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專長/ 智慧型自動化影像辨識、營建流程最佳化、建築永續性之規劃與分析  
人工智慧及虛擬/擴增實境於建築管理之應用、風險評估與管理、IFC  
標準之研究、營建財務模式

Intelligent Automated Image Recognition, Artificial Intelligence Applications,  
Virtual Reality (VR) and Augmented Reality (AR) Applications, Optimization of  
Construction Operations

### Refereed Journal Papers

A. Articles in Refereed Journals (\*: Corresponding author)

1. Chen, P.H., Kan, M.S., and Chang, L.M. (2015). "Sustainable Design for Hospitals in Taiwan." *International Journal of Civil Engineering and Architecture*, Vol. 1, No. 1, August 2015, pp. 1-6.
2. Chowdhury, A.N., Chen, P.H.\*, and Tiong, R.L.K. (2015). "Credit Enhancement Factors for the Financing of Independent Power Producer (IPP) Projects in Asia." *International Journal of Project Management*, Vol. 33, No. 7, October 2015, pp. 1576-1587. (SSCI/EI)
3. Chen, P.H., Ong, C.F., and Hsu, S.C\* (2016). "The Linkages between Internationalization and Environmental Strategies of Multinational Construction Firms." *Journal of Cleaner Production*, Vol. 116, March 2016, pp. 207-216. (SCI/EI)
4. Chen, P.H., Ong, C.F., and Hsu, S.C\* (2016). "Understanding the Relationships between Environmental Management Practices and Financial Performances of Multinational Construction Firms." *Journal of Cleaner Production*, Vol. 139, December 2016, pp. 750-760. (SCI/EI)
5. Chen, P.H.\* and Tsay, I.S. (2017). "Transmission Network Price Setting Model for the Promotion of Liberalized Market for the Power Industry in Taiwan." *Energy Policy*, Vol. 104, May 2017, pp. 100-111. (SCI/SSCI/EI)
6. Chen, P.H.\* and Nguyen, T.C. (2017). "Integrating Web Map Service and Building Information Modeling for Location and Transportation Analysis in Green Building

- Certification Process.” *Automation in Construction*, Vol. 77, May 2017, pp. 52-66. (SCI/EI)
7. Li, Y.\*, Chen, X., Wang, X., Xu, Y., and Chen, P.H. (2017). “A Review of Studies on Green Building Assessment Methods by Comparative Analysis.” *Energy and Buildings*, Vol. 146, July 2017, pp. 152-159. (SCI/EI)
  8. Kao, C.Y., Lin, M.F., Nguyen, N.T., Tsai, H.H., Chang, L.M., Chen, P.H., and Chang, C.T.\* (2018). “Hexamethyldisilazane Removal with Mesoporous Materials Prepared from Calcium Fluoride Sludge.” *Journal of Nanoscience and Nanotechnology*, Vol. 18, No. 5, May 2018, pp. 3314-3319. (SCI/EI)
  9. Chen, P.H.\* and Peng, T.T. (2018). “Value-at-Risk Model Analysis of Taiwanese High-tech Facility Construction.” *Journal of Management in Engineering*, ASCE, Vol. 34, No. 2, March 2018, DOI: [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000585](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000585). (SCI/EI)
  10. Shen, H.K., Chen, P.H.\*, and Chang, L.M. (2018). “Human-Visual-Perception-Like Intensity Recognition for Color Rust Images Based on Artificial Neural Network.” *Automation in Construction*, Vol. 90, June 2018, pp. 178-187. (SCI/EI)
  11. Lin, Y.H., Chen, Q., Liao, P.C.\*, Chen, P.H., and Cheng, S. (2018). “The Moderating Effect of Guanxi on the Dynamic Capacity and Competitive Advantage of Chinese International Contractors.” *Advances in Civil Engineering*, Vol. 2018, Article ID 3638152, 17 pages, 2018, DOI: <https://doi.org/10.1155/2018/3638152>. (SCI)
  12. Chen, P.H.\* and Nguyen, T.C. (2019). “A BIM-WMS Integrated Decision Support Tool for Supply Chain Management in Construction.” *Automation in Construction*, Vol. 98, February 2019, pp. 289-301. (SCI/EI)
  13. Lin, M.F., Nguyen, N.T., Chang, C.T.\*, and Chen, P.H.\* (2019). “Preparation of Fe-SBC from Urban Sludge for Organic and Inorganic Arsenic Removal.” *Journal of Nanoscience and Nanotechnology*, Vol. 19, No. 5, May 2019, pp. 2658-2663. (SCI/EI)
  14. Nguyen, Q.L. and Chen, P.H.\* (2019). “Statistical Analysis of Risks for Construction Projects in Vietnam: From Private Owners’ Perspective.” *SSRG International Journal of Civil Engineering (SSRG-IJCE)*, Vol. 6, No. 1, January 2019, pp. 13-21, ISSN: 2348-8352.
  15. Lei, K.T., Tang, J.S., and Chen, P.H.\* (2019). “Numerical Simulation and Experiments with Green Roofs for Increasing Indoor Thermal Comfort.” *Journal of*

