

7 REFERENCES

- Abdel-Fattah, A., El-Tawil, A., & Harraz, N. (2013). An Integrated Operational Research and System Dynamics Approach for Planning Decisions in Container Terminals. *Engineering and Technology International Journal of Industrial Science and Engineering*, 7. <http://www.waset.org/publications/17095>
- Abdelmagid, A. M., Gheith, M. S., & Eltawil, A. B. (2021). A comprehensive review of the truck appointment scheduling models and directions for future research. *Transport Reviews*. <https://doi.org/10.1080/01441647.2021.1955034>
- Abdelshafie, A., Salah, M., Kramberger, T., & Dragan, D. (2022). Repositioning and Optimal Re-Allocation of Empty Containers: A Review of Methods, Models, and Applications. *Sustainability (Switzerland)*, 14(11). <https://doi.org/10.3390/su14116655>
- Abeysooriya, H., Weerasinghe, B. A., & Perera, H. N. (2021). Optimizing Gate Queueing at Container Terminals to Facilitate Green Operations. *The Australian Maritime Logistics Research Network (AMLRN) 2021 Symposium*.
- Adi, T N, Iskandar, Y. A., & Bae, H. (2020). Q-learning-based technique for reduction of number of empty-truck trips in inter-terminal transportation. *ICIC Express Letters, Part B: Applications*, 11(10), 987–994. <https://doi.org/10.24507/icicelb.11.10.987>
- Adi, T N, Iskandar, Y. A., Bae, H., & Choi, Y. (2020). *Reduction of number of empty-truck trips in inter-terminal transportation using multi-agent Q-learning*. 167–172. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085955113&partnerID=40&md5=43780d4026e03b85c067cbcac2fb81ad>
- Adi, Taufik Nur, Bae, H., & Iskandar, Y. A. (2021). Interterminal truck routing optimization using cooperative multiagent deep reinforcement learning. *Processes*, 9(10). <https://doi.org/10.3390/pr9101728>

- Adi, Taufik Nur, Iskandar, Y. A., & Bae, H. (2020). Interterminal truck routing optimization using deep reinforcement learning. *Sensors (Switzerland)*, *20*(20), 1–20. <https://doi.org/10.3390/s20205794>
- Agra, A., & Oliveira, M. (2018). MIP approaches for the integrated berth allocation and quay crane assignment and scheduling problem. *European Journal of Operational Research*, *264*(1), 138–148. <https://doi.org/10.1016/j.ejor.2017.05.040>
- Al-Dhaheri, N., Jebali, A., & Diabat, A. (2016). The quay crane scheduling problem with nonzero crane repositioning time and vessel stability constraints. *Computers and Industrial Engineering*, *94*, 230–244. <https://doi.org/10.1016/j.cie.2016.01.011>
- Alvarez, J. F., Longva, T., & Engebretsen, E. S. (2010). A methodology to assess vessel berthing and speed optimization policies. *Maritime Economics and Logistics*, *12*(4), 327–346. <https://doi.org/10.1057/mel.2010.11>
- Ambrosino, D., Sciomachen, A., & Tanfani, E. (2004). Stowing a containership: The master bay plan problem. *Transportation Research Part A: Policy and Practice*, *38*(2), 81–99. <https://doi.org/10.1016/j.tra.2003.09.002>
- Angeloudis, P., & Bell, M. G. H. (2011). A review of container terminal simulation models. *Maritime Policy and Management*, *38*(5), 523–540. <https://doi.org/10.1080/03088839.2011.597448>
- Azevedo, A. T., de Salles Neto, L. L., Chaves, A. A., & Moretti, A. C. (2018). Solving the 3D stowage planning problem integrated with the quay crane scheduling problem by representation by rules and genetic algorithm. *Applied Soft Computing Journal*, *65*, 495–516. <https://doi.org/10.1016/j.asoc.2018.01.006>
- Bahadir, M. C., & Akdag, H. C. (2019). The System Dynamics Modelling for Container Capacity & Transportation Planning Policies. *Asian Journal of*

- Shipping and Logistics*, 35(4), 200–212.
<https://doi.org/10.1016/j.ajsl.2019.12.007>
- Bai, X., & Lam, J. S. L. (2014). Dynamic regional port cluster development: case of the ports across Taiwan Strait. *GeoJournal*, 80(5), 619–636.
<https://doi.org/10.1007/s10708-014-9567-5>
- Bai, X., Zhang, X., Li, K. X., Zhou, Y., & Yuen, K. F. (2021). Research topics and trends in the maritime transport: A structural topic model. *Transport Policy*, 102(November 2020), 11–24. <https://doi.org/10.1016/j.tranpol.2020.12.013>
- Bartošek, A., & Marek, O. (2013). Quay Cranes in Container Terminals. *Transactions on Transport Sciences*, 6(1), 9–18. <https://doi.org/10.2478/v10158-012-0027-y>
- Beens, M.-A., & Ursavas, E. (2016). Scheduling cranes at an indented berth. *European Journal of Operational Research*, 253(2), 298–313.
<https://doi.org/10.1016/j.ejor.2016.02.038>
- Behera, J., Bhuta, C., & Thorpe, G. (2000). Management information systems: An overview of practices at marine container terminals in Australia and Asia. *Transportation Quarterly*, 54(4), 59–73.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-0034264968&partnerID=40&md5=798b6ce3a52c6e0c409b8cb7f82ba561>
- Beškovnik, B. (2008). Measuring and increasing the productivity model on maritime container terminals. *Pomorstvo*, 22(2), 171–183.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-60649084632&partnerID=40&md5=ebcc4659ecea4f0f2bee06550641bea5>
- Bierwirth, C., & Meisel, F. (2010). A survey of berth allocation and quay crane scheduling problems in container terminals. *European Journal of Operational Research*, 202(3), 615–627. <https://doi.org/10.1016/j.ejor.2009.05.031>

- Blankmann, H., & Klimbie, B. (1985). Container terminal along the Rhine. An overview of existing and planned transshipment facilities. *ROTTERDAM EUROPOORT DELTA*, 4, 1985, 19–23. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-0013763157&partnerID=40&md5=49079a6a4b2cf5c1e05391574d10daa6>
- Böse, J. W. (2020). Handbook of terminal planning. In *Operations Research/Computer Science Interfaces Series* (Vol. 49, Issue 1). <https://doi.org/10.1007/978-1-4419-8408-1>
- Buhrkal, K., Zuglian, S., Ropke, S., Larsen, J., & Lusby, R. (2011). Models for the discrete berth allocation problem: A computational comparison. *Transportation Research Part E: Logistics and Transportation Review*, 47(4), 461–473. <https://doi.org/10.1016/j.tre.2010.11.016>
- Caballini, C., Gracia, M. D., Mar-Ortiz, J., & Sacone, S. (2020). A combined data mining – optimization approach to manage trucks operations in container terminals with the use of a TAS: Application to an Italian and a Mexican port. *Transportation Research Part E: Logistics and Transportation Review*, 142. <https://doi.org/10.1016/j.tre.2020.102054>
- Cai, B, Huang, S., Liu, D., & Dissanayake, G. (2014). Rescheduling policies for large-scale task allocation of autonomous straddle carriers under uncertainty at automated container terminals. *Robotics and Autonomous Systems*, 62(4), 506–514. <https://doi.org/10.1016/j.robot.2013.12.007>
- Cai, Binghuang, Huang, S., Liu, D., & Dissanayake, G. (2014). Rescheduling policies for large-scale task allocation of autonomous straddle carriers under uncertainty at automated container terminals. *Robotics and Autonomous Systems*, 62(4), 506–514. <https://doi.org/10.1016/j.robot.2013.12.007>
- Cao, J., Shi, Q., & Lee, D.-H. (2010). Integrated quay crane and yard truck schedule problem in container terminals. *Tsinghua Science and Technology*, 15(4), 467–

474. [https://doi.org/10.1016/S1007-0214\(10\)70089-4](https://doi.org/10.1016/S1007-0214(10)70089-4)

Cao, J. X., Lee, D.-H., Chen, J. H., & Shi, Q. (2010). The integrated yard truck and yard crane scheduling problem: Benders' decomposition-based methods. *Transportation Research Part E: Logistics and Transportation Review*, 46(3), 344–353. <https://doi.org/10.1016/j.tre.2009.08.012>

Carlo, H J, Vis, I. F. A., & Roodbergen, K. J. (2014). Storage yard operations in container terminals: Literature overview, trends, and research directions. *European Journal of Operational Research*, 235(2), 412–430. <https://doi.org/10.1016/j.ejor.2013.10.054>

