1. 許聿廷、薛宏毅、劉瑾易 (2021) 智慧型城市規劃模擬平台之設計與應用－基於多主體模擬平台預測社經變化與技術創新趨勢下之都市運輸系統發展，科技部/109-2621-M-002-014-。
2. 許聿廷、蕭鈞謙 (2020) 興建學生宿舍交通衝擊評估計畫，臺灣大學總務處。
3. 蘇育民、陳介豪、許聿廷、鄭鈞耀、周琪雅 (2020) 探討道路交通標線之防滑特性，交通部運輸研究所/MOTC-IOT-109-SDB010。
4. 水敬心、許聿廷、張瑞巖 (2020) YouBike 2.0 於臺灣大學校總區試辦期間營運績效 評估與需求分析，臺灣大學總務處。
5. 許聿廷、毛美能、倪英璨 (2020) 臺北都會區大眾捷運系統萬大－中和－樹林線 (第二期) 委託技術服務DQ125設計標:車站人流分析工作,中興工程顧問公司/0080B-06/108-S-A71。
6. 廖俊雄、沈宗緯、許聿廷、謝宛彧、周琪雅 (2019) 中華郵政物流園區車流分析與動線規劃案，中華郵政。
7. 許聿廷、李文宇 (2019) 軌道運輸系統運量預測方法：考量運輸系統與土地利用狀態之互動關係，科技部/107-2119-M-002-044-。
8. 許聿廷、陳薇亘、楊璨凱、李弘亦 (2019) 107-108 年精進國道事件處理效率委外研究，國道高速公路局北區養護分局/107B04P006。

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Construction Automation & Robotics, Construction Financial Management

Construction Estimating & Scheduling, Project Performance Evaluation

期刊論文(Refereed Papers)

A. SCI 之期刊論文

1. Ho, SP (Ho, S. Ping) [1] ; Dahal, R (Dahal, Rameshwar) [1] ; Tserng, HP (Tserng, Hui-Ping) [1] (2023), “A Contingency Model of Strategic Responses to the Institutional Challenges in Emerging Countries: Evidence and Findings from Least Developed Countries”, JOURNAL OF MANAGEMENT IN ENGINEERING.
2. Chen, WC (Chen, Wei-Cheng) [1] ; Tserng, HP (Tserng, H. Ping) [2] (2022), “Real-time individual workload management at tunnel worksite using wearable heart rate measurement devices” AUTOMATION IN CONSTRUCTION, Vol. 134, 104051.
3. Liu, TY (Liu, Tai-Yi) [1] ; Ho, SJ (Ho, Shiau-Jing) [2] ; Tserng, HP (Tserng, Hui-Ping) [2] ; Tzou, HK (Tzou, Hong-Kee) [1] (2022), “Using a Unique Retaining Method for Building Foundation Excavation: A Case Study on Sustainable Construction Methods and Circular Economy” BUILDINGS, Vol. 123,298.
4. Han-Tang Huang, H. Ping Tserng, Ruei-Yu Hou, Mirosław Skibniewski (2021), ” Wireless Sensor Network-Based Monitoring of Bridge Pile Foundations for Detecting Scouring Depth,” Journal of Marine Science and Technology, Vol. 29(1), pp.73-88. (SCI)
5. Tserng, Hui-Ping, Cho, I-Cheng, Chen, Chun-Hung, Liu, Yu-Fan, (2021), “Developing a Risk Management Process for Infrastructure Projects Using IDEF0,” SUSTAINABILITY, Vol. 13(12). (SCI)
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B. 其他期刊論文

1. 周瑞生、歐昱辰、曾惠斌、陳瑞鈴、蔡綽芳、張人傑 (2019)，「臺灣私有建築物耐震評估補強經費之財務供需規劃暨其配套措施研議」，營建管理季刊。一百零八年，第 111 期，頁 16-38。
2. 周瑞生、歐昱辰、曾惠斌、陳瑞鈴、蔡綽芳、吳昀臻、陳育銘 (2019.06)，都會區私有建築物震損評估與耐震補強成本效益分析-以臺南市幸福及維冠金龍大樓為例，中國土木水利工程學刊，第 OOO 卷，第 O 期，OOO-OOO。(接受刊登)

研討會論文(Conference Papers)

1. 萬有為、曾惠斌(2021)，”模矩式設計與營建工程之研究探討 -以偏遠外離島工程為例”，第 25 屆營建工程與管理學術研討會，2021 年 7 月 16 日.(獲最佳論文獎)
2. 曾惠斌、林東儒(2021)，”無線監測橋梁掏刷系統之量測流程及數據分析初步研究”，第 25 屆營建工程與管理學術研討會，2021 年 7 月 16 日.(獲優等論文獎)
3. 賈啟敏、曾惠斌(2021)，”論工程技術服務契約之定性及時效- 以規劃設計監造契約為對象”，第 25 屆營建工程與管理學術研討會，2021 年 7 月 16 日.(獲優等論文獎)
4. Bitokov Timur, Ching-Wei Chen, Hui-Ping Tserng, Xiu-Zhen Huang, (2021), “Critical Success Factors in International Project Finance Transactions,” The 25th Symposium on Construction Engineering and Management / International Conference, July 16, 2021, Taipei, Taiwan. (Outstanding Paper Award)
5. Chia-Ming Liu, Jyun-Ping Jhan, Hui-Ping Tserng, (2021), “Applying Mobile Mapping System for Bridge Deck 3D Reconstruction and Deformation Measurement,” The 25th Symposium on Construction Engineering and Management / International Conference, July 16, 2021, Taipei, Taiwan. (Outstanding Paper Award)
6. 黃進平、曾惠斌 (2021)，”以賽局理論為決策基礎導入營建工程用地侵界風險管理之研究-以統包工程捷運連通道為例”，第 25 屆營建工程與管理學術研討會，2021 年 7 月 16 日.
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9. 呂震業、曾惠斌(2021)，”工程顧問公司導入實獲值管理之研究-以執行專案管理(PCM)服務為例”，第 25 屆營建工程與管理學術研討會，2021 年 7 月 16 日.
10. Chuang, Kun-Yen, Hui-Ping Tserng, (2021), “Study on the Weather Impact of Construction Schedule of Taiwan Offshore Wind Farm Foundations,” The 25th Symposium on Construction Engineering and Management / International Conference, July 16, 2021, Taipei, Taiwan.
11. 林聰能，曾惠斌(2020)，資訊科技於橋梁工程施工之應用-以三鶯大橋第一期工程為例，第 24 屆營建工程與管理學術研討會，2020 年 8 月 5 日.(獲最佳論文獎)
12. Hung-Yi Chen*, Sy-Jye Guo, Jen-Hao Liu, Hui-Ping Tserng (2020), “Impact of Weather on the schedule of Offshore Wind Farm Turbines Installation in the Taiwan Strait, “2020 International Conference on Innovative Computing and Management Science, July 29-31, 2020, Yilan Taiwan
13. Chi Ming ChiaChyi Herng Teh Wei-Cheng Chen Hui-Ping Tserng (2020), “Workload Evaluation of Elevated Operation in Construction Worksite Using Continuous Heart Rate Monitoring”, 2020 International Conference on Innovative Computing and Management Science, July 29-31, 2020, Yilan Taiwan
14. Cheng-Mo Chou and Hui-Ping Tserng(2020). “The Core Competence of the Project Manager in a Consultant Company via the Transaction Cost Perspective and its Better Learning Path.”, The 24th Symposium on Construction Engineering and Management (SCEM 2020), August 5, 2020, Taipei, Taiwan

