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Combinatorial optimization and algorithms, disaster and emergency transportation planning, application of image processing and computer vision

期刊論文 (Journal Papers)

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

1. Ho#, Y.-H., Hsiao, T.-C., and Chen*, A. Y. (2023) "Emission Analysis of Electric Motorcycles and Assessment of Emission Reduction with Fleet Electrification." IEEE, Transactions on Intelligent Transportation Systems, Accepted. [SCI]
2. Chen, T.-L., Lai, C.-H., Chen, Y.-C., Ho#, Y.-H., Chen, A. Y., and 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. [SCI]
3. Ho#, Y.-H., Hsiao, T.-C., and Chen*, A. Y. (2022) "Electric Motorcycle Emission Analysis Through Computer Vision." Journal of the Chinese Institute of Civil and Hydraulic Engineering.
4. Tseng#, P.-Y., Lin, J. J., Chan, Y.-C., and Chen*, A. Y. (2022) "Real-Time Indoor Localization with Visual SLAM for In-building Emergency Response." Automation in Construction, 140, 104319. [SCI]
5. Chin, K.-C., Cheng#, Y.-C., Sun, J.-T., Ou#, C.-Y., Hu, C.-H., Tsai, M.-C., Ma, M. H.-M., Chiang*, W.-C. and Chen*, A. Y. (2022) "Prediction of Severely Injured Patients in Emergency Medical Dispatch through Machine Learning Based Text Analysis: Model Development and Validation." Journal of Medical Internet Research, 24(6), June 2022, <https://www.jmir.org/2022/6/e30210>. [SCI] (Chin and Cheng are co-first authors, and Chen and Chiang are co-corresponding authors)
6. Lee, Y.-C., Chen#, Y.-S., and Chen*, A. Y. (2022) "Lagrangian Dual Decomposition for the Ambulance Relocation and Routing Considering Stochastic Demand with the Truncated Poisson." Transportation Research Part B: Methodological, 157, 1-23, March 2022. [SCI]
7. Chou#, C.-C., Chiang, W.-C., and Chen*, A. Y. (2022) "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, 158, 102591, Feb 2022. [SCI]
8. Hsu, T.-P., Wu*, Y.-W., and Chen, A. Y. (2022) "Temporal Stability of Associations between Crash Characteristics: A Multiple Correspondence Analysis." Accident Analysis and Prevention, 168, 106590, Apr 2022. [SCI]
9. Hsiao, C.-H., Chen, A. Y., Ge*, L., and Yeh, F.-H. (2022) "Performance of Artificial Neural Network and Convolutional Neural Network on Slope Failure Prediction Using Data from the Random Finite Element Method." Acta Geotechnica, April 2022. [SCI]
10. Sun, M.-C., Sakai, K., Chen, A. Y., and Hsu*, Y.-T. (2022) "Location Problems of Vertical Evacuation Structures for Dam-Failure Floods: Considering Shelter-in-Place and Horizontal Evacuation." International Journal of Disaster Risk Reduction, 77, 103044, Jul 2022. [SCI]
11. 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, 291(15), 118206, Dec 2021. [SCI]

12. 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*, , 167, 144-150, Oct 2021. (Chin and Hsieh are co-first authors, and Chen and Ma are co-corresponding authors). [SCI]
13. 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*, 35(5), 04021014, Sep 2021.. [SCI]
14. Lin[#], T.-H., Chen^{*}, A. Y. and S.-H. Hsieh (2020) "Temporal Image Analytics for Abnormal Construction Activity Identification." *Automation in Construction*, 124, 103572. (SCI).
15. 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*, 47, 101237. (SCI).
16. 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*, 57, 102048, Apr 2021. (SCI)
17. 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).
18. 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*, , 119, 102744 (SCI).
19. 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).
20. 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).
21. 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).
22. Yen[#], Y., Angah[#], O., Huang, Y.N., and Chen^{*}, A.Y. (2018) "Potential Applications of State of the Art Artificial Intelligence in Civil Infrastructure Engineering." *Journal of the Chinese Institute of Civil and Hydraulic Engineering*, Vol. 45, Issue 5. pp. 51-58.
23. Chiang^{*}, W.-C., Hsieh, M.-J., Chu, H.-L., Chen, A. Y., Wen[#], S.-Y., Yang, W.-S., Chien, Y.-C., Wang, Y.-C., Lee, B.-C., Wang, H.-C., Huang, E.-P., Yang, C.-W., Sun, J.-T., Chong, K.-M., Lin, H.-Y., Hsu, S.-H, Chen, S.-Y., and Ma M. H. (2018) "The Effect of Successful Endotracheal Intubation on Patient Outcomes following Out-of-hospital Cardiac Arrest in Taipei." *Annals of Emergency Medicine*, 71(3), pp. 387-39 (SCI).

研討會論文 (Conference Papers)

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.
 7. Yen, Y., Wen, S.-Y., Y.-H., Huang, Y.-N., and Chen, A. (2018) “Human Tracking for Facility Surveillance,” Computer Vision Conference (CVC), Las Vegas 2019.
 8. Wang, J.-C. and Chen, A. Y. (2018) “Image-based Traffic Characteristics Extraction through Deep Learning,” The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan, November 22-24
 9. Ou, C.-Y. and Chen, A. Y. (2018) “The Analysis of Audio Content in Emergency Medical Service Dispatch Communication,” The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan, November 22-24
 10. Qiu, W.-X. and Chen, A. Y. (2018) “Multi-Camera Human Tracking for Decision Making for Facilities Location in Public Places,” The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan, November 22-24
 11. Wei, S.-R. and Chen, A. Y. (2018) “Projection transformation for traffic surveillance cameras through deep learning,” The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan, November 22-24
 12. Hsieh, T.-C. and Chen, A. Y. (2018) "Emotion Effect on the Interaction between Caller and Dispatcher in Emergency Medical Service Dispatch Communication" The 17th International Conference on Computing in Civil and Building Engineering (ICCCBE), Tampere, Finland, June 5-7. **(Best Student Paper Award)**
 13. Lin, B.-W., and Chen, A. Y. (2018) "Improvement of the Efficiency of Object Detection," The 17th International Conference on Computing in Civil and Building Engineering (ICCCBE), Tampere, Finland, June 5-7.
 14. Wen, S.-Y., and Chen, A. Y. (2018) "Using Context Encoders in AEC/FM," The 17th International Conference on Computing in Civil and Building Engineering (ICCCBE), Tampere, Finland, June 5-7.