- the Chinese Institute of Engineers, Vol. 42, DOI:  
<https://doi.org/10.1080/02533839.2019.1585207>. (SCI/EI)
16. Liu, T.Y.\*, Chen, P.H., and Chou, N.N.S. (2019). “Sustainability-based Construction of the Restoration Projects for the Guguan Hydropower Station.” *Electronic Journal of Structural Engineering*, ISSN 1443-9255, accepted. (ESCI/EI)
  17. Shau, H.J., Liu, T.Y., Chen, P.H.\*, and Chou, N.N.S. (2019). “Sustainability Practices for the Suhua Highway Improvement Project in Taiwan.” *International Journal of Civil Engineering*, Vol. 17, No. 10, October 2019, pp. 1631-1641, DOI: <https://doi.org/10.1007/s40999-019-00415-4>. (SCI/EI)
  18. Liu, T.Y., Chen, P.H.\*, and Chou, N.N.S. (2019). “Comparison of Assessment Systems for Green Building and Green Civil Infrastructure.” *Sustainability (Special Issue: Sustainable Habitat)*, Vol. 11, No. 7, April 2019, DOI: <https://doi.org/10.3390/su11072117>. (SCI/SSCI)
  19. Lin, Y.H., Shi, B, Chen, P.H.\*, Xu, Z., and Liu, H. (2019). “A Grey-BPNN Model for Evaluating the Competitiveness of Chinese Contractors in the High-Speed Rail Market in Europe.” *Advances in Civil Engineering*, Vol. 2019, May 2019, Article ID 5858094, 19 Pages, DOI: <https://doi.org/10.1155/2019/5858094>. (SCI)
  20. Li, Y.\*, Song, H., Sang, P., Chen, P.H., and Liu, X. (2019). “Review of Critical Success Factors (CSFs) for Green Building Projects.” *Building and Environment*, Vol. 158, July 2019, pp. 182-191. (SCI/EI)
  21. Tsay, I.S. and Chen, P.H.\* (2019). “A Dual Market Structure Design for the Reform of an Independent Power Grid System – The Case of Taiwan.” *Energy Reports*, Vol. 5, November 2019, pp. 1603-1615. DOI: <https://doi.org/10.1016/j.egy.2019.11.001>. (SCI/EI)
  22. Hsieh, C.M., Chen, C.J., Peng, T.T., Chen, S., and Chen, P.H. (2019). “The Relationship between Workplace Justice and Self-reported Occupational Accidents in Construction Employees of Taiwan.” *Industrial Health*, November 2019, DOI: <https://doi.org/10.2486/indhealth.2019-0131>. (SCI)

#### B. ISI-indexed conference papers:

1. Chowdhury, A.N.\*, Chen, P.H., and Tiong, R.L.K. (2015). “Credit Enhancement and Its Risk Factors for IPP Projects in Asia: An Analysis by Network Theory.” *Procedia Engineering*, Vol. 125, pp. 133-142. (EI)

2. Chen, P.H.\* and Nguyen, T.C. (2016). “Integrating BIM and Web Map Service (WMS) for Green Building Certification.” *Procedia Engineering*, Vol. 164, pp. 503-509. (EI)