Carlo, H J, Vis, I. F. A., & Roodbergen, K. J. (2015). Seaside operations in container terminals: literature overview, trends, and research directions. *Flexible Services and Manufacturing Journal*, 27(2–3), 224–262. <https://doi.org/10.1007/s10696-013-9178-3>

Carlo, Héctor J., Vis, I. F. A., & Roodbergen, K. J. (2015). Seaside operations in container terminals: literature overview, trends, and research directions. *Flexible Services and Manufacturing Journal*, 27(2–3), 224–262. <https://doi.org/10.1007/s10696-013-9178-3>

Caserta, M., Schwarze, S., & Voß, S. (2012). A mathematical formulation and complexity considerations for the blocks relocation problem. *European Journal of Operational Research*, 219(1), 96–104. <https://doi.org/10.1016/j.ejor.2011.12.039>

Castilla-Rodríguez, I., Expósito-Izquierdo, C., Melián-Batista, B., Aguilar, R. M., & Moreno-Vega, J. M. (2020). Simulation-optimization for the management of the transshipment operations at maritime container terminals. *Expert Systems with Applications*, 139. <https://doi.org/10.1016/j.eswa.2019.112852>

Chamchang, P., & Niyomdecha, H. (2021). Impact of service policies on terminal gate

efficiency: a simulation approach. *Cogent Business and Management*, 8(1).
<https://doi.org/10.1080/23311975.2021.1975955>

Chang, D., Jiang, Z., Yan, W., & He, J. (2010). Integrating berth allocation and quay crane assignments. *Transportation Research Part E: Logistics and Transportation Review*, 46(6), 975–990.
<https://doi.org/10.1016/j.tre.2010.05.008>

Chao, S.-L., & Lin, P.-H. (2021). Minimizing overstay in master bay plans of large container ships. *Maritime Economics and Logistics*, 23(1), 71–93.
<https://doi.org/10.1057/s41278-019-00126-6>

Chargui, K., Zouadi, T., El Fallahi, A., Reghioui, M., & Aouam, T. (2021). Berth and quay crane allocation and scheduling with worker performance variability and yard truck deployment in container terminals. *Transportation Research Part E: Logistics and Transportation Review*, 154.
<https://doi.org/10.1016/j.tre.2021.102449>

Chargui, K., Zouadi, T., Fallahi, A. E., Reghioui, M., & Aouam, T. (2021). Coupling the ILS optimisation algorithm and a simulation process to solve the travelling quay-crane worker assignment and balancing problem. *Journal of the Operational Research Society*. <https://doi.org/10.1080/01605682.2021.1907241>

Chen, G., Govindan, K., & Golias, M. M. (2013). Reducing truck emissions at container terminals in a low carbon economy: Proposal of a queueing-based bi-objective model for optimizing truck arrival pattern. *Transportation Research Part E: Logistics and Transportation Review*, 55, 3–22.
<https://doi.org/10.1016/j.tre.2013.03.008>

Chen, G., Govindan, K., & Yang, Z. (2013). Managing truck arrivals with time windows to alleviate gate congestion at container terminals. *International Journal of Production Economics*, 141(1), 179–188.
<https://doi.org/10.1016/j.ijpe.2012.03.033>

- Chen, J. H., & Bierlaire, M. (2017). The study of the unidirectional quay crane scheduling problem: complexity and risk-aversion. *European Journal of Operational Research*, 260(2), 613–624. <https://doi.org/10.1016/j.ejor.2017.01.007>
- Chen, J. H., Lee, D. H., & Cao, J. X. (2012). A combinatorial benders' cuts algorithm for the quayside operation problem at container terminals. *Transportation Research Part E: Logistics and Transportation Review*, 48(1), 266–275. <https://doi.org/10.1016/j.tre.2011.06.004>
- Chen, P., Fu, Z., Lim, A., & Rodrigues, B. (2004). Port yard storage optimization. *IEEE Transactions on Automation Science and Engineering*, 1(1), 26–37. <https://doi.org/10.1109/TASE.2004.829412>
- Chen, S., & Zeng, Q. (2021). Carbon-efficient scheduling problem of electric rubber-tired gantry cranes in a container terminal. *Engineering Optimization*. <https://doi.org/10.1080/0305215X.2021.1972293>
- Chou, C.-C., & Fang, P.-Y. (2021). Applying expert knowledge to containership stowage planning: an empirical study. *Maritime Economics and Logistics*, 23(1), 4–27. <https://doi.org/10.1057/s41278-018-0113-0>
- Chu, F, He, J., Zheng, F., & Liu, M. (2019). Scheduling multiple yard cranes in two adjacent container blocks with position-dependent processing times. *Computers and Industrial Engineering*, 136, 355–365. <https://doi.org/10.1016/j.cie.2019.07.013>
- Chu, Feng, He, J., Zheng, F., & Liu, M. (2019). Scheduling multiple yard cranes in two adjacent container blocks with position-dependent processing times. *Computers and Industrial Engineering*, 136, 355–365. <https://doi.org/10.1016/j.cie.2019.07.013>
- Chung, Y.-G., Randhawa, S. U., & McDowell, E. D. (1988). A simulation analysis for

- a transtainer-based container handling facility. *Computers and Industrial Engineering*, 14(2), 113–125. [https://doi.org/10.1016/0360-8352\(88\)90020-4](https://doi.org/10.1016/0360-8352(88)90020-4)
- Cordeau, J.-F., Laporte, G., Legato, P., & Moccia, L. (2005). Models and tabu search heuristics for the berth-allocation problem. *Transportation Science*, 39(4), 526–538. <https://doi.org/10.1287/trsc.1050.0120>
- Dadashi, A., Dulebenets, M. A., Golias, M. M., & Sheikholeslami, A. (2017). A novel continuous berth scheduling model at multiple marine container terminals with tidal considerations. *Maritime Business Review*, 2(2), 142–157. <https://doi.org/10.1108/mabr-02-2017-0010>
- Davarzani, H., Fahimnia, B., Bell, M., & Sarkis, J. (2016). Greening ports and maritime logistics: A review. *Transportation Research Part D: Transport and Environment*, 48, 473–487. <https://doi.org/10.1016/j.trd.2015.07.007>
- Delgado, A., Jensen, R. M., Janstrup, K., Rose, T. H., & Andersen, K. H. (2012). A Constraint Programming model for fast optimal stowage of container vessel bays. *European Journal of Operational Research*, 220(1), 251–261. <https://doi.org/10.1016/j.ejor.2012.01.028>
- Dell, R. F., Royset, J. O., & Zyngiridis, I. (2009). Optimizing container movements using one and two automated stacking cranes. *Journal of Industrial and Management Optimization*, 5(2), 285–302. <https://doi.org/10.3934/jimo.2009.5.285>
- Diabat, A., & Theodorou, E. (2014). An Integrated Quay Crane Assignment and Scheduling Problem. *Computers and Industrial Engineering*, 73(1), 115–123. <https://doi.org/10.1016/j.cie.2013.12.012>
- Díaz-Curbelo, A., Espin Andrade, R. A., & Gento Municio, Á. M. (2020). The Role of Fuzzy Logic to Dealing with Epistemic Uncertainty in Supply Chain Risk Assessment: Review Standpoints. *International Journal of Fuzzy Systems*, 22(8),

2769–2791. <https://doi.org/10.1007/s40815-020-00846-5>

- Ding, D., & Chou, M. C. (2015). Stowage planning for container ships: A heuristic algorithm to reduce the number of shifts. *European Journal of Operational Research*, 246(1), 242–249. <https://doi.org/10.1016/j.ejor.2015.03.044>
- Ding, Y., Yang, Y., Heilig, L., Lalla-Ruiz, E., & Voss, S. (2021). Deployment and retrofit strategy for rubber-tyred gantry cranes considering carbon emissions. *Computers and Industrial Engineering*, 161. <https://doi.org/10.1016/j.cie.2021.107645>
- Dkhil, H., Yassine, A., & Chabchoub, H. (2018). Multi-objective optimization of the integrated problem of location assignment and straddle carrier scheduling in maritime container terminal at import. *Journal of the Operational Research Society*, 69(2), 247–269. <https://doi.org/10.1057/s41274-017-0184-9>
- Dragović, B, Park, N. K., Radmilović, Z., & Maraš, V. (2005). Simulation modelling of ship-berth link with priority service. *Maritime Economics and Logistics*, 7(4), 316–335. <https://doi.org/10.1057/palgrave.mel.9100141>
- Dragović, Branislav, Tzannatos, E., & Park, N. K. (2017). Simulation modelling in ports and container terminals: literature overview and analysis by research field, application area and tool. *Flexible Services and Manufacturing Journal*, 29(1), 4–34. <https://doi.org/10.1007/s10696-016-9239-5>
- Dubrovsky, O., Levitin, G., & Penn, M. (2002). A genetic algorithm with a compact solution encoding for the container ship stowage problem. *Journal of Heuristics*, 8(6), 585–599. <https://doi.org/10.1023/A:1020373709350>
- Duinkerken, M B, Dekker, R., Kurstjens, S. T. G. L., Ottjes, J. A., & Dellaert, N. P. (2007). Comparing transportation systems for inter-terminal transport at the Maasvlakte container terminals. In *Container Terminals and Cargo Systems: Design, Operations Management, and Logistics Control Issues* (pp. 37–61).

Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-49550-5_3

- Duinkerken, Mark B., Dekker, R., Kurstjens, S. T. G. L., Ottjes, J. A., & Dellaert, N. P. (2006). Comparing transportation systems for inter-terminal transport at the Maasvlakte container terminals. *OR Spectrum*, 28(4), 469–493. <https://doi.org/10.1007/s00291-006-0056-1>
- Esmer, S., Cetin, I. B., & Tuna, O. (2010). A simulation for optimum terminal truck number in a turkish port based on lean and green concept. *Asian Journal of Shipping and Logistics*, 26(2), 277–296. [https://doi.org/10.1016/S2092-5212\(10\)80006-9](https://doi.org/10.1016/S2092-5212(10)80006-9)
- Fan, H., Ren, X., Guo, Z., & Li, Y. (2019). Truck scheduling problem considering carbon emissions under truck appointment system. *Sustainability (Switzerland)*, 11(22). <https://doi.org/10.3390/su11226256>
- Fazi, S. (2019). A decision-support framework for the stowage of maritime containers in inland shipping. *Transportation Research Part E: Logistics and Transportation Review*, 131, 1–23. <https://doi.org/10.1016/j.tre.2019.09.008>
- Fazlollahtabar, H., & Saidi-Mehrabad, M. (2015). Methodologies to Optimize Automated Guided Vehicle Scheduling and Routing Problems: A Review Study. *Journal of Intelligent and Robotic Systems: Theory and Applications*, 77(3–4), 525–545. <https://doi.org/10.1007/s10846-013-0003-8>
- Fernández, E., & Munoz-Marquez, M. (2022). New formulations and solutions for the strategic berth template problem. *European Journal of Operational Research*, 298(1), 99–117. <https://doi.org/10.1016/j.ejor.2021.06.062>
- Fibrianto, H. Y., Kang, B., Kim, B., Marbach, A., Buer, T., Haasis, H.-D., Hong, S., & Kim, K. H. (2020). A Simulation Study of a Storage Policy for a Container Terminal. *LDIC*, 1, 62–69. https://doi.org/10.1007/978-3-030-44783-0_6

- Filom, S., Amiri, A. M., & Razavi, S. (2022). Applications of machine learning methods in port operations – A systematic literature review. *Transportation Research Part E: Logistics and Transportation Review*, 161. <https://doi.org/10.1016/j.tre.2022.102722>
- Gerken, P., Kotzab, H., & Unseld, H. G. (2020). Resource Sharing as a Management Concept for Digital Logistics Terminals. *LDIC*, 1, 79–88. https://doi.org/10.1007/978-3-030-44783-0_8
- Gharehgozli, A., Gharehgozli, O., & Li, K. (2021). Mixed integer programming models on scheduling automated stacking cranes. *International Journal of Business Analytics*, 8(4), 11–33. <https://doi.org/10.4018/IJBAN.2021100102>
- Gharehgozli, A H, de Koster, R., & Jansen, R. (2017). Collaborative solutions for inter terminal transport. *International Journal of Production Research*, 55(21), 6527–6546. <https://doi.org/10.1080/00207543.2016.1262564>
- Gharehgozli, A H, Vernooij, F. G., & Zaerpour, N. (2017). A simulation study of the performance of twin automated stacking cranes at a seaport container terminal. *European Journal of Operational Research*, 261(1), 108–128. <https://doi.org/10.1016/j.ejor.2017.01.037>
- Gharehgozli, Amir Hossein, de Koster, R., & Jansen, R. (2017). Collaborative solutions for inter terminal transport. *International Journal of Production Research*, 55(21), 6527–6546. <https://doi.org/10.1080/00207543.2016.1262564>
- Gharehgozli, Amir Hossein, Roy, D., & De Koster, R. (2016). Sea container terminals: New technologies and or models. *Maritime Economics and Logistics*, 18(2), 103–140. <https://doi.org/10.1057/mel.2015.3>
- Golias, M M, Boile, M., & Theofanis, S. (2009). Berth scheduling by customer service differentiation: A multi-objective approach. *Transportation Research Part E: Logistics and Transportation Review*, 45(6), 878–892.

<https://doi.org/10.1016/j.tre.2009.05.006>

- Golias, M M, Saharidis, G. K., Boile, M., Theofanis, S., & Ierapetritou, M. G. (2009). The berth allocation problem: Optimizing vessel arrival time. *Maritime Economics and Logistics*, 11(4), 358–377. <https://doi.org/10.1057/mel.2009.12>
- Golias, Mihalis M. (2011). A bi-objective berth allocation formulation to account for vessel handling time uncertainty. *Maritime Economics and Logistics*, 13(4), 419–441. <https://doi.org/10.1057/mel.2011.21>
- Görge, M., & Freitag, M. (2020). On the Influence of Structural Complexity on Autonomously Controlled Automobile Terminal Processes. *LDIC*, 2, 42–51. https://doi.org/10.1007/978-3-030-44783-0_4
- Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
- Gunawardhana, J. A., Perera, H. N., & Thibbotuwawa, A. (2021). Rule-based dynamic container stacking to optimize yard operations at port terminals. *Maritime Transport Research*, 2(March), 100034. <https://doi.org/10.1016/j.martra.2021.100034>
- Guo, W., Ji, M., & Zhu, H. (2021). Multi-Period Coordinated Optimization on Berth Allocation and Yard Assignment in Container Terminals Based on Truck Route. *IEEE Access*, 9, 83124–83136. <https://doi.org/10.1109/ACCESS.2021.3086185>
- Guo, X., & Huang, S. Y. (2012). Dynamic space and time partitioning for yard crane workload management in container terminals. *Transportation Science*, 46(1), 134–148. <https://doi.org/10.1287/trsc.1110.0383>
- Güven, C., & Eliiyi, D. T. (2014). Trip allocation and stacking policies at a container terminal. *Transportation Research Procedia*, 3(July), 565–573.

<https://doi.org/10.1016/j.trpro.2014.10.035>

- Güven, C., & Eliiyi, D. T. (2018). Modelling and optimisation of online container stacking with operational constraints. *Maritime Policy and Management*, 46(2), 201–216. <https://doi.org/10.1080/03088839.2018.1450529>
- Hansen, P., Oğuz, C., & Mladenović, N. (2008). Variable neighborhood search for minimum cost berth allocation. *European Journal of Operational Research*, 191(3), 636–649. <https://doi.org/10.1016/j.ejor.2006.12.057>
- He, J, Chang, D., Mi, W., & Yan, W. (2010). A hybrid parallel genetic algorithm for yard crane scheduling. *Transportation Research Part E: Logistics and Transportation Review*, 46(1), 136–155. <https://doi.org/10.1016/j.tre.2009.07.002>
- He, J, Huang, Y., Yan, W., & Wang, S. (2015). Integrated internal truck, yard crane and quay crane scheduling in a container terminal considering energy consumption. *Expert Systems with Applications*, 42(5), 2464–2487. <https://doi.org/10.1016/j.eswa.2014.11.016>
- He, Junliang, Tan, C., & Zhang, Y. (2019). Yard crane scheduling problem in a container terminal considering risk caused by uncertainty. *Advanced Engineering Informatics*, 39(November 2018), 14–24. <https://doi.org/10.1016/j.aei.2018.11.004>
- Heilig, L., Lalla-Ruiz, E., & Voß, S. (2016). *Port-IO: A mobile cloud platform supporting context-aware inter-terminal truck routing*. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84995814982&partnerID=40&md5=f3c05d79f74cf3b9e4c5524bfe4792f6>
- Heilig, L., Lalla-Ruiz, E., & Voß, S. (2017a). Multi-objective inter-terminal truck routing. *Transportation Research Part E: Logistics and Transportation Review*, 106, 178–202. <https://doi.org/10.1016/j.tre.2017.07.008>

