FSB University of Zagreb
Faculty of Mechanical Engineering
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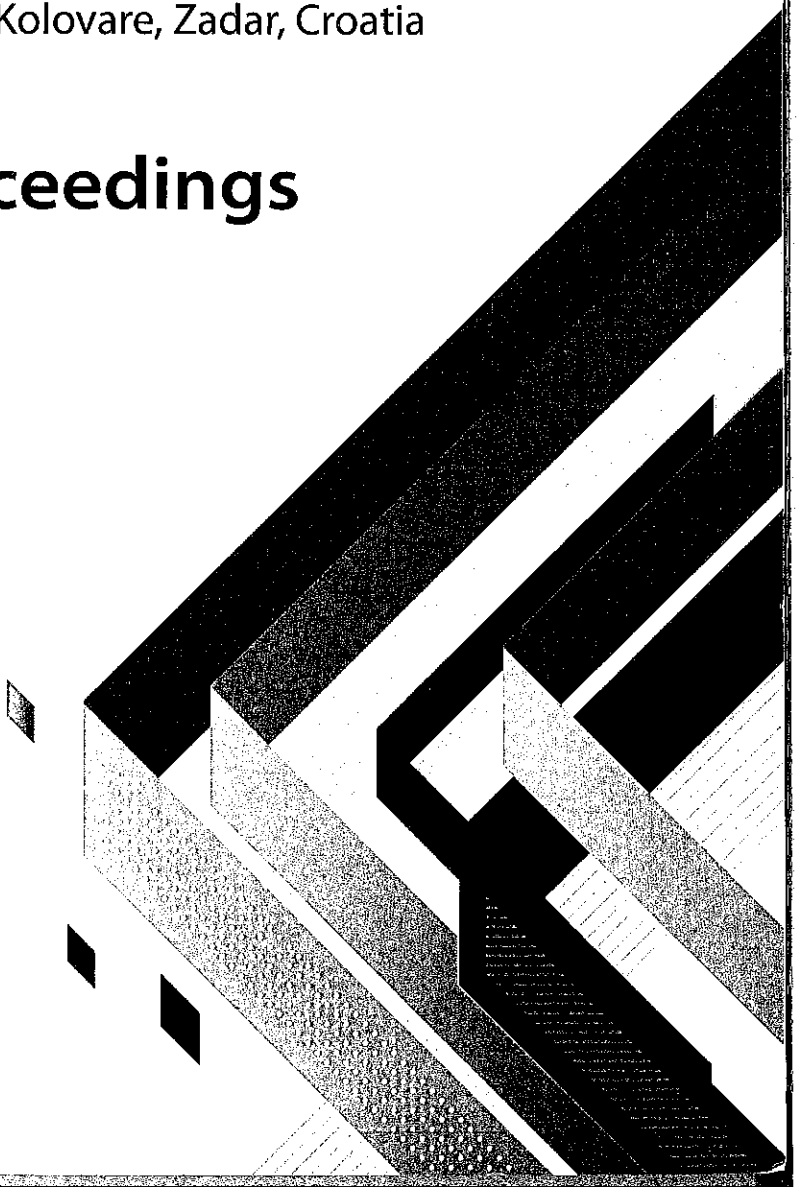
ICIIL International Centre for Innovation
and Industrial Logistics

ICIL 2023

International Conference on Industrial Logistics
May 31 – June 02, 2023, Hotel Kolovare, Zadar, Croatia

Conference Proceedings



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Goran Đukić, Tihomir Opetuk

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Modelling Freight Allocation and Transportation Lead-Time

Aurelija BURINSKIENE[1], **Arunas BURINSKAS**[2]

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The authors have investigated sustainable environment delivery systems and identified transportation lead-time investigation cases. This research study aimed to increase freight delivery lead-time and minimize distance in transportation. To reach the goal, the paper's authors, after analysis of the hierarchy of quantitative methods and models, proposed the framework for modeling freight allocation and transportation lead-time and delivered a study that includes discrete event simulation. During the simulation, various scenarios have been revised. Following the simulation mentioned above analysis, around 3.8 % of distance could be saved during freight delivery if lead-time for transportation were revised by choosing five days criteria for modeling freight allocation. The savings depend on the number of received orders from different geographic locations.

Keywords: *Freight transportation, delivery system, discrete event simulation, environmental sustainability, lead-time*