### **Refereed Conference Papers**

1. Chen, P.H. and Nguyen, T.C. (2015). “Utilizing Building Information Modeling (BIM) in Green Building Certification.” *Proceedings of the Fourth International Congress on Natural Sciences and Engineering (ICNSE 2015)*, May 7-9, 2015, Kyoto, Japan.
2. Chen, P.H. and Nguyen, T.C. (2015). “Integration of Building Information Modeling (BIM) and LEED’s Location and Transportation Category.” *Proceedings of the 32nd International Symposium on Automation and Robotics in Construction and Mining (ISARC 2015)*, June 15-18, 2015, Oulu, Finland.
3. Ong, C.F., Chen, P.H., and Hsu, S.C. (2015). “Internationalization and Environmental Strategies of Multinational Construction Firms” *Proceedings of the Creative Construction Conference 2015 (CCC2015)*, June 21-24, 2015, Krakow, Poland.
4. Chowdhury, A.N. and Chen, P.H. (2015). “Credit Enhancement and its Risk Factors for IPP Projects in Asia: An Analysis by Network Theory.” *Proceedings of the 6th International Conference on Construction Engineering and Project Management (ICCEPM 2015)*, October 11-14, 2015, Busan, Korea.
5. Chen, P.H. and Su, C.L. (2015). “Development of an Optimized Value Engineering System for the Retail Industry.” *Proceedings of the 28th KKHTCNN Symposium on Civil Engineering (KKHTCNN 2015)*, November 16-18, 2015, Bangkok, Thailand, pp. 188. (Abstract)
6. Chen, P.H. and Nguyen, T.C. (2015). “A Framework to Enhance BIM Application in Green Building Certification Analyses.” *Proceedings of the 28th KKHTCNN Symposium on Civil Engineering (KKHTCNN 2015)*, November 16-18, 2015, Bangkok, Thailand.
7. Hung, S.M., Chen, P.H., and Yao, D.T.C. (2016). “The Trend of Risk Management for Construction industry in Taiwan.” *Proceedings of the 14th East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-14)*, January 6-8, 2016, Ho Chi Minh City, Vietnam, pp. 472-473. (Abstract)
8. Chen, P.H. and Chiu, Y.C. (2016). “Appraisal of Green Buildings with the Help of BIM – Taking Residential Buildings for Example.” *Proceedings of the 14th East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-14)*, January 6-8, 2016, Ho Chi Minh City, Vietnam, pp. 260-261. (Abstract)

9. Chen, P.H. and Lin, M.F. (2016). "Summarized Facility Energy Consumption in 200mm and 300mm Fabs for the Semiconductor Industry in Taiwan." Proceedings of the 14th East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-14), January 6-8, 2016, Ho Chi Minh City, Vietnam, pp. 461-462. (Abstract)
10. Chen, P.H. and Nguyen, T.C. (2016). "Integrating BIM and Web Map Service (WMS) for Green Building Certification." Proceedings of the Creative Construction Conference 2016 (CCC 2016), June 25-28, 2016, Budapest, Hungary, pp. 606-611.
11. Nguyen, T.C. and Chen, P.H. (2017). "A peer-to-peer reviewing framework for selecting construction material suppliers using the integration of Building Information Modeling and Web-Map Service." Proceedings of the World Sustainable Built Environment Conference 2017 (WSBE 2017), June 5-7, 2017, Hong Kong, China.
12. Chiu, Y.C. and Chen, P.H. (2017). "Building Carbon Footprint (BCF) Evaluation for Social Amenities and Education Center in Taipei." Proceedings of the 34th International Symposium on Automation and Robotics in Construction (ISARC 2017), June 28 – July 1, 2017, Taipei, Taiwan.
13. Perng, N.H., Bai, B.S., Chen, P.H., Han, J.Y., Jiang M.Y., Huang, J.H., Su, C.W., and Chen, P.Y. (2017). "Automatic Generation of 3D Models from UAV-captured Image Data for Immersive VR Applications." Proceedings of the 34th International Symposium on Automation and Robotics in Construction (ISARC 2017), June 28 – July 1, 2017, Taipei, Taiwan.
14. Liu, W.T., Bai, B.S., and Chen, P.H. (2017). "Development of Smartphone Application for Real-Time Steel Rust Recognition." Proceedings of the 34th International Symposium on Automation and Robotics in Construction (ISARC 2017), June 28 – July 1, 2017, Taipei, Taiwan.
15. Liao, J.M., Chang, L.M. and Chen, P.H. (2017). "Intelligent and Green Building for Sustainability (A Case Study of Central Taiwan Innovation Campus)." Proceedings of the 34th International Symposium on Automation and Robotics in Construction (ISARC 2017), June 28 – July 1, 2017, Taipei, Taiwan.
16. Liu, T.Y., Ni, J.C., and Chen, P.H. (2017). "Enhancing the Safety Management of NATM Using the Tunnel Seismic Prediction (TSP) Method." Proceedings of the 30th International Symposium of KKHTCNN, November 2-4, 2017, Taipei, Taiwan.
17. Liu, T.Y., Chen, P.H., and Chou, N.S. (2017). "Practice on Sustainability of Infrastructure with the Suhua Highway Improvement Project as an Example." Proceedings of the

International Symposium on Life-cycle Engineering and Sustainability of Infrastructure (ISLES2017), November 10-11, 2017, Taipei, Taiwan.