- Heilig, L., Lalla-Ruiz, E., & Voß, S. (2017b). Multi-objective inter-terminal truck routing. *Transportation Research Part E: Logistics and Transportation Review*, 106, 178–202. <https://doi.org/10.1016/j.tre.2017.07.008>
- Heilig, L., Lalla-Ruiz, E., & Voß, S. (2017c). port-IO: an integrative mobile cloud platform for real-time inter-terminal truck routing optimization. *Flexible Services and Manufacturing Journal*, 29(3–4), 504–534. <https://doi.org/10.1007/s10696-017-9280-z>
- Heilig, L., & Voß, S. (2017). Inter-terminal transportation: an annotated bibliography and research agenda. *Flexible Services and Manufacturing Journal*, 29(1), 35–63. <https://doi.org/10.1007/s10696-016-9237-7>
- Hendriks, M. P. M., Armbruster, D., Laumanns, M., Lefebvre, E., & Udding, J. T. (2012). Strategic allocation of cyclically calling vessels for multi-terminal container operators. *Flexible Services and Manufacturing Journal*, 24(3), 248–273. <https://doi.org/10.1007/s10696-011-9120-5>
- Homayouni, S. M., & Tang, S. H. (2013). Multi objective optimization of coordinated scheduling of cranes and vehicles at container terminals. *Mathematical Problems in Engineering*, 2013. <https://doi.org/10.1155/2013/746781>
- Homayouni, S. M., Tang, S. H., & Motlagh, O. (2014). A genetic algorithm for optimization of integrated scheduling of cranes, vehicles, and storage platforms at automated container terminals. *Journal of Computational and Applied Mathematics*, 270, 545–556. <https://doi.org/10.1016/j.cam.2013.11.021>
- Homayouni, S. M., Vasili, M. R., Kazemi, S. M., & Tang, S. H. (2012). Integrated scheduling of SP-AS/RS and handling equipment in automated container terminals. *42nd International Conference on Computers and Industrial Engineering 2012, CIE 2012*, 2, 781–792. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84892996615&partnerID=40&md5=7828794f3b701692f5dc31ce69e9f78b>

- Hsu, H.-P., Tai, H.-H., Wang, C.-N., & Chou, C.-C. (2021). Scheduling of collaborative operations of yard cranes and yard trucks for export containers using hybrid approaches. *Advanced Engineering Informatics*, 48. <https://doi.org/10.1016/j.aei.2021.101292>
- Hsu, H.-P., Wang, C.-N., Fu, H.-P., & Dang, T.-T. (2021). Joint scheduling of yard crane, yard truck, and quay crane for container terminal considering vessel stowage plan: An integrated simulation-based optimization approach. *Mathematics*, 9(18). <https://doi.org/10.3390/math9182236>
- Hu, Q, Corman, F., Wiegmans, B., & Lodewijks, G. (2018). A tabu search algorithm to solve the integrated planning of container on an inter-terminal network connected with a hinterland rail network. *Transportation Research Part C: Emerging Technologies*, 91, 15–36. <https://doi.org/10.1016/j.trc.2018.03.019>
- Hu, Q, Wiegmans, B., Corman, F., & Lodewijks, G. (2019). Critical literature review into planning of inter-terminal transport: In port areas and the hinterland. *Journal of Advanced Transportation*, 2019. <https://doi.org/10.1155/2019/9893615>
- Hu, Qu, Luan, X., Corman, F., & Lodewijks, G. (2016). A Tabu Search Algorithm for Inter-terminal Container Transport. *IFAC-PapersOnLine*, 49(3), 413–418. <https://doi.org/10.1016/j.ifacol.2016.07.069>
- Hu, Qu, Wiegmans, B., Corman, F., & Lodewijks, G. (2019a). Critical literature review into planning of inter-terminal transport: In port areas and the hinterland. *Journal of Advanced Transportation*, 2019. <https://doi.org/10.1155/2019/9893615>
- Hu, Qu, Wiegmans, B., Corman, F., & Lodewijks, G. (2019b). Integration of inter-terminal transport and hinterland rail transport. *Flexible Services and Manufacturing Journal*, 31(3), 807–831. <https://doi.org/10.1007/s10696-019-09345-8>

- Hwan Kim, K., & Bae Kim, H. (1999). *Segregating space allocation models for container inventories in port container terminals*. 59(1), 415–423. [https://doi.org/10.1016/S0925-5273\(98\)00028-0](https://doi.org/10.1016/S0925-5273(98)00028-0)
- Imai, A., Nishimura, E., & Papadimitriou, S. (2008). Berthing ships at a multi-user container terminal with a limited quay capacity. *Transportation Research Part E: Logistics and Transportation Review*, 44(1), 136–151. <https://doi.org/10.1016/j.tre.2006.05.002>
- Imran, M. M. H., Ayob, A. F., & Jamaludin, S. (2021). Applications of artificial intelligence in ship berthing: A review. *Indian Journal of Geo-Marine Sciences*, 50(11), 855–863. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85127586449&partnerID=40&md5=0e57ecfe987cfc0d7bbe0639914faaed>
- Iris, Ç., Pacino, D., Ropke, S., & Larsen, A. (2015). Integrated Berth Allocation and Quay Crane Assignment Problem: Set partitioning models and computational results. *Transportation Research Part E: Logistics and Transportation Review*, 81, 75–97. <https://doi.org/10.1016/j.tre.2015.06.008>
- Islam, S. (2017). Empty truck trips problem at container terminals: A review of causes, benefits, constraints and solution approaches. *Business Process Management Journal*, 23(2), 248–274. <https://doi.org/10.1108/BPMJ-06-2015-0086>
- Jacomino, L. A., Pérez, C. M., & Pérez, R. B. (2017). Literature review on objective functions for stacking of containers. *Inteligencia Artificial*, 20(60), 28–50. <https://doi.org/10.4114/intartif.vol20iss60pp28-50>
- Ji, M., Guo, W., Zhu, H., & Yang, Y. (2015). Optimization of loading sequence and rehandling strategy for multi-quay crane operations in container terminals. *Transportation Research Part E: Logistics and Transportation Review*, 80, 1–19. <https://doi.org/10.1016/j.tre.2015.05.004>
- Jin, B., Zhu, W., & Lim, A. (2014). Solving the container relocation problem by an

- improved greedy look-ahead heuristic. *European Journal of Operational Research*, 240(3), 837–847. <https://doi.org/10.1016/j.ejor.2014.07.038>
- Jin, X., & Kim, K. H. (2018). Collaborative inter-terminal transportation of containers. *Industrial Engineering and Management Systems*, 17(3), 407–416. <https://doi.org/10.7232/iems.2018.17.3.407>
- Kalmar. (2013). *Boosting efficiency*.
- Karakas, S., Kirmizi, M., & Kocaoglu, B. (2021). Yard block assignment, internal truck operations, and berth allocation in container terminals: introducing carbon-footprint minimisation objectives. *Maritime Economics and Logistics*, 23(4), 750–771. <https://doi.org/10.1057/s41278-021-00186-7>
- Kastner, M., Nellen, N., Schwientek, A., & Jahn, C. (2021). Integrated simulation-based optimization of operational decisions at container terminals. *Algorithms*, 14(2). <https://doi.org/10.3390/a14020042>
- Kastner, Marvin, Lange, A.-K., & Jahn, C. (2020). Expansion Planning at Container Terminals. *LDIC*, 4(D), 114–123. https://doi.org/10.1007/978-3-030-44783-0_11
- Kaveshgar, N., & Huynh, N. (2015a). A genetic algorithm heuristic for solving the quay crane scheduling problem with time windows. *Maritime Economics and Logistics*, 17(4), 515–537. <https://doi.org/10.1057/mel.2014.31>
- Kaveshgar, N., & Huynh, N. (2015b). Integrated quay crane and yard truck scheduling for unloading inbound containers. *International Journal of Production Economics*, 159, 168–177. <https://doi.org/10.1016/j.ijpe.2014.09.028>
- Kenan, N., Jebali, A., & Diabat, A. (2022). The integrated quay crane assignment and scheduling problems with carbon emissions considerations. *Computers and Industrial Engineering*, 165. <https://doi.org/10.1016/j.cie.2021.107734>