15. Cheng-Mo Chou and Hui-Ping Tserng(2020). “Comprehensive Evaluation of Circular Economy in the Implementation of Taiwan's Public Building Construction Engineering.”, The 24th Symposium on Construction Engineering and Management (SCEM 2020), August 5, 2020, Taipei, Taiwan.
16. 鄭其恒，陳維政，曾惠斌, (2019), 以現場連續心率監測評估高架作業環境工作負荷, 第23屆營建工程與管理學術研討會(SCEM2019), 台中.
17. LIN C.N.，CHEN W.T.，CHEN S.H.，TSERNG H.P(2019).「 Construction risk management of shield disassembly in Taiwan metropolitan area- study on the Taiwan Power Company "Daan 345kV bulk power transmission cable lines project "」 ，The 18th Symposium On tunnel and Underground Engineering Academic and Technical， Nov 2 ~3 2019，China，Chongqing.
18. Wei-Cheng Chen, Yu-Chin Lin, and I-Chun Chen, “ Quality Control Factors of CIPP Construction Management for Water Main Rehabilitation”, International No-Dig 2019 37th International Conference and Exhibition, 30th Sep. – 2nd Oct. 2019, Florence, Italy.
19. Wei-Cheng Chen, Hui-Ping Tserng Ph.D. Josh Huang Ph.D.,” A Novel IoT System Application Development of Using Wearable PPG Heartrate Monitor Devices to Improve Safety Management for Shield Tunnel Construction Project”, International No-Dig 2019 37th International Conference and Exhibition, 30th Sep. – 2nd Oct. 2019, Florence, Italy.
20. Wei-Cheng Chen, Hui-Ping Tserng Ph.D., Josh Huang Ph.D, “A Novel Solution of Workload Management Based on Tunnel Worker’s Physical Status Using Wearable PPG Heart-Rate Detection Wristband and BLE IoT System”, 19th International Conference on Construction Applications of Virtual Reality, November13-15, 2019, Bangkok, Thailand.
21. Jing-Xian Lin, Guan-Ren Wang, and Hui-Ping Tserng, ”Development on Monitoring and Alarm System of Scaffold Collapse”, The 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
22. Tsai-Ning Yang, Wei-Cheng Chen and Hui-Ping Tserng, ” The Correlation between Job Stress and Heart Rate Variability of Engineers in Engineering Consultant Companies”, The 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
23. Kun.Yi.Chen, Wei.Cheng.Chen and Hui.Ping.Tserng, ” Application of PPG Wristband on Fatigue and Stress Evaluation of Tunnel Construction Using Heart Rate Variability”, The 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
24. Wei-Cheng Chen, Jia-Sheu Huang and Hui-Ping Tserng, “A Novel Solution of Continuous Monitoring Tunnel Worker’s Physical and Psychological Status Using Wearable PPG Heart-Rate Detection Wristband and BLE IoT System”, 9th International Conference on Construction Applications of Virtual Reality, 13-15 November 2019, Bangkok, Thailand

專利成果

類別	專利名稱	國別	專利號碼	發明人	專利權人	專利期間
B	結構物即時安全監測系統	台灣	M443724	韓仁毓、曾惠斌、林致廷	台灣大學	2012.12.21~2022.7.15
B	變位監測系統	台灣	M443725	林致廷、曾惠斌、韓仁毓	台灣大學	2012.12.21~2022.7.15

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法律經濟學

Game Theory Analysis in Engineering and Tendering, Strategic Management and Construction Internationalization, Financial Economics, Block-chain Modeling and Applications

期刊論文 (Journal Papers)

1. 游中揚、荷世平 (2023年)。國際性營建產業揭露永續報告之決定因素。中國土木水利工程學刊，35(3), 239-249。(EI)
2. 溫世家，山邊奈生，荷世平，徐瑋澤 (2023年)。綠建築消費者行為之模型與綠建築策略之意涵-基於對日本之實證研究。中國土木水利工程學刊，35(3), 309-318。(EI)
3. S. Ping Ho, Rameshwar Dahal, and Hui-Ping Tserng (2023). A Contingency Model of Strategic Responses to the Institutional Challenges in Emerging Countries: Evidence and Findings from Least Developed Countries, ASCE Journal of Management in Engineering, 39(4), 04023015.
4. Y.H. LIN, T. CHU, C.J. KIM, S.P. HO* (2021, Jul). How do Institutional Pressures Moderate the Impacts of Relational Governance on the Performance of International Projects? An Empirical Assessment (SSCI 5yr IF=9.222). *International Journal of Project Management*, 39(7), 726-737. (SSCI, 33/226, MANAGEMENT). MOST 109-2221-E-002-055. 本人為通訊作者.
5. Liu, T., Liu, G., Chen, P., Chou, N., Ho, S. (2021, Apr). Establishment of a Sustainability Assessment System for Bridges (SCI 5yr IF=3.473). *Sustainability*, 13, 4795. (SCI, 119/270).
6. Pei-Yan Lin, Aswin Lim, Shu-ken Ho, and S. Ping Ho (2018, Nov). Application of the Novel Composite Earth Retaining Structure Method to Urban Excavations: A Constructability Analysis (SCI). *Journal of the Chinese Institute of Engineers*, 41(7), 603-611. (SCI). MOST 103-2221-E-002-236-MY3.
7. Ho, S.P., Hsu, W., and Wang, H.（2021年）。應用區塊鏈技術於提升工程品質自主查驗-科技、優勢與可行性（EI Journal） 。中國土木水利工程學刊，33(7), 565-574。（EI）。本人為第一作者。
8. 荷世平，葉易（2021年）。營造業聯合承攬促進合作之賽局模型與策略設計（EI Journal）。中國土木水利工程學刊，33(7), 555-563。（EI）。本人為第一作者。

研討會論文(Conference Papers)

1. I. Bambo, S. Wen, W. Hsu, and S.P. Ho (2020, Jul). Study of the Promotion Strategies of the Green Buildings in Mozambique: The Consumer Behaviors and the Proposed Certification

System and Standards. 第24屆營建工程與管理學術研討會, 台灣. MOST 109-2221-E-002-055.

2. Ho, S. P., Nguyen, V. H., and Hsu, W. C. (2019, Aug). Consumer Behaviors in Certified Green Buildings -An Empirical Study. 2019 Clute International Academic Conferences New York, New York City, USA. MOST 106-2221-E-002-038-MY3. 本人為第一作者、通訊作者. Best Presentation Award.
3. Nguyen, V. H. and Ho, S. P. (2019, Jul). Consumer Behaviors on Certified Green Building-An Empirical Study of Vietnam.. The 23rd Symposium of Construction Engineering and Management, Taichun, Taiwan. MOST 106-2221-E-002-038-MY3. Outstanding Paper Award.
4. S. Ping Ho and Pei-Yan Lin (2018, Nov). Critical Success Factors of Value Engineering in Construction Industry: A Case Study of Japanese Company. The Thirty-First KKHTCNN Symposium on Civil Engineering, Kyoto, Japan. MOST 103-2221-E-002-236-MY3. 本人為第一作者、通訊作者.
5. S. Ping Ho*, Chungyang You, and Yaowen Hsu (2018, Apr). An Empirical Study of Sustainable Development and Disclosure in Construction Industry. EGU General Assembly 2018, Vienna, Austria. MOST 106-2221-E-002-038-MY3. 本人為第一作者、通訊作者.
6. 周琳芸、荷世平、徐瑋澤（2020年07月）。智慧建築之消費者行為分析之計量實證研究。第24屆營建工程與管理學術研討會，台灣。科技部：109-2221-E-002-055。
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Sustainable Building Design, Building Simulation and Energy Modeling, Building Envelopes and Commercial facades, Indoor Environmental Conditions

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2. Kuan-Chun Shih and Ying-Chieh Chan, “Development of personalized predicted mean vote based on a real-time clothing insulation recognition system”, CISBAT 2023, Lausanne, Switzerland.
3. Shou-Wang Chen, Chao-Yen Chang, Wan-Chen Lee, Ying-Chieh Chan, “The benefit of

kitchen exhaust fan uses after cooking - A CFD assessment", CISBAT 2023, Lausanne, Switzerland.