18. Liu, T.Y., Chen, P.H., and Chou, N.S. (2017). "Disaster Prevention and Carbon Reduction Effectiveness of a Special Retaining Method for Excavation." Proceedings of the HKIE-IEM-CIE Tripartite Seminar 2017 – Geotechnical Engineering Solutions for Natural Disaster Mitigation, December 12, 2017, Hong-Kong.
19. Kao, C.Y., Nguyen, N.T., Lin, M.F., Tsai, H.H., Chang, C.T., Chang, L.M., and Chen, P.H. (2018). "Preparation of Iron Mesoporous Catalysis from Hazardous Waste for Acetone Treatment." Proceedings of 2018 IEEE International Conference on Applied System Innovation (IEEE-ICASI), April 13-17, 2018, Chiba, Tokyo, Japan. (This paper received the Best Conference Paper Award from IEEE-ICASI 2018.)
20. Chen, P.H. and Nguyen, T.C. (2018). "A Decision-Supporting Tool for Selecting a Construction Material Regarding Its Location Aspect Using the Integration of Building Information Modeling and Web-Map Services." Proceedings of 31st KKHTCNN Symposium on Civil Engineering, November 22-24, 2018, Kyoto, Japan.
21. Chen, S.K. and Chen, P.H. (2018). "Corrosion Recognition for Steel Bridges Using Convolutional Neural Network (CNN)." Proceedings of 31st KKHTCNN Symposium on Civil Engineering, November 22-24, 2018, Kyoto, Japan.
22. Dao, T.N. and Chen, P.H. (2018). "Legal Issues in the Integration of Building Information Modeling (BIM) into Construction Contracts." Proceedings of 31st KKHTCNN Symposium on Civil Engineering, November 22-24, 2018, Kyoto, Japan.
23. Liu, T.Y., Chen, P.H., and Chou, N.S. (2018). "Case study of soil improvement under a rigid pavement airport runway." Proceedings of 31st KKHTCNN Symposium on Civil Engineering, November 22-24, 2018, Kyoto, Japan.
24. Liu, T.Y., Chen, P.H., and Chou, N.S. (2018). "Sustainability-based Construction of the restoration projects for the Guguan hydropower station." Proceedings of the 5th International Conference on Civil Engineering (ICCE2018), December 20-21, 2018, Nanchang, China.
25. Lin, K.S. and Chen, P.H. (2019). "Applying HSV Color Model to the Development of Handheld-Device-Based Steel Rust Image Recognition System (HSV 色彩模型應用於手持裝置鋼材鏽蝕影像辨識系統開發)." Proceedings of the 23rd Symposium on Construction Engineering and Management (SCEM 2019; 第23屆營建工程與管理學術研討會), July 4, 2019, Taichung, Taiwan. [This paper received the Best Paper Award (特優論文獎) in SCEM 2019.]

26. Liu, T.Y., Chen, P.H., Chou, N.N.S., Chou, M.Y., Lin, R.J.C., and Lo, H.T. (2019). “Environmental Sustainability Approaches Adopted for Anhsin Bridge Construction of Ankeng Metro System in New Taipei City in Taiwan.” Proceedings of the 2019 International Conference on Water Resource and Environmental Engineering (ICWREE 2019), August 22-23, 2019, Singapore. DOI: <https://doi.org/10.1051/e3sconf/201911700013>.
27. Cheng, H.Y. and Chen, P.H. (2019). “Promoting Urban Renewal through the Application of Security Token Offering and Building Information Modeling (BIM).” Proceedings of 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
28. Ko, H.L. and Chen, P.H. (2019). “Application of Blockchain in Construction Industry Loans.” Proceedings of 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
29. Lin, B.L. and Chen, P.H. (2019). “Automatic BIM Dimension Adjustment for Feng Shui Using the “Luban Ruler” Standard.” Proceedings of 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
30. Osorto Carrasco, M.D., Derbes, E.R., and Chen, P.H. (2019). “IRENO-ARCHITRECTURE: A Possible Adaption of Architecture for Peace in Honduras.” Proceedings of 32nd KKHTCNN Symposium on Civil Engineering, October 24-26, 2019, Daejeon, Korea.
31. Liu, T.Y., Chou, N.N.S, and Chen, P.H. (2019). “Case Study on Slope Stabilization by Bio-engineering in Taiwan – National Chi-Nan University.” Proceedings of 2019 Congress International de Geotechnique – Ouvrages – Structures (CIGOS 2019), October 31-November 1, 2019, Hanoi, Vietnam.