- Kim, A., Park, H.-J., Park, J.-H., & Cho, S.-W. (2021). Rescheduling strategy for berth planning in container terminals: An empirical study from Korea. *Journal of Marine Science and Engineering*, 9(5). <https://doi.org/10.3390/jmse9050527>
- Kizilay, D., & Eliiyi, D. T. (2021). A comprehensive review of quay crane scheduling, yard operations and integrations thereof in container terminals. *Flexible Services and Manufacturing Journal*, 33(1). <https://doi.org/10.1007/s10696-020-09385-5>
- Kizilay, Damla, & Eliiyi, D. T. (2020). A comprehensive review of quay crane scheduling, yard operations and integrations thereof in container terminals. In *Flexible Services and Manufacturing Journal* (Issue 0123456789). Springer US. <https://doi.org/10.1007/s10696-020-09385-5>
- Kon, W. K., Abdul Rahman, N. S. F., Md Hanafiah, R., & Abdul Hamid, S. (2020). The global trends of automated container terminal: a systematic literature review. *Maritime Business Review*, 6(3), 206–233. <https://doi.org/10.1108/MABR-03-2020-0016>
- Kong, L., Ji, M., & Gao, Z. (2021). Joint optimization of container slot planning and truck scheduling for tandem quay cranes. *European Journal of Operational Research*, 293(1), 149–166. <https://doi.org/10.1016/j.ejor.2020.12.005>
- Kurniawan, F., Musa, S. N., Moin, N. H., & Sahroni, T. R. (2022). A Systematic Review on Factors Influencing Container Terminal's Performance. *Operations and Supply Chain Management*, 15(2), 174–192. <https://doi.org/10.31387/oscm0490339>
- Laik, N., & Hadjiconstantinou, E. (2008). Container assignment and yard crane deployment in a container terminal: A case study. *Maritime Economics and Logistics*, 10(1–2), 90–107. <https://doi.org/10.1057/palgrave.mel.9100193>
- Larsen, R., & Pacino, D. (2021). A heuristic and a benchmark for the stowage planning problem. *Maritime Economics and Logistics*, 23(1), 94–122.

<https://doi.org/10.1057/s41278-020-00172-5>

- Lau, H. Y. K., & Zhao, Y. (2008). Integrated scheduling of handling equipment at automated container terminals. *Annals of Operations Research*, *159*(1), 373–394. <https://doi.org/10.1007/s10479-007-0262-5>
- Lau, Y., Ducruet, C., Ng, A. K. Y., & Fu, X. (2017). Across the waves: a bibliometric analysis of container shipping research since the 1960s. *Maritime Policy and Management*, *44*(6), 667–684. <https://doi.org/10.1080/03088839.2017.1311425>
- Lee, C.-Y., & Song, D.-P. (2017). Ocean container transport in global supply chains: Overview and research opportunities. *Transportation Research Part B: Methodological*, *95*, 442–474. <https://doi.org/10.1016/j.trb.2016.05.001>
- Lee, D.-H., Jin, J. G., & Chen, J. H. (2012). Terminal and yard allocation problem for a container transshipment hub with multiple terminals. *Transportation Research Part E: Logistics and Transportation Review*, *48*(2), 516–528. <https://doi.org/10.1016/j.tre.2011.09.004>
- Lee, D.-H., Wang, H. Q., & Miao, L. (2008). Quay crane scheduling with non-interference constraints in port container terminals. *Transportation Research Part E: Logistics and Transportation Review*, *44*(1), 124–135. <https://doi.org/10.1016/j.tre.2006.08.001>
- Legato, P., Canonaco, P., & Mazza, R. M. (2009). Yard crane management by simulation and optimisation. *Maritime Economics and Logistics*, *11*(1), 36–57. <https://doi.org/10.1057/mel.2008.23>
- Li, C.-L., & Vairaktarakis, G. L. (2004). Loading and unloading operations in container terminals. *IIE Transactions (Institute of Industrial Engineers)*, *36*(4), 287–297. <https://doi.org/10.1080/07408170490247340>
- Li, C., Lu, Z., Han, X., Zhang, Y., & Wang, L. (2015). Integrated scheduling of a

container handling system with simultaneous loading and discharging operations. *Engineering Optimization*, 48(3), 397–414. <https://doi.org/10.1080/0305215X.2015.1012077>

- Li, H., Peng, J., Wang, X., & Wan, J. (2021). Integrated Resource Assignment and Scheduling Optimization with Limited Critical Equipment Constraints at an Automated Container Terminal. *IEEE Transactions on Intelligent Transportation Systems*, 22(12), 7607–7618. <https://doi.org/10.1109/TITS.2020.3005854>
- Li, J., Zhang, Y., Ma, J., & Ji, S. (2018). Multi-Port Stowage Planning for Inland Container Liner Shipping Considering Weight Uncertainties. *IEEE Access*, 6(c), 66468–66480. <https://doi.org/10.1109/ACCESS.2018.2878308>
- Li, N., Haralambides, H., Sheng, H., & Jin, Z. (2022). A new vocation queuing model to optimize truck appointments and yard handling-equipment use in dual transactions systems of container terminals. *Computers and Industrial Engineering*, 169. <https://doi.org/10.1016/j.cie.2022.108216>
- Li, S., Negenborn, R. R., & Lodewijks, G. (2016). A logic-based benders decomposition approach to improve coordination of inland vessels for inter-terminal transport: Vol. 9855 LNCS (V. S., P. A., & R. M. (eds.); pp. 96–115). Springer Verlag. https://doi.org/10.1007/978-3-319-44896-1_7
- Li, Shijie, Negenborn, R. R., & Lodewijks, G. (2015). A two phase approach for inter-terminal transport of inland vessels using preference-based and utility-based coordination rules. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 9335, 281–297. https://doi.org/10.1007/978-3-319-24264-4_20
- Li, X., Peng, Y., Huang, J., Wang, W., & Song, X. (2021). Simulation study on terminal layout in automated container terminals from efficiency, economic and environment perspectives. *Ocean and Coastal Management*, 213. <https://doi.org/10.1016/j.ocecoaman.2021.105882>

- Li, Y., Chang, D., Gao, Y., Zou, Y., & Bao, C. (2021). Automated Container Terminal Production Operation and Optimization via an AdaBoost-Based Digital Twin Framework. *Journal of Advanced Transportation*, 2021. <https://doi.org/10.1155/2021/1936764>
- Liu, C. (2020). Iterative heuristic for simultaneous allocations of berths, quay cranes, and yards under practical situations. *Transportation Research Part E: Logistics and Transportation Review*, 133. <https://doi.org/10.1016/j.tre.2019.11.008>
- Liu, C., Zheng, L., & Zhang, C. (2016). Behavior perception-based disruption models for berth allocation and quay crane assignment problems. *Computers and Industrial Engineering*, 97, 258–275. <https://doi.org/10.1016/j.cie.2016.04.008>
- Longo, F. (2019). Sustainability in logistic hubs: A decision support system for investigating green practices at container terminals. *International Journal of Simulation and Process Modelling*, 14(3), 234–250. <https://doi.org/10.1504/IJSPM.2019.101008>
- Lu, C., Zeng, B., & Liu, S. (2020). A Study on the Block Relocation Problem: Lower Bound Derivations and Strong Formulations. *IEEE Transactions on Automation Science and Engineering*, 17(4), 1829–1853. <https://doi.org/10.1109/TASE.2020.2979868>
- Lu, H., & Wang, S. (2019). A study on multi-ASC scheduling method of automated container terminals based on graph theory. *Computers and Industrial Engineering*, 129, 404–416. <https://doi.org/10.1016/j.cie.2019.01.050>
- Lu, H., Zhen, H., Huang, Y., & Yan, W. (2013). Assembly sequence planning of quayside container crane based on improved immune algorithm. *Journal of Applied Sciences*, 13(22), 4922–4928. <https://doi.org/10.3923/jas.2013.4922.4928>
- Lu, Y. (2021). The Three-Stage Integrated Optimization of Automated Container

Terminal Scheduling Based on Improved Genetic Algorithm. *Mathematical Problems in Engineering*, 2021. <https://doi.org/10.1155/2021/6792137>

Lujan, E., Vergara, E., Rodriguez-Melquiades, J., Jiménez-Carrión, M., Sabino-Escobar, C., & Gutierrez, F. (2021). A fuzzy optimization model for the berth allocation problem and quay crane allocation problem(BAP + QCAP) with n quays. *Journal of Marine Science and Engineering*, 9(2), 1–15. <https://doi.org/10.3390/jmse9020152>

Luna, J. H., Mar-Ortiz, J., Gracia, M. D., & Morales-Ramírez, D. (2018). An efficiency analysis of cargo-handling operations at container terminals. *Maritime Economics and Logistics*, 20(2), 190–210. <https://doi.org/10.1057/s41278-017-0074-8>

Lunin, A., & Glock, C. H. (2021). Systematic review of Kinect-based solutions for physical risk assessment in manual materials handling in industrial and laboratory environments. *Computers and Industrial Engineering*, 162. <https://doi.org/10.1016/j.cie.2021.107660>