4. Lai, K.F., **Chan, Y. C.**, "Review of Construction Workspace Definition and Case Studies". The 37th International Symposium on Automation and Robotics in Construction (ISARC 2020 Online), Japan, October,2020
5. Chen, P. Y., and **Chan, Y. C.** "Developing the methodology to investigate the thermal comfort of hot-humid climate under different ventilation modes", CISBAT 2019, Lausanne, Switzerland, September 2019
6. Do, C. T., Shen, H., **Chan, Y. C.**, and Liu, X. "Model Evaluation and Development for Global and Diffuse Luminous Efficacy Models through On-Site Measurement and Optimization Techniques" 2019 Building Simulation, Rome, Italy, September 2019,
7. Huang, L.T., Chiu, Y. Y., and **Chan, Y.C.** "The Design of Building Management Platform Based On Cloud Computing and Low-Cost Devices", 36th International Symposium on Automation and Robotics in Construction, May 2019

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Project Controls, Computer Vision, BIM, Lean Construction

期刊論文 (Journal Papers)

Refereed Academic Journals Published and Under Review

1. Wang, TH (Wang, Tse Hsiang) [1] ; Pal, A (Pal, Aritra) [1] ; Lin, JJ (Lin, Jacob J.) [1] ; Hsieh, SH (Hsieh, Shang-Hsien) [1] (2023), Construction Photo Localization in 3D Reality Models for Vision-Based Automated Daily Project Monitoring, JOURNAL OF COMPUTING IN CIVIL ENGINEERING.
2. Wang, YY (Wang, Yanyu) [1] ; Tang, PB (Tang, Pingbo) [1] ; Liu, KJ (Liu, Kaijian) [2] ; Cai, JN (Cai, Jiannan) [3] ; Ren, R (Ren, Ran) [4] ; Lin, JJ (Lin, Jacob J.) [5] ; Cai, HB (Cai, Hubo) [6] ; Zhang, JS (Zhang, Jiansong) [4] ; El-Gohary, N (El-Gohary, Nora) [7] ; Berges, M (Berges, Mario) [8] ; Fard, MG (Fard, Mani Golparvar) [9] (2023), Characterizing Data Sharing in Civil Infrastructure Engineering: Current Practice, Future Vision, Barriers, and Promotion Strategies, JOURNAL OF COMPUTING IN CIVIL ENGINEERING.
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6. Tseng, P.Y., Chen A.Y., Lin, J.J. (under review). Real-Time Indoor Localization with Visual SLAM for Emergency Response. Automation in Construction.
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8. Lin, J.J., and Golparvar-Fard, M. (under review). Predictive Schedule Analytics for Proactive Construction Project Control, Journal of Computing in Civil Engineering. 本人為第一作者、通訊作者.
9. Duong, H. and Lin J.J. (2022) Reality Model-based Facility Management Framework for Existing Building. Front. Built Environ. 815672. doi: 10.3389/fbuil.2022.815672 本人為通訊作者.
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Hazard risk analysis, Community sustainability and resilience, Distributed simulation of community response to disasters, Agent-based modeling of human behavior in disasters

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1. Tsai, F.-J. and **Lin, S.-Y.*** (2023) A Class Distance Penalty Deep Learning Method for Post-disaster Building Damage Assessment. *KSCE Journal of Civil Engineering*. Accepted. (SCIE)
2. **Lin, S.-Y.*** and Wang, C.-H. (2023) Life cycle cost analysis of seismic retrofit policy at the city scale. *Journal of Building Engineering*, 80: 107917. https://doi.org/10.1016/j.jobe.2023.107917 (SCIE)
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1. Kulthanaphanich, Y. and **Lin, S.-Y.** (2023). BIM-based Carbon Emission Calculation Tool for Seismic Retrofitting Construction. *The 34th KKHTCNN Symposium on Civil Engineering, Pattaya, Thailand, November 23-25, 2023*.
2. Kuo, W.-N., Tsai, F.-J. and **Lin, S.-Y.** (2023) A Preliminary Study of Building Damage Prediction Using Machine Learning Models in Meinong and Hualien Earthquakes*. The 27th Symposium on Construction Engineering and Management/International Conference, SCEM2023, Hsinchu, Taiwan, July 13, 2023.*
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9. Nieh, C-.Y. and **Lin, S.-Y.*** (2022) Seismic Analysis of Natural Gas Network-Tainan Xinhua District*. The 26th Symposium on Construction Engineering and Management, SCEM2022, Taipei, Taiwan, July 22, 2022.*
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12. Chu, Y.C., **Lin, S.-Y.*** and Yang, C.T. (2022) Post-Earthquake Risk and Vulnerability Assessment of Rescue Roads. *The 12th National Conference on Earthquake Engineering, 12NCEE*, Salt Lake City, Utah, *United States, June 27 - July 1, 2022.*
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15. **Lin, S.-Y**.*, El-Tawil, S., and Aguirre, B.E. (2020). Effect of Benefit Fraud on Community Resilience in the Wake of Disaster. *Proceeding of the 17th World Conference on Earthquake Engineering*, *17WCEE*, *Sendai*, *Japan*, *September 13-18*, *2020.*
16. **Lin, S.-Y**.*, Hlynka, A.W., Xu, L., Lu, H., Sediek, O.A., El-Tawil, S., Kamat, V.R., Prakash A., Menassa, C.C., Spence, S. M. J., McCormick, J., and Aguirre, B. (2020). Simple

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17. **Lin, S.-Y***. and El-Tawil, S. (2019). Time-Dependent Computation of Multiscale Interdependencies between Lifeline Systems Subjected to Seismic Events. *International Conference in Commemoration of 20th Anniversary of the 1999 Chi-Chi Earthquake, Taipei, Taiwan, September 15-19, 2019.*
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A. 期刊論文 (Journal Papers)

經學術審查期刊論文

1. Pal, A., J. J. Lin, S. H. Hsieh, and M. Golparvar-Fard (2023). "Automated Vision-based Construction Progress Monitoring in Built Environment Through Digital Twin", *Developments in the Built Environment*, 16 (2023), 100247.

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7. 蕭中榮、謝尚賢* (2022)，"共構建築設計與避難指引之研究"，建築學報，第 121 期，1-20 頁。DOI: 10.53106/101632122022090121001 **[TSSCI]**
8. Lin, Z. H., A. Y. Chen* and S. H. Hsieh (2021). "Temporal Image Analytics for Abnormal Construction Activity Identification," *Automation in Construction*, Vol. 124 (https://doi.org/10.1016/j.autcon.2021.103572). **[SCI/EI]**
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11. 郭韋良、李秋明、張芸翠、紀乃文、黃伯凱、楊懿、謝尚賢* (2021)，"動態視覺化室內逃生輔助系統之設計與實作－運用建築資訊模型及物聯網資訊"，*中國土木水利工程學刊*，第 33 卷，第 7 期，第 575- 584 頁。**[EI]** [MOST 107-2221-E-002-058-MY2]
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56. Chi, N. W., Y. W. Chen, S. H. Hsieh, J. Y. Han, and L. M. Huang (2019). "A BIM-based AR Application for Construction Quality Inspection," *Proceeding of the 4th International Conference on Civil and Building Engineering Informatics*, November 7-8, 2019, Sendai, Japan, 191-196.