Ma, H.-L., Wong, C. W.-H., Leung, L. C., & Chung, S.-H. (2020). Facility sharing in business-to-business model: A real case study for container terminal operators in Hong Kong port. *International Journal of Production Economics*, 221. <https://doi.org/10.1016/j.ijpe.2019.09.004>

Madsen, P. P. (2015). *Soft Computing*. <https://slideplayer.com/slide/4180900/>

Maloni, M., & Jackson, E. C. (2005). North American container port capacity: A literature review. *Transportation Journal*, 44(2), 16–36. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-21544447808&partnerID=40&md5=3b3b5bfea4d084a6d09a371296072fbc>

Mar-Ortiz, J., Castillo-García, N., & Gracia, M. D. (2019). A decision support system for a capacity management problem at a container terminal. *International Journal*

of *Production Economics*. <https://doi.org/10.1016/j.ijpe.2019.09.023>

- Mi, C., Huang, Y., Fu, C., Zhang, Z., & Postolache, O. (2021). Vision-Based Measurement: Actualities and Developing Trends in Automated Container Terminals. *IEEE Instrumentation and Measurement Magazine*, 24(4), 65–76. <https://doi.org/10.1109/MIM.2021.9448257>
- Mishra, N., Roy, D., & Van Ommeren, J. K. (2017). A stochastic model for interterminal container transportation. *Transportation Science*, 51(1), 67–87. <https://doi.org/10.1287/trsc.2016.0726>
- Moini, N., Boile, M., Theofanis, S., & Laventhal, W. (2012). Estimating the determinant factors of container dwell times at seaports. *Maritime Economics and Logistics*, 14(2), 162–177. <https://doi.org/10.1057/mel.2012.3>
- Monaco, M. F., Sammarra, M., & Sorrentino, G. (2014). The terminal-oriented ship stowage planning problem. *European Journal of Operational Research*, 239(1), 256–265. <https://doi.org/10.1016/j.ejor.2014.05.030>
- Muravev, D., Rakhmangulov, A., Hu, H., & Zhou, H. (2019). The introduction to system dynamics approach to operational efficiency and sustainability of dry port's main parameters. *Sustainability*, 11(8). <https://doi.org/10.3390/su11082413>
- Nabeshima, Y., Kiryu, T., & Arakaki, M. (1978). HITACHI AUTOMATED CONTAINER TERMINAL SYSTEM. *Hitachi Review*, 27(6), 295–300. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-0018020280&partnerID=40&md5=7e25aa3babfe2e68e530752ca58432ee>
- Nasution, N. K. G., Jin, X., & Singgih, I. K. (2022). Classifying games in container terminal logistics field: A systematic review. *Entertainment Computing*, 40. <https://doi.org/10.1016/j.entcom.2021.100465>

- Navis. (2014). *Navis N4 XPS Advanced Vessel Planning and Control*.
- Navis. (2019). *WHAT'S NEW IN N4 RELEASE 3.8. June*, 1–9.
- Negenborn, R. (2014). Analysis for Inter Terminal Transportation demand scenarios for the Maasvlakte I and II in 2030. *Delft University of Technology*. <http://inter-terminal.net/itt-reports/ITT - D3.1 - Evaluation - Cost and benefits.pdf>
- Nellen, N., Grafelmann, M., Ziegenbein, J., Lange, A.-K., Kreutzfeldt, J., & Jahn, C. (2020). Literature Classification on Container Transport Systems for Inter-terminal Transportation. *LDIC*, 52–61. https://doi.org/10.1007/978-3-030-44783-0_5
- Nieuwkoop, F., Corman, F., Negenborn, R. R., Duinkerken, M. B., Van Schuylenburg, M., & Lodewijks, G. (2014). Decision support for vehicle configuration determination in Inter Terminal Transport system design. *Proceedings of the 11th IEEE International Conference on Networking, Sensing and Control, ICNSC 2014*, 613–618. <https://doi.org/10.1109/ICNSC.2014.6819696>
- Nishimura, E., Imai, A., & Papadimitriou, S. (2001). Berth allocation planning in the public berth system by genetic algorithms. *European Journal of Operational Research*, 131(2), 282–292. [https://doi.org/10.1016/S0377-2217\(00\)00128-4](https://doi.org/10.1016/S0377-2217(00)00128-4)
- Niu, B., Liu, Q., Wang, Z., Tan, L., & Li, L. (2021). Multi-objective bacterial colony optimization algorithm for integrated container terminal scheduling problem. *Natural Computing*, 20(1), 89–104. <https://doi.org/10.1007/s11047-019-09781-3>
- Notteboom, T., Pallis, A., & Rodrigue, J.-P. (2022). *Port Economics, Management and Policy*. <https://doi.org/doi.org/10.4324/9780429318184>
- Notteboom, T., Parola, F., & Satta, G. (2014). *Partim transshipment volumes*.
- OECD & EUIPO. (2021). *Misuse of Containerized Maritime Shipping in the Global*

Trade of Counterfeits. <https://doi.org/10.1787/e39d8939-en>

- Pacino, D. (2018). Crane Intensity and Block Stowage Strategies in Stowage Planning. *International Conference on Computational Logistics, 11184*, 191–206. <https://doi.org/10.1007/978-3-030-00898-7>
- Parreño, F., Pacino, D., & Alvarez-Valdes, R. (2016). A GRASP algorithm for the container stowage slot planning problem. *Transportation Research Part E: Logistics and Transportation Review*, *94*, 141–157. <https://doi.org/10.1016/j.tre.2016.07.011>
- Perera, H. N., Fahimnia, B., & Tokar, T. (2020). Inventory and ordering decisions: a systematic review on research driven through behavioral experiments. *International Journal of Operations and Production Management*, *40*(7–8), 997–1039. <https://doi.org/10.1108/IJOPM-05-2019-0339>
- Perera, H. N., Hurley, J., Fahimnia, B., & Reisi, M. (2019). The human factor in supply chain forecasting: A systematic review. *European Journal of Operational Research*, *274*(2), 574–600. <https://doi.org/10.1016/j.ejor.2018.10.028>
- Perera, H. N., & Perera, H. Y. R. (2022). Applications of Pixel Oriented Mobility Modelling in Transport & Logistics. In M. Freitag, A. Kinra, H. Kotzab, & N. Megow (Eds.), *Dynamics in Logistics* (pp. 337–348). Springer International Publishing.
- Petering, M. E. H. (2011). Decision support for yard capacity, fleet composition, truck substitutability, and scalability issues at seaport container terminals. *Transportation Research Part E: Logistics and Transportation Review*, *47*(1), 85–103. <https://doi.org/10.1016/j.tre.2010.07.007>
- Phruksaphanrat, B., & Tanthatemee, T. (2012). Fuzzy inventory control system for uncertain demand and supply. *Lecture Notes in Engineering and Computer Science*, *2196*(March 2012), 1224–1229.

- Raman, H., & Ramkumar, G. (1988). Simulation model for analysis of waiting time of ships and berth occupancy in ports. *Journal of the Institution of Engineers (India), Part MR: Marine Engineering Division*, 68 pt 2, 35–40. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-0024001173&partnerID=40&md5=ce69c5421785cf8952742c9c9d3fd00d>
- Reefke, H. (2010). *Simulation of container traffic flows at a metropolitan seaport: Vol. 46 LNBI* (pp. 420–431). Springer Verlag. https://doi.org/10.1007/978-3-642-12494-5_37
- Rego, C., & Roucairol, C. (1995). Using Tabu search for solving a dynamic multi-terminal truck dispatching problem. *European Journal of Operational Research*, 83(2), 411–429. [https://doi.org/10.1016/0377-2217\(95\)00016-J](https://doi.org/10.1016/0377-2217(95)00016-J)
- Ren, W. (2012). Yard crane scheduling with time window and dynamic demand strategy based on resource sharing. *International Journal of Digital Content Technology and Its Applications*, 6(8), 213–221. <https://doi.org/10.4156/jdcta.vol6.issue8.25>
- Rodrigues, F., & Agra, A. (2021). An exact robust approach for the integrated berth allocation and quay crane scheduling problem under uncertain arrival times. *European Journal of Operational Research*. <https://doi.org/10.1016/j.ejor.2021.03.016>
- Rodrigues, F., & Agra, A. (2022). Berth allocation and quay crane assignment/scheduling problem under uncertainty: A survey. *European Journal of Operational Research*. <https://doi.org/10.1016/j.ejor.2021.12.040>
- Safaeian, M., Etebari, F., & Vahdani, B. (2021). An integrated quay crane assignment and scheduling problem with several contractors in container terminals. *Scientia Iranica*, 28(2), 1030–1048. <https://doi.org/10.24200/sci.2019.53338.3191>
- Saginaw II, D. J., & Perakis, A. N. (1989). Decision support system for containership

stowage planning. *Marine Technology and SNAME News*, 26(1), 47–61.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-0024479859&partnerID=40&md5=b1e5d28da39d1282a39cba366f7bc4b9>