[受邀專題演講]

1. Pal, A., J. J. Lin, and S. H. Hsieh (2022). "Automated Construction Progress Monitoring of Partially Completed Building Elements Leveraging Geometry Modeling and Appearance Detection with Deep Learning," *Proceedings of ASCE Construction Research Congress 2022*, March 9-12, 2022, Arlington, Virginia, USA, 708-717. [MOST 109-2621-M-002-012 and MOST 109-2622-E-002-027]
2. Huang, L., S. H. Hsieh, Y. T. Chang, Y. P. Chu, and J. A. Chien (2022). "Teaching Smart City for Sustainable Guandu Plain in Taipei: A Reflection on Transdisciplinary Education," *Proceedings of the 28th International Sustainable Development Research Society Conference*, June 14-17, 2022, Stockholm and online, Sweden, 856-872.
3. Hsieh, S. H. (2022). "Multi-scale Digital Twin Driven Research Efforts Toward Resilient and Sustainable Smart Cities," The 17th East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-17), June 27-30, 2022, Singapore (Online). **[Keynote Lecture]**
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11. Hsu, W. Y., T. H. Wu, B. Setiawan, C. C. Tandri, S. H. Hsieh, and W. T. Chang (2022). "A BIM-Based Cost Estimation Approach for The Aluminum Formwork System," *Proceedings of the 22nd International Conference on Construction Applications of Virtual Reality*, November 16-18, 2022, Seoul, South Korea, 1288-1291.

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15. Hsu, S. H., W. Han, Y. T. Chang, Y .C. Chen, and S.H. Hsieh (2020). "A Framework for Utilization of Occupants' Trajectory Data to Enhance Building Management," *Proceedings of the 18th International Conference on Computing in Civil and Building Engineering & the 37th International CIB W78 Conference*, August, 18 - 20, 2020, São Paulo, SP, Brazil, 740-754. [Online]

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17. 謝尚賢（2020），"以設計思考培育跨領域服務創新人才"，第 10 屆服務科學論壇，2020 年 9 月 3 日，高雄市，臺灣。 **[大會專題演講]**

18. Pal, A., and S. H. Hsieh (2020). "Vision based Construction Site Monitoring: A Review from Construction Management Point of View," *Proceedings of the 20th International Conference on Construction Application of Virtual Reality*, September 30 - October 2, 2020, Teesside University, Middlesbrough, UK, 44-55. [Online]

19. Chien, W. T., and S. H. Hsieh (2020). "A Web-Based Approach to Dynamically Assessing Space Conflicts by Integrating BIM and Graph Database," *Proceedings of the 37th Symposium on Automation and Robotics in Construction*, October 27-28, 2020, Kitakyshu, Japan. [Online]

20. Hsieh, S. H. (2020). "Integrating BIM into Civil Engineering Education," *Proceedings of the International Conference on Construction Digitalisation for Sustainable Development (CDSD 2020)*, November 24-25, 2020, Hanoi, Vietnam. [Online] **[Keynote Lecture]**

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C. 專書及專書論文(Monographs and monograph papers)

1. Huang, L., S. H. Hsieh, Y. T. Chang, K. C. Chen, and Q. Dong (2023). Chapter 25: Implementing sustainability in Taipei with transdisciplinarity, *Handbook of Transdisciplinarity: Global Perspectives*, 436–454, *Edward Elgar Publishing*, ISBN: 9781802207828

2. Hsieh, S. H., and S. C. Kang (Guest editors) (2019). Special Issue of the 3rd International Conference on Civil and Building Engineering Informatics, *Advanced Engineering Informatics*, Vol. 40.

3. 柳儒錚、林祐正、謝佑明、謝尚賢、溫子馨、黃紋玉、陳柏肇（2019），*透過案例演練學習 BIM：Tekla 結構篇*，國立臺灣大學出版中心，ISBN: 978-986-350-371-2。

D. 專利(Patent)

專利種類：美國發明專利
證號：US 9,959,372 B2
名稱：Building Information Modeling Feedback System, Method, Computer Readable Medium
專利權人：National Taiwan University
發明人： Shang-Hsien Hsieh and Huan-Ting Chen
專利權期間：2018/05/01–2036/10/18

專利種類：中華民國新型專利
證號：M565860
名稱：智慧工地資訊系統
專利權人：國立臺灣大學
發明人： 謝尚賢、韓仁毓、陳以文、李雨澈、陳立笙、楊懿、魏嘉盈、張引玉、黃隆茂
專利權期間： 2018/8/21 - 2028/2/26

E. 技轉

名稱：3D 自動化設計(III)-SinoExcavation2 & SinoTunnel 2
被授權人：中興工程顧問股份有限公司
時間：2020

名稱：3D 自動畫設計(II)-潛盾隧道工程 SinoTunnel 之客製自動化設計界面
被授權人：中興工程顧問股份有限公司
時間：2019

名稱：地下車站結構 3D 設計自動化 SinoUnderstructure 之客製自動化設計界面
被授權人：中興工程顧問股份有限公司
時間：2019

名稱：BIM 施工品質-智慧工地即時查驗系統（第三期研究服務專案）
被授權人：瑞助營造股份有限公司
時間：2018

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Professor

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專長/ 多尺度模擬、計算力學、材料模擬、軟體設計與開發、人工智慧在工程的應用

Multiscale Modeling, Computational Mechanics, Materials Modeling, Software Design and Development, Artificial Intelligence for Engineering Application

期刊論文 (Journal Papers)

#corresponding author

1. Y-H Chiang, B-Y Tseng, J-P Wang, Y-W Chen, C-C Tung, C-H Yu#, P-Y Chen, C-S Chen# (2023), "Generating three-dimensional bioinspired microstructures using transformer-based generative adversarial network," *Journal of Materials Research and Technology* (accepted). [SCI]
2. A. Noorizadegan, D.L. Young#, C-S Chen# (2023), "Space-time method for analyzing transient heat conduction in functionally graded materials," *Numerical Heat Transfer, Part B: Fundamentals* (accepted). [SCI]
3. J-C Song, I-Y Hsieh#, C-S Chen# (2023), "Sparse trip demand prediction for shared e-scooter using spatio-temporal graph neural networks," *Transportation Research Part D*, **125**, 103962. [SCI]
4. T-H Su, JG Jean, C-S Chen# (2023), "Model-free data-driven identification algorithm enhanced by local manifold learning," *Computational Mechanics*, **71**, 637-655. [SCI].
5. C.S. Chen, A. Noorizadegan, D.L. Young#, C-S Chen# (2023), "On the determination of locating the source points of the MFS using effective condition number," *Journal of Computational and Applied Mathematics*, **423**, 114955. [SCI]
6. C-S Chen#, A. Noorizadegan, D.L. Young#, C-S Chen (2023), "On the selection of a better radial basis function and its shape parameter in interpolation problems," *Applied Mathematics and Computation*, **442**, 127713. [SCI]
7. T-H Su, S-J Huang, JG Jean, C-S Chen# (2022), "Multiscale computational solid mechanics: data and machine learning," *Journal of Mechanics*, **38**, 568-585. [SCI]. Invited Paper.
8. C-H Yu#, B-Y Tseng, Z Yang, C-C Tung, E Zhao, Z-F Ren, S-S Yu, P-Y Chen, C-S Chen, M J Buehler# (2022), "Hierarchical Multiresolution Design of Bioinspired Structural Composites Using Progressive Reinforcement Learning," *Advanced Theory and Simulations*, **5**(11), 2200459. [SCI]

9. C-H Yu[#], J-S Chen, Y-C Hsu, C-S Chen[#] (2022) "*De novo* multiscale method for nonequilibrium molecular dynamics," *Computational Materials Science*, **213**, 111636. [SCI]
10. L-H Kuo, J Uvah, C-S Chen[#] (2022) "Residual-Error Cross-Validation method for selecting a suitable shape parameter for RBF interpolation," *Engineering Analysis with Boundary Elements*, **143**, 331-339. [SCI]
11. C-S Chen, A. Naji, Y. Cao[#], C-S Chen (2022) "Space–time localized polynomial basis functions for solving parabolic and hyperbolic equations," *International Journal of Computer Mathematics*, **99**(9), 1770-1784. [SCI]
12. A. Noorizadegan, C-S Chen[#], D.L. Young[#], C-S Chen (2022) "Effective condition number on the selection of the shape parameter of RBFs with fictitious point method," *Applied Numerical Mathematics*, **178**, 280-295. [SCI]
13. A. Noorizadegan, D.L. Young[#], C-S Chen[#] (2022) "A novel local radial basis function collocation method for multi-dimensional piezoelectric problems," *Journal of Intelligent Material Systems and Structures*, **33**(12), 1574-1587. [SCI]
14. 紀乃文、莊仕杰、陳翊翔、陳鵬元、陳俊杉(2022) 應用影像語意分割技術於鋼筋間距查驗，土木水利，第49卷第1期，第27-31頁。
15. 陳翊翔、莊仕杰、張鈞程、羅昱恆、黃琮煒、邱永全、林冠成、黃志民、周頌安、陳俊杉(2021) 以深度學習與數位孿生打造工地鋼筋查驗新法，土木水利，第48卷第2期，第15-21頁。
16. A. Noorizadegan, D.L. Young[#], C-S Chen[#] (2021) "A novel local radial basis function collocation method for multi-dimensional piezoelectric problems," *Journal of Intelligent Material Systems and Structures*, accepted. [SCI]
17. C-S Chen, A. Naji, Y. Cao[#], C-S Chen (2021) "Space–time localized polynomial basis functions for solving parabolic and hyperbolic equations," *International Journal of Computer Mathematics*, accepted. [SCI]
18. K-T Chen, T-J Wei, G-C Li, M-Y Chen, Y-S Chen, S-W Chang, H-W Yen, C-S Chen[#] (2021) "Mechanical properties and deformation mechanisms in CoCrFeMnNi high entropy alloys: a molecular dynamics study," *Materials Chemistry and Physics*, **271**, 124912. [SCI]
19. S-R Lin, D.L. Young, C-S Chen[#] (2021) "Ghost-point based radial basis function collocation methods with variable shape parameters," *Engineering Analysis with Boundary Elements*, **130**, 40-48. [SCI]
20. T-H Su, N-H Lu, C-H Chen[#], C-S Chen[#] (2021) "On the decrease of transformation stress in a bicrystal Cu-Al-Mn shape-memory alloy during cyclic compressive deformation," *Materials*, **14**, 4439. [SCI]
21. Y-T Lin, Y-K Chen, K-H Yang, C-S Chen, J-Y Han[#] (2021) "Integrating InSAR observables and multiple geological factors for landslide susceptibility assessment," *Applied Sciences*, **11**, 7289. [SCI]
22. D.L. Young, S-R Lin, C-S Chen, C. S. Chen[#] (2021) "Two-step MPS-MFS ghost point method for solving partial differential equations," *Computers and Mathematics with Applications*, **94**, 38-46. [SCI]

23. Y Chiang, C-C Tung, X-D Lin, P-Y Chen, C-S Chen, S-W Chang[#] (2021) "Geometrically toughening mechanism of cellular composites inspired by Fibonacci lattice in Liquidambar formosana," *Composite Structures*, **262**, 113349. [SCI]
24. 林彥廷、顏筱穎、張乃軒、林宏明、韓仁毓、楊國鑫、陳俊杉、鄭宏逵、徐若堯 (2021)。結合時空因子與 InSAR 觀測資料之地表崩塌變位預測分析。中國土木水利工程學刊，第 33 卷第 2 期，95-106。
25. T. H. Su, N. H. Lu, C. H. Chen[#], C-S Chen[#] (2020), "Full-field Stress and Strain Measurements Revealing Energy Dissipation Characteristics in Martensitic Band of CuAlMn Shape Memory Alloy," *Materials Today Communications*, **24**, 101321. [SCI]
26. N-W Chi, J-P Wang, J-H Liao, W-C Cheng, C-S Chen[#] (2020), "Machine Learning Based Seismic Capability Evaluation for School Buildings," *Automation in Construction*, **118**, 103274. [SCI]
27. T-H Huang, T-H Huang, Y-S Lin, C-H Chang, S-W Chang, C-S Chen[#] (2019) "A Time Integration Method for Phase-Field Modeling," *Multiscale Science and Engineering*, **1**(1), 56-69.
28. C-S Chen (2019), "Working model of microstructural evolution by bio-inspired processing," *Landscape, NTU Research and Development*, **6**, 53.

研討會論文 (Conference Papers)

1. A. Noorizadegan, R. Schaback, C-S Chen (2023), Practical evaluation condition assessment for meshless kernel-based methods, *21st International Conference on Numerical Analysis and Applied Mathematics*, Crete, Greece, September 11-17.
2. A. Noorizadegan, C-S Chen, R. Cavoretto, A. De Rossi (2023), Boosting stability and performance in randomized SVD, *21st International Conference on Numerical Analysis and Applied Mathematics*, Crete, Greece, September 11-17.
3. C-S Chen (2022), Deep materials modeling and design, *World Congress on Computational Mechanics (WCCM-APCOM 2022)*, July 31-August 5, Yokohama, Japan (**Semi-plenary Talk**).
4. A. Noorizadegan, D.L. Young, and C-S Chen (2022), A local radial basis function collocation method with variable LOOCV for multi-dimensional piezoelectric problems. *Functional Analysis, Approximation Theory, and Numerical Analysis*, Matera, Italy, July 5-8.
5. 蘇東桓、陳俊杉 (2021), "以數據驅動無組成律模型的計算力學及其應用" 第45屆全國力學會議，台北、台灣。(6頁，**學生論文競賽第一名**)
6. C-J Lin, J-P Wang, C-H Yu, C-S Chen (2021), "Strength and Toughness Optimization of Nacre-inspired Design using Reinforcement Learning," 第45屆全國力學會議，台北、台灣。(virtual)
7. Y-H Chiang, J-P Wang, C-C Tung, C-H Huang, C-H Yu, P-Y Chen, C-S Chen (2021), "Generating Three-Dimensional Bioinspired Microstructures with Deep Neural Networks," 第45屆全國力學會議，台北、台灣。(virtual)
8. C-S Chiu, J-P Wang, C-C Tung, C-H Yu, C-S Chen (2021), "Synthesize Bio-inspired Microstructures with Deep Learning: AE-Style-GANs," 第45屆全國力學會議，台北、台灣。(virtual)