Salido, M. A., Rodriguez-Molins, M., & Barber, F. (2011). Integrated intelligent techniques for remarkshaling and berthing in maritime terminals. *Advanced Engineering Informatics*, 25(3), 435–451.
<https://doi.org/10.1016/j.aei.2010.10.001>

Schepler, X., Balev, S., Michel, S., & Sanlaville, É. (2017). Global planning in a multi-terminal and multi-modal maritime container port. *Transportation Research Part E: Logistics and Transportation Review*, 100, 38–62.
<https://doi.org/10.1016/j.tre.2016.12.002>

Schroer, H. J. L., Corman, F., Duinkerken, M. B., Negenborn, R. R., & Lodewijks, G. (2015). *Evaluation of inter terminal transport configurations at Rotterdam Maasvlakte using discrete event simulation* (T. A., Y. L., D. S. Y., & R. I. O. (eds.); Vols 2015-Janua, pp. 1771–1782). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/WSC.2014.7020026>

Seth, S., & Feng, Q. (2020). Assessment of port efficiency using stepwise selection and window analysis in data envelopment analysis. *Maritime Economics and Logistics*, 22(4), 536–561. <https://doi.org/10.1057/s41278-020-00155-6>

Sha, M., Notteboom, T., Zhang, T., Zhou, X., & Qin, T. (2021). Simulation model to determine ratios between quay, yard and intra-terminal transfer equipment in an integrated container handling system. *Journal of International Logistics and Trade*, 19(1), 1–18. <https://doi.org/10.24006/JILT.2021.19.1.001>

Shang, X. T., Cao, J. X., & Ren, J. (2016). A robust optimization approach to the integrated berth allocation and quay crane assignment problem. *Transportation Research Part E: Logistics and Transportation Review*, 94, 44–65.
<https://doi.org/10.1016/j.tre.2016.06.011>

- Shields, J. J. (1984). CONTAINERSHIP STOWAGE: A COMPUTER-AIDED PREPLANNING SYSTEM. *Marine Technology*, 21(4), 370–383. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-0021513351&partnerID=40&md5=f5abd046469dfd83d60442f8eedbe3bb>
- Silberholz, M. B., Golden, B. L., & Baker, E. K. (1991). Using simulation to study the impact of work rules on productivity at marine container terminals. *Computers and Operations Research*, 18(5), 433–452. [https://doi.org/10.1016/0305-0548\(91\)90020-R](https://doi.org/10.1016/0305-0548(91)90020-R)
- Sislioglu, M., Celik, M., & Ozkaynak, S. (2019). A simulation model proposal to improve the productivity of container terminal operations through investment alternatives. *Maritime Policy and Management*, 46(2), 156–177. <https://doi.org/10.1080/03088839.2018.1481544>
- SLPA. (2015). *Sri Lanka Ports Authority Annual Report 2015*.
- SLPA. (2016). Forging Ahead. *Manufacturing Engineer*, 69(1), 38–39. <https://doi.org/10.1049/me:19900025>
- Song, X., Jin, J. G., & Hu, H. (2021). Planning shuttle vessel operations in large container terminals based on waterside congestion cases. *Maritime Policy and Management*, 48(7), 988–1009. <https://doi.org/10.1080/03088839.2020.1719443>
- Spruijt, A., Van Duin, R., & Rieck, F. (2017). *Towards an autonomous system for handling inter-terminal container transport*. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85050103314&partnerID=40&md5=023d8b5f076d8550da0970b01c0c1938>
- Stahlbock, R., & Voß, S. (2007). Operations research at container terminals: A literature update. *OR Spectrum*, 30(1), 1–52. <https://doi.org/10.1007/s00291-007-0100-9>

- Stahlbock, Robert, & Voß, S. (2007). Operations research at container terminals: A literature update. *OR Spectrum*, 30(1), 1–52. <https://doi.org/10.1007/s00291-007-0100-9>
- Steenken, D., Voß, S., & Stahlbock, R. (2004). Container terminal operation and operations research - A classification and literature review. *OR Spectrum*, 26(1), 3–49. <https://doi.org/10.1007/s00291-003-0157-z>
- Sun, D., Tang, L., Baldacci, R., & Lim, A. (2021). An exact algorithm for the unidirectional quay crane scheduling problem with vessel stability. *European Journal of Operational Research*, 291(1), 271–283. <https://doi.org/10.1016/j.ejor.2020.09.033>
- Svitek, M., Kosheleva, O., & Kreinovich, V. (2021). *As Complexity Rises, Meaningful Statements Lose Precision - but Why?*
- Tan, C., Yan, W., & Yue, J. (2021). Quay crane scheduling in automated container terminal for the trade-off between operation efficiency and energy consumption. *Advanced Engineering Informatics*, 48. <https://doi.org/10.1016/j.aei.2021.101285>
- Tan, Z., Zhang, Q., Yuan, Y., & Jin, Y. (2022). A decision method on yard cranes transformation and deployment in green ports. *International Transactions in Operational Research*, 29(1), 323–346. <https://doi.org/10.1111/itor.13027>
- Tierney, K, Voß, S., & Stahlbock, R. (2014). A mathematical model of inter-terminal transportation. *European Journal of Operational Research*, 235(2), 448–460. <https://doi.org/10.1016/j.ejor.2013.07.007>
- Tierney, Kevin, Voß, S., & Stahlbock, R. (2014). A mathematical model of inter-terminal transportation. *European Journal of Operational Research*, 235(2), 448–460. <https://doi.org/10.1016/j.ejor.2013.07.007>

- Ting, S.-C., Wang, J.-S., Kao, S.-L., & Pitty, F. M. (2010). Categorized stacking models for import containers in port container terminals. *Maritime Economics and Logistics*, 12(2), 162–177. <https://doi.org/10.1057/mel.2010.4>
- Torkjazi, M., Huynh, N., & Shiri, S. (2018). Truck appointment systems considering impact to drayage truck tours. *Transportation Research Part E: Logistics and Transportation Review*, 116, 208–228. <https://doi.org/10.1016/j.tre.2018.06.003>
- Uesugi, M., Irohara, T., & Yoshimoto, K. (2001). A Study on Vehicle Routing Scheduling Problem under Limited Number of Berths. *Nihon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, 67(662), 3345–3350. <https://doi.org/10.1299/kikaic.67.3345>
- UNCTAD. (2019). *The Review of Maritime Transport 2019* (Issue October). https://unctad.org/en/PublicationsLibrary/rmt2019_en.pdf
- UNCTAD. (2020). *Review of Maritime Transport 2020*. https://unctad.org/system/files/official-document/rmt2020_en.pdf
- UNCTAD. (2021). *Review of Maritime Report*. http://unctad.org/en/PublicationsLibrary/rmt2015_en.pdf
- Unsal, O., & Oguz, C. (2013). Constraint programming approach to quay crane scheduling problem. *Transportation Research Part E: Logistics and Transportation Review*, 59, 108–122. <https://doi.org/10.1016/j.tre.2013.08.006>
- Ursavas, E. (2014). A decision support system for quayside operations in a container terminal. *Decision Support Systems*, 59(1), 312–324. <https://doi.org/10.1016/j.dss.2014.01.003>
- Ursavas, E. (2017). Crane allocation with stability considerations. *Maritime Economics and Logistics*, 19(2), 379–401. <https://doi.org/10.1057/mel.2015.35>