9. T-Y Chien, Y-L Cheng, H-W Yen, C-S Chen (2021), "Microstructure-based crystal plasticity study on precipitation hardening behavior of aluminum alloys," 第45屆全國力學會議，台北、台灣。(virtual)
10. Y-W Chen, C-H Yu, C-S Chen (2021), "仿生材料設計：應用微結構於耐衝擊產品" 第45屆全國力學會議，台北、台灣。(virtual)
11. T-Y Chien, Y-L Cheng, H-W Yen, C-S Chen (2021), "Microstructure-based crystal plasticity study on precipitation hardening behavior of aluminum alloys," *2021 MRS-T International Conference (2021 MRSTIC),* November 13-17, Taipei, Taiwan. (**invited talk**, virtual)
12. J-P Wang, C-C Tung, C-H Yu, P-Y Chen, C-S Chen (2021), "Machine learning for bioinspired structural materials," *2021 MRS-T International Conference (2021 MRSTIC),* November 13-17, Taipei, Taiwan. (**invited talk**, virtual)
13. J-G Jean, T-H Su, C-S Chen (2021), "Local-convexity data-driven identification for materials data," *Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering & Technology (MMLDT-CSET 2021),* September 26-29, San Diego, CA, USA. (hybrid)
14. T-Y Chien, Y-L Cheng, H-W Yen, C-S Chen (2021), "A dislocation density enhanced crystal plasticity finite element model for precipitation hardening behavior of aluminum alloys," *Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering & Technology (MMLDT-CSET 2021),* September 26-29, San Diego, CA, USA. (hybrid)
15. C-S Chen, J-P Wang, C-H Huang, C-H Yu, P-Y Chen (2021), "Machine learning for bio-inspired structural materials," *Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering & Technology (MMLDT-CSET 2021),* September 26-29, San Diego, CA, USA. (hybrid)
16. T-H Su, J-G Jean, C-S Chen (2021), "High-quality Material Data Acquisition for Data-driven Computing using Manifold Learning-based Data-driven Identification Approach," *16th U.S. National Congress on Computational Mechanics,* July 25-29, Chicago, Illinois, USA. (hybrid)
17. 林彥廷、顏筱穎、張乃軒、林宏明、韓仁毓、陳俊杉、楊國鑫、鄭宏逵、徐若堯 (2020)。結合時空因子與 InSAR 觀測資料之地表變位相關性分析，2020 台灣地理資訊學會年會暨學術研討會，12 月 10-11 日，台灣台南。
18. C-S Chen (2020), "Machine learning for bio-inspired structural materials," 第44屆全國力學會議，宜蘭、臺灣。
19. J-G Jean, T-H Su, C-S Chen (2020), "Stress characterization and composite material identification from digital image correlation," 第44屆全國力學會議，宜蘭、臺灣。
20. Y-C Hsu, C-H Yu, C-S Chen (2020), "A *de novo* Multiscale Method for Nonequilibrium Atomistic Simulation on Silicon Nanowires," 第44屆全國力學會議，宜蘭、臺灣。
21. J-P Wang, C-S Chen (2020), "A methodology to synthesize microstructure of tailored mechanical properties based on generative adversarial network," 第44屆全國力學會議，宜蘭、臺灣。
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23. K-T Chen, M-Y Chen, Y-H Chen, S-W Chang, H-W Yen, C-S Chen (2019), "Molecular Dynamic Simulations of Mechanical Properties and Deformation Mechanisms of High-Entropy Alloys," *Asian Pacific Congress on Computational Mechanics (APCOM 2019)*, December 18-21, Taipei, Taiwan.
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25. Y-C Hsu, S-L Tsai, C-S Chen (2019), "Generative Adversarial Networks for Material Design of Bio-Inspired Microstructure," *Asian Pacific Congress on Computational Mechanics (APCOM 2019)*, December 18-21, Taipei, Taiwan.
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36. 陳俊杉 (2019). “人工智慧在土木工程應用的挑戰與契機,” 電子計算機於土木水利工程應用研討會，台北、台灣。**(opening plenary talk)**
37. C-S Chen, S-W Chang, Y-C Hsu, S-L Tsai (2019). “Modeling and Design of Bioinspired Structural Materials.” *The 10th International Conference on Materials for Advanced Technologies (ICMAT 2019),* June 23-28, Singapore **(invited talk)**.
38. C-S Chen (2019). “Modeling and Design of Bioinspired Structural Materials.” *Meshfree Method and Advances in Computational Mechanics, In Celebration of Professor J.S. Chen’s 60th Birthday*, March 10-12, Pleasanton, CA, USA **(invited talk)**.

專書與專書章節 (Book and Book Chapter)

1. 黃仲偉、吳泓錡、張慰慈、鄭翊良、楊文嘉、游濟華、陳俊杉 (2022), 實現自己的材料庫: Abaqus UMAT於計算力學之應用，國立臺灣大學出版中心。
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Remote Sensing in Hydrometeorology, Urban Stormwater Management, Fractals and Geostatistics, Multi-Scale Data Merging, Stochastic Rainfall Modelling and Forecasting

期刊論文 (Journal Papers)

1. Carlos Muñoz Lopez, **Li-Pen Wang**, Patrick Willems (2023), Statistical characterization of rainfall fields based upon a 12-year high-resolution radar archive of Belgium, Atmospheric Research, 283, 106544.
2. Carlos Muñoz, **Li-Pen Wang**, Patrick Willems, P., Statistical characterization of rainfall fields based upon a 12-year high-resolution radar archive of Belgium, Automatic Research., 283, 106544, 2022.
3. Chen, Y., Paschalis, A., **Wang, L.-P.** and Onof, C.: Can we estimate flood frequency with point-process spatial-temporal rainfall models? J. Hydrol., 600, 126667, 2021, doi:10.1016/j.jhydrol.2021.126667.
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5. Ochoa-Rodríguez, S., **Wang, L.-P.**, Willems, P. and Onof, C.: A review of radar-rain gauge data merging methods and their potential for urban hydrological applications, Water Resour. Res., 55 (8), 6356-6391, 2019, doi:10.1029/2018WR023332.

研討會論文 (Conference Papers/Abstracts)

1. **Li-Pen Wang**, Yu-Sheng Cheng: Exploring the use of 3D radar measurements for predicting the lifespans of single-core convective rain cells, 12th International Workshop on Precipitation in Urban Areas, Pontresina, Switzerland, Dec 2023.
2. Y.-S. Cheng and **L.-P. Wang**: Exploring the use of 3D radar measurements in predicting the evolution of convective rain cells, European Meteorology Society (EMS) Annual Meeting 2023, EMS2023-399, Bratislava, Slovakia, Sep 2023.
3. Ho Tian Hung, **Li-Pen Wang**: IMERG Run Deep: Can we produce a low-latency IMERG Final run product with a deep learning based prediction model?, EGU General Assembly 2023, EGU23-4887, Vienna, Austria, Apr 2023.
4. Pei-Chun Chen, **Li-Pen Wang**: Modeling rainfall with a Bartlett–Lewis process: incorporating climate co-variate using a deep learning method, EGU General Assembly 2023, EGU23-3733, Vienna, Austria, Apr 2023.
5. Ching-Chun Chou, Auguste Gires, **Li-Pen Wang**: Modelling Typhoon Rainfall with Universal Multifractal, EGU General Assembly 2023, EGU23-12880, Vienna, Austria, Apr 2023.
6. **Wang, L.-P.** and Onof, C.: Modelling sub-hourly rainfall extremes with short records, International Conference on the Development and Applications of New Technologies in Civil

Engineering (iCAN), Taoyuan, Taiwan, Oct-Nov 2020.

7. **Wang, L.-P.** and Onof, C.: Reproducing extreme statistics of hourly and sub-hourly rainfall with Bartlett-Lewis models: tips and new developments, 11th International Workshop on Precipitation in Urban Areas (UrbanRain 18), Pontresina, Switzerland, December 2018.
8. Zulkafli, Z., **Wang, L.-P.**, Mohd Zad, S.N. and Mutalib, R.: Improving satellite-based and ground radar-based estimations of subdaily rainfall for improved flood prediction, BHS National Symposium, London, UK, September 2018.
9. Verbeiren, B., Dagnachew Seyoum, S., Lubbad, I., Xin, T., ten Veldhuis, J. A. E., Onof, C., **Wang, L.-P**., Ochoa-Rodríguez, S., Veeckman, C., Boonen, M., See, L., Nalpas, D., O'Brien, B., Johnston, J. and Willems, P.: FloodCitiSense: Early Warning Service For Urban Pluvial Floods For And By Citizens and City Authorities, 11th International Conference on Urban Drainage Modelling, Palermo, Italy, September 2018.
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11. Kim, D., Onof, C., Park, J. and **Wang, L.-P.**: A stochastic rainfall generator suitable for modeling future compound disasters associated with heavy rainfall, European Geosciences Union (EGU) General Assembly 2022, Vienna, Austria, April 2022.
12. Chou, C.-C. and **Wang, L.-P.**: Observing Extreme Rainfall Events at Fine Timescales, European Geosciences Union (EGU) General Assembly 2022, Vienna, Austria, April 2022.
13. Wei, C.-L. and **Wang, L.-P.**: Toward a low-cost disdrometer: Measuring drop size with a cantilever piezo film, European Geosciences Union (EGU) General Assembly 2022, Vienna, Austria, April 2022.
14. Wei, C.-L., Su, W.-J., Chang, S.-W. and **Wang, L.-P.**: Toward a low-cost disdrometer: simulating the collision of raindrops with a cantilever piezo film, European Geosciences Union (vEGU) General Assembly 2021, Vienna, Austria, April 2021.
15. **Wang, L.-P.**, Dai, T.-Y., He, Y.-T., Chou, C.-C. and Onof, C.: pyBL: An open source Python package for stochastic high-resolution rainfall modelling based upon a Bartlett Lewis Rectangular Pulse model, European Geosciences Union (vEGU) General Assembly 2021, Vienna, Austria, April 2021.
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17. Dai, T.-Y. and **Wang, L.-P.**: Modelling high-resolution rainfall extremes in a changing climate, European Geosciences Union (vEGU) General Assembly 2021, Vienna, Austria, April 2021.
18. **Wang, L.-P.**, Marra, F. and Onof, C.: Modelling sub-hourly rainfall extremes with short records – a comparison of MEV, Simplified MEV and point process methods, European Geosciences Union (EGU) General Assembly 2020, Vienna, Austria, May 2020.
19. **Wang, L.-P**., Chen, Y., Muñoz, C. and Onof, C.: Characterising local rainfall cell patterns over Birmingham (UK) using 10+ years of high-resolution radar images, European Geosciences Union (EGU) General Assembly 2019, Vienna, Austria, April 2019.

Chapter

1. **汪立本**， Ochoa-Rodriguez, S.,，Chen, Y.，Onof, C.： 人工智慧在都市淹水預測之應用與展望,，中國土木水利工程學會會刊，48 卷 2 期，P56-63, 2021.
2. Verbeiren, B., Dagnachew Seyoum, S., Lubbad, I., Xin, T., ten Veldhuis, J. A. E., Onof, C., **Wang, L.-P.**, Ochoa-Rodríguez, S., Veeckman, C., Boonen, M., See, L., Nalpas, D., O'Brien, B., Johnston, J. and Willems, P.: FloodCitiSense: Early Warning Service For Urban Pluvial

Floods For And By Citizens and City Authorities, in *New Trends in Urban Drainage Modelling*, Springer Nature, Switzerland, September 2019.

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(A) 期刊論文 (Journal Paper) (*: 通訊作者)

a. SCI/SSCI 期刊論文

1. Jia-Cherng Song, **I-Yun Lisa Hsieh**, Chuin-Shan Chen (2023), Sparse trip demand prediction for shared E-scooter using spatio-temporal graph neural networks, Transportation Research Part D: Transport and Environment.
2. Kai-Yun Lo, Jian Hern Yeoh, **I-Yun Lisa Hsieh** (2023), Towards Nearly Zero-Energy Buildings: Smart Energy Management of Vehicle-to-Building (V2B) Strategy and Renewable Energy Sources, Sustainable Cities and Society.
3. Wei-Hsuan Chen, **I-Yun Lisa Hsieh** (2023), Techno-economic analysis of lithium-ion battery price reduction considering carbon footprint based on life cycle assessment, Journal of Cleaner Production.
4. 黃瀚陞；**謝依芸**，2023。校園交通車及公務車電動化的環境效益與擁有成本分析：以臺灣大學為例，運輸學刊。
5. Wei-Chun Tseng, **I-Yun Lisa Hsieh** (2023), Impacts of electric fleet charging patterns under different solar power penetration levels: Hourly grid variations and operating emissions, Transportation Research Part D: Transport and Environment.
6. Yu-Jui Chang, **I-Yun Lisa Hsieh** (2023), Transitioning from illegal rooftop dwellings to solar PV: Market-based incentive design and techno-economic analysis, Energy Strategy Reviews.
7. Yuan-Hsi Chien, **I-Yun Lisa Hsieh**, Tsung-Heng Chang (2023), Beyond personal vehicles: How electrifying scooters will help achieve climate mitigation goals in Taiwan, Energy Strategy Reviews.
8. Ashish Verma, Jennifer Dunn, Alejandro Tirachini, Casper Boongaling Agaton, **I-Yun Lisa Hsieh**, Ahmad Mayyas, Shahana Althaf, Miloš N Mladenović (2023), Driving a sustainable road transportation transformation, One Earth.
9. Chia-Yu Tsai, Tsung-Heng Chang, **I-Yun Lisa Hsieh** (2023), Evaluating vehicle fleet electrification against net-zero targets in scooter-dominated road transport, Transportation Research Part D: Transport and Environment.
10. **Hsieh, I. Y. L.**, Chossière, G. P., Gençer, E., Chen, H., Barrett, S., & Green, W. H.* (2022). An Integrated Assessment of Emissions, Air Quality, and Public Health Impacts of China's Transition to Electric Vehicles. Environmental Science & Technology, 56 (11), 6836-6846.
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12. **Hsieh, I. Y. L.**, Pan, M.& Green, W. H.* (2020). Transition to electric vehicles in China: Implications for private motorization rate and battery market. Energy Policy, 144, 111654: 10.1016/j.enpol.2020.111654
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14. **Hsieh, I. Y. L.**, Pan, M. S., Chiang, Y. M., & Green, W. H.* (2019). Learning only buys you so much: Practical limits on battery price reduction. Applied Energy, 239, 218-224: 10.1016/j.apenergy.2019.01.138

b. 非屬SCI/SSCI之EI或TSSCI期刊論文

1. **Hsieh, I. Y. L.** & Green, W. H.* (2020). Transition to electric vehicles in China: Implications for total cost of ownership and cost to society. SAE International Journal of Sustainable Transportation, Energy, Environment, & Policy 1(2):10.4271/13-01-02-0005.

(B) 研討會論文(Conference Paper) (*: 通訊作者)

a. 國外會議論文

1. 陳珮慈、陳維軒、謝依芸 (2023)。淨零轉型下機車電動化的減碳效益:臺灣與中國之比較研究，2023年中華運輸學會年會暨國際論文研討會。
2. Lo, K. Y., **Hsieh, I. Y. L.*** Artificial Intelligence Applications in Hourly Energy Use Intensity Prediction. 43rd IAEE International Conference, Tokyo, Japan, 2022.
3. Feng, Y. F., **Hsieh, I. Y. L.*** Location Planning for Solar Power Generation Using Artificial Intelligence. 43rd IAEE International Conference, Tokyo, Japan, 2022.
4. Chien, Y. H., **Hsieh, I. Y. L.*** Life Cycle Environmental and Cost Comparison of Scooters in Taiwan. 43rd IAEE International Conference, Tokyo, Japan, 2022.
5. **Hsieh, I. Y. L.**, Chossière, G. P., Gençer, E., Chen, H., Barrett S. & Green, W. H.* An integrated assessment of emissions, air quality, and public health impacts of China's transition to electric vehicles. 100th Annual Meeting of the Transportation Research Board, Washington, DC, 2021.
6. Loganathan, M. K., Tan, C. M., Sultana, S., **Hsieh, I. Y. L.**, Kumaraswamidhas, L. A., & Rai, R. N.* Parametric performance analysis of battery operated electric vehicle. In 2021 International Conference on Sustainable Energy and Future Electric Transportation (SEFET) (pp. 1-6). IEEE.
7. **Hsieh, I. Y. L.**, Nunes, A., Pan, M. S., & Green, W. H.* Recharging options to improve the economics of electrified fleet ecosystem: A case study of battery swapping deployment in the taxi industry. 99th Annual Meeting of the Transportation Research Board, Washington, DC, 2020.
8. **Hsieh, I. Y. L.**, Pan, M. S., Chiang, Y. M., & Green, W. H.* Learning only buys you so much: Practical limits on battery price reduction. Materials Research Society (MRS) Fall Meeting, Boston, MA, 2019.
9. **Hsieh, I. Y. L.**, & Green, W. H.* The future of electro mobility in China. 26th Intelligent Transportation Systems (ITS) World Congress, Singapore, 2019.