- Vahdani, B., Mansour, F., Soltani, M., & Veysmoradi, D. (2019). Bi-objective optimization for integrating quay crane and internal truck assignment with challenges of trucks sharing. *Knowledge-Based Systems*, *163*, 675–692. <https://doi.org/10.1016/j.knosys.2018.09.025>
- van-Eck, N. J., & Waltman, L. (2014). Measuring Scholarly Impact. In *Measuring Scholarly Impact*. <https://doi.org/10.1007/978-3-319-10377-8>
- van Hee, K. M., & Wijbrands, R. J. (1988). Decision support system for container terminal planning. *European Journal of Operational Research*, *34*(3), 262–272. [https://doi.org/10.1016/0377-2217\(88\)90147-6](https://doi.org/10.1016/0377-2217(88)90147-6)
- Vis, I. F. A., & Carlo, H. J. (2010). Sequencing two cooperating automated stacking cranes in a container terminal. *Transportation Science*, *44*(2), 169–182. <https://doi.org/10.1287/trsc.1090.0298>
- Vis, I. F. A., & De Koster, R. (2003). Transshipment of containers at a container terminal: An overview. *European Journal of Operational Research*, *147*(1), 1–16. [https://doi.org/10.1016/S0377-2217\(02\)00293-X](https://doi.org/10.1016/S0377-2217(02)00293-X)
- Wan, Y.-W., Liu, J., & Tsai, P.-C. (2009). The assignment of storage locations to containers for a container stack. *Naval Research Logistics*, *56*(8), 699–713. <https://doi.org/10.1002/nav.20373>
- Wang, G. W. Y., Pallis, A. A., & Notteboom, T. E. (2014). Incentives in cruise terminal concession contracts. *Research in Transportation Business and Management*, *13*, 36–42. <https://doi.org/10.1016/j.rtbm.2014.11.002>
- Wasesa, M., Ramadhan, F. I., Nita, A., Belgiawan, P. F., & Mayangsari, L. (2021). Impact of overbooking reservation mechanism on container terminal's operational performance and greenhouse gas emissions. *Asian Journal of Shipping and Logistics*, *37*(2), 140–148. <https://doi.org/10.1016/j.ajsl.2021.01.002>

- Weerasinghe, B. A., Perera, H. N., & Kießner, P. (2021). *Planning decision alterations and container terminal efficiency*. <https://doi.org/10.1108/MABR-04-2021-0035>
- Weerasinghe, B. A., Perera, H. N., & Kießner, P. (2022). *Planning decision alterations and container terminal efficiency*. <https://doi.org/https://doi.org/10.1108/MABR-04-2021-0035>
- Weerasinghe, B., Perera, H. N., & Kiessner, P. (2021). *Effects of Altering Planning Decisions on The Efficiency of Container Terminals*. 1–4.
- Wilson, I. D., & Roach, P. A. (1999). Principles of combinatorial optimization applied to container-ship stowage planning. *Journal of Heuristics*, 5(4), 403–418. <https://doi.org/10.1023/A:1009680305670>
- Xiang, X., & Liu, C. (2021). An almost robust optimization model for integrated berth allocation and quay crane assignment problem. *Omega (United Kingdom)*, 104. <https://doi.org/10.1016/j.omega.2021.102455>
- Xiao, Q., Li, F., Ge, X., & Yu, X. (2022). *Research on scheduling optimization of internal trucks for inter-terminal transportation*. 2277(1). <https://doi.org/10.1088/1742-6596/2277/1/012005>
- Xiao, Z., Xia, S., Gong, K., & Li, D. (2012). The trapezoidal fuzzy soft set and its application in MCDM. *Applied Mathematical Modelling*, 36(12), 5844–5855. <https://doi.org/10.1016/j.apm.2012.01.036>
- Xin, J., Negenborn, R. R., & Lodewijks, G. (2014). Energy-aware control for automated container terminals using integrated flow shop scheduling and optimal control. *Transportation Research Part C: Emerging Technologies*, 44, 214–230. <https://doi.org/10.1016/j.trc.2014.03.014>
- Xu, B., Jie, D., Li, J., Yang, Y., Wen, F., & Song, H. (2021). Integrated scheduling optimization of U-shaped automated container terminal under loading and

- unloading mode. *Computers and Industrial Engineering*, 162. <https://doi.org/10.1016/j.cie.2021.107695>
- Xu, B., Liu, X., Yang, Y., Li, J., & Postolache, O. (2021). Optimization for a multi-constraint truck appointment system considering morning and evening peak congestion. *Sustainability (Switzerland)*, 13(3), 1–19. <https://doi.org/10.3390/su13031181>
- Yang, C. H., Choi, Y. S., & Ha, T. Y. (2004). Simulation-based performance evaluation of transport vehicles at automated container terminals. *OR Spectrum*, 26(2), 149–170. <https://doi.org/10.1007/s00291-003-0151-5>
- Yu, H., Ge, Y. E., Chen, J., Luo, L., Tan, C., & Liu, D. (2017). CO2 emission evaluation of yard tractors during loading at container terminals. *Transportation Research Part D: Transport and Environment*, 53, 17–36. <https://doi.org/10.1016/J.TRD.2017.03.014>
- Yu, J., Voß, S., & Song, X. (2022). Multi-objective optimization of daily use of shore side electricity integrated with quayside operation. *Journal of Cleaner Production*, 351. <https://doi.org/10.1016/j.jclepro.2022.131406>
- Zadeh, L. A. (1965). Fuzzy sets. *Journal of Information and Control*, 8, 338–353. <https://doi.org/10.1061/9780784413616.194>
- Zeng, Q., Feng, Y., & Chen, Z. (2017). Optimizing berth allocation and storage space in direct transshipment operations at container terminals. *Maritime Economics and Logistics*, 19(3), 474–503. <https://doi.org/10.1057/mel.2016.2>
- Zeng, Q., & Yang, Z. (2009). Integrating simulation and optimization to schedule loading operations in container terminals. *Computers and Operations Research*, 36(6), 1935–1944. <https://doi.org/10.1016/j.cor.2008.06.010>
- Zhang, C., Zheng, L., Zhang, Z., Shi, L., & Armstrong, A. J. (2010). The allocation of

- berths and quay cranes by using a sub-gradient optimization technique. *Computers and Industrial Engineering*, 58(1), 40–50. <https://doi.org/10.1016/j.cie.2009.08.002>
- Zhang, W.-Y., Lin, Y., Ji, Z.-S., & Zhang, G.-F. (2008). Review of containership stowage plans for full routes. *Journal of Marine Science and Application*, 7(4), 278–285. <https://doi.org/10.1007/s11804-008-7087-8>
- Zhang, Y., Rong, Z., & Liu, Z.-X. (2014). The integrated scheduling problem in container terminal with dual-cycle operation. *International Journal of Simulation Modelling*, 13(3), 335–347. [https://doi.org/10.2507/IJSIMM13\(3\)CO12](https://doi.org/10.2507/IJSIMM13(3)CO12)
- Zhao, W., & Goodchild, A. V. (2013). Using the truck appointment system to improve yard efficiency in container terminals. *Maritime Economics and Logistics*, 15(1), 101–119. <https://doi.org/10.1057/mel.2012.23>
- Zhen, L, Sun, Q., Zhang, W., Wang, K., & Yi, W. (2021). Column generation for low carbon berth allocation under uncertainty. *Journal of the Operational Research Society*, 72(10), 2225–2240. <https://doi.org/10.1080/01605682.2020.1776168>
- Zhen, Lu, Xu, Z., Wang, K., & Ding, Y. (2016). Multi-period yard template planning in container terminals. *Transportation Research Part B: Methodological*, 93, 700–719. <https://doi.org/10.1016/j.trb.2015.12.006>
- Zheng, F., Huang, J., Liu, M., & Chu, F. (2016). *Port truck scheduling on a dedicated transportation route at a container terminal*. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85013845809&partnerID=40&md5=78f5644eff2f0fb72710425d8edfdd1f>
- Zheng, H., Negenborn, R. R., & Lodewijks, G. (2014). Model Predictive Control of a waterborne AGV at the operational level. In *Maritime-Port Technology and Development* (pp. 99–108). CRC Press. <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

85130231010&partnerID=40&md5=0391a711c4bab5db502ce38b84e1b3fd

- Zhou, C., Lee, B. K., & Li, H. (2020). Integrated optimization on yard crane scheduling and vehicle positioning at container yards. *Transportation Research Part E: Logistics and Transportation Review*, 138. <https://doi.org/10.1016/j.tre.2020.101966>
- Zhou, C., Zhao, Q., & Li, H. (2021). Simulation optimization iteration approach on traffic integrated yard allocation problem in transshipment terminals. *Flexible Services and Manufacturing Journal*, 33(3), 663–688. <https://doi.org/10.1007/s10696-020-09393-5>
- Zhou, Y., Wang, W., Song, X., & Guo, Z. (2016). Simulation-Based Optimization for Yard Design at Mega Container Terminal under Uncertainty. *Mathematical Problems in Engineering*, 2016.
- Zhuang, Z., Zhang, Z., Teng, H., Qin, W., & Fang, H. (2022). Optimization for integrated scheduling of intelligent handling equipment with bidirectional flows and limited buffers at automated container terminals. *Computers and Operations Research*, 145. <https://doi.org/10.1016/j.cor.2022.105863>