b. 國內會議論文

1. 羅凱芸、**謝依芸***，建構智慧能源管理系統以加速低碳轉型：車輛到建築策略，2022年中華運輸學會年會暨國際論文研討會，臺灣，2022 年。
2. 簡元璽、**謝依芸***，電動機車有多貴？生命週期碳排放與成本評估工具開發，2022年中華運輸學會年會暨國際論文研討會，臺灣，2022 年。
3. 曾靖琇、簡元璽、**謝依芸***，乘用車電動化的生命週期碳排放與成本評估，2022年中華運輸學會年會暨國際論文研討會，臺灣，2022 年。
4. 黃瀚陞、**謝依芸***，電動交通車的環境效益與擁有成本分析：以臺灣大學為例，2022年中華運輸學會年會暨國際論文研討會，臺灣，2022 年。
5. 馮意凡、周敬淳、汪立本、**謝依芸***，人工智慧於太陽能發電潛力預測與選址評估之應用，中華民國能源經濟學會111年年會暨學術研討會，臺灣，2022 年。
6. 陳維軒、羅凱芸、曾暐畯、馮意凡、**謝依芸***，近零耗能建築於智慧電網結合太陽光電與電池儲能系統下的可行性研究，第 27 屆車輛工程學術研討會暨第 2 屆台灣智慧電動車及綠能科技研討會，臺灣，2022 年。

張綜桁、**謝依芸***，臺灣機車銷售市場與持有量預測，2021年中華運輸學會年會暨國際論文研討會，臺北，臺灣，2021 年。

7. 蔡佳妤、**謝依芸***，臺灣車輛電動化的潛在市場與環境影響，2021年中華運輸學會年會暨國際論文研討會，臺北，臺灣，2021 年。
8. 謝承翰、**謝依芸***、張學孔，直轄市電動公車營運與補貼之研究—以台北市為例，2021年中華運輸學會年會暨國際論文研討會，臺北，臺灣，2021 年。
9. 曾暐畯、**謝依芸***，區塊鏈技術在電動車與綠能科技上的應用，第一屆台灣智慧電動車及綠能科技研討會，臺灣，2021 年。
10. 陳維軒、**謝依芸***，電動車電池組成本預測，第一屆台灣智慧電動車及綠能科技研討會，臺灣，2021 年。
11. 馮意凡、**謝依芸***，衛星數據與人工智慧在綠色能源上的應用，第一屆台灣智慧電動車及綠能科技研討會，臺灣，2021 年。
12. 蔡佳妤、**謝依芸***，台灣車輛電動化的潛在市場與影響，第一屆台灣智慧電動車及綠能科技研討會，臺灣，2021 年。
13. 張綜桁、**謝依芸***，台灣機車銷售市場預測與電動化的減碳潛力，第一屆台灣智慧電動車及綠能科技研討會，臺灣，2021 年。
14. 謝承翰、**謝依芸***，台北市區電動公車營運之研究，第一屆台灣智慧電動車及綠能科技研討會，臺灣，2021 年。
15. **謝依芸***、張綜桁，車輛電動化轉型之展望與挑戰，2020 年中華運輸學會年會暨國際論文研討會，臺南，臺灣，2020 年。

(D) 技術報告

1. MIT Energy Initiative (including **Hsieh, I. Y. L.**) (2019). Insights into Future Mobility. Cambridge, MA.

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Artificial Intelligence, Big Data and Data Fusion, Structural Health Monitoring, Metamaterial Design, System Identification and Inverse Problems

期刊論文 (Journal Paper)

1. Ting-Yan Wu, Rih-Teng Wu*, Ping-Hsiung Wang, Tzu-Kang Lin, Kuo-Chun Chang (2023). “Development of a high-fidelity failure prediction system for reinforced concrete bridge columns using generative adversarial networks”, Engineering Structures, 286, 116130.
2. Wen Tang, Tarutal Ghosh Mondal, Rih-Teng Wu*, Abhishek Subedi, Mohammad R. Jahanshahi (2023). “Deep Learning-based Autonomous Post-disaster Building Reconnaissance leveraging Channel-Wise Attention and Semi-Supervised Learning”, Smart Structures and Systems, 31(4), 365-381.
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3. 洪維屏、甘翊萱、林育銓、韓仁毓（2023）基於 Yolov8 與無人機影像達成港區岸邊設施自動辨識，第 45 屆海洋工程研討會，10 月 5-6 日，臺灣基隆。

4. 洪維屏、甘翊萱、黃春嘉、林育銓、韓仁毓（2023）基於港區環境分析進行無人載載具巡檢適宜性評估，第 41 屆測量及空間資訊研討會，8 月 31 日至 9 月 1 日，臺灣新竹。

5. 許謹柔、嚴寬、張家銘、韓仁毓 （2023）結合無人機與深度學習影像檢測技術的智慧化橋梁安全評估實例，第 41 屆測量及空間資訊研討會，8 月 31 日至 9 月 1 日，臺灣新竹。

6. 黃春嘉、周君芸、許謹柔、李信誼、韓仁毓（2023）超寬頻無線通訊之 UAV 穩健定位技術研究，第 41 屆測量及空間資訊研討會，8 月 31 日至 9 月 1 日，臺灣新竹。

7. 吳辰瑋、韓仁毓（2023）結合多維度時空因子與都卜勒雷達觀測於測區雨量推估，第 41 屆測量及空間資訊研討會，8 月 31 日至 9 月 1 日，臺灣新竹。

8. 林培宇、韓仁毓、陳芳瓊（2023）應用機器學習模型於地層下陷模式建構與未來趨勢推估，第 41 屆測量及空間資訊研討會，8 月 31 日至 9 月 1 日，臺灣新竹。

9. 莫詒雯、韓仁毓（2023）基於機器學習與多元資料於太陽輻射量之估計，第 41 屆測量及空間資訊研討會，8 月 31 日至 9 月 1 日，臺灣新竹。

10. 黃春嘉、韓仁毓（2023）應用 UAV 感測技術於河道管理災防評估技術，第二十屆京台青年科學家論壇，8 月 14 日至 18 日，中國北京。

11. 黃春嘉、韓仁毓、何昊哲、陳俊杉、張淵順、林彥承（2023）結合 UAV 感測技術之河道水理模式與橋梁安全評估技術，創服方案 108-111 年度總成果發表暨研討會，7 月 27 日，臺灣臺北。

12. 甘翊萱、林育銓、韓仁毓（2023）基於深度學習之航攝影像雲覆判釋，第 45 屆台灣地理資訊學會年會暨學術研討會，6 月 29 -30 日，臺灣台南。

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16. Ulinnuha, H., Han, J.Y., and Saraswat, A. (2022) Euler rotation parameter estimation in Banda Arc region (2022) *The 16th South-East Asian Survey Congress* (*SEASC*), August 2-4, Bandung, Indonesia.

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18. 林培宇、陳芳瓊、韓仁毓（2022）以機器學習方法探討影響地層下陷之關鍵因素，第 40 屆測量及空間資訊研討會，9 月 4-5 日，臺灣台中市。

19. 洪維屏、甘翊萱、林彥廷、韓仁毓（2022）基於多期無人機影像自動化對位改正分析，第 40 屆測量及空間資訊研討會，9 月 4-5 日，臺灣台中市。

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技術報告及其他(Technical reports and others)

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Remote Sensing/Earth Observation, Environmental Monitoring, Satellite Image Analysis, Synthetic Aperture Radar (SAR), Machine Learning

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