

Eng. Akram Elomiya, M.Sc.

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🎂 07 March 1992



Profile

- Transport engineering researcher and Ph.D. candidate in Transport Technology and Management at the University of Pardubice. I build decision-support and predictive models for **city logistics and urban freight**, with a focus on **loading-zone management** and **last-mile delivery**. My work combines machine learning, GIS-based spatial analysis, and multi-criteria decision-making to site sustainable transport infrastructure (EV charging, hydrogen refuelling, parcel lockers) and to forecast demand for parking and curb space. I aim to turn these methods into tools that cities, logistics operators, and public authorities can use.

Academic Positions

- Feb 2026 – Present ■ **Research Fellow**, Faculty of Transport Engineering, University of Pardubice, Czech Republic.
Applied research on artificial intelligence for urban freight and city logistics: demand estimation, space–time allocation of loading zones, routing and scheduling support, and performance evaluation. I design experiments, analyse real-world mobility and logistics datasets, and publish the results in journals and at conferences.
- Feb 2016 – Present ■ **Teaching Assistant (on academic study leave)**, Faculty of Engineering, Tanta University, Egypt.
Taught tutorials and laboratory sessions for Highway Engineering, Transportation and Traffic Engineering, Airport Engineering, Plane Surveying, and Topographic Surveying. Assessed laboratory reports and prepared tutorial materials built around case studies and worked examples.
- Aug 2023 – Present ■ **Research Team Member**, research group of Assoc. Prof. Libor Švadlenka, Faculty of Transport Engineering, University of Pardubice, Czech Republic.
Interdisciplinary research on urban freight transport, e-commerce logistics, and the environmental impacts of urban freight systems, including shared-economy models and alternative propulsion. I contribute data analysis, co-author journal articles, and present at international conferences.
- 2022 – Present ■ **Peer Reviewer**, *Sustainable and Resilient Infrastructure*.
Referee for submissions on sustainable and resilient infrastructure. Verified review records:
- Review record 1 (2023)
 - Review record 2 (2023)
 - Review record 3 (2022)

Industry Positions

- Feb 2023 – Dec 2023 ■ **Civil Engineer**, Kucián Statika s.r.o., Pardubice, Czech Republic.
Structural design and assessment of highways, buildings, and steel bridges. Drafted and reviewed technical specifications for tender processes and coordinated structural evaluations with project teams.

Industry Positions (continued)

- Dec 2019 – Oct 2021  **Highway Laboratory Analyst**, Faculty of Engineering, Tanta University, Egypt. Tested asphalt materials, including aggregate sampling and pavement density assessment. Prepared test reports for governmental and commercial clients and resolved client disputes over material quality.
- Nov 2019 – Oct 2021  **Infrastructure Consultant**, Consultative Committee for Highway Engineering and Maintenance, Gharbeya Governorate, Egypt. Advised the governorate on highway maintenance and traffic management. Led studies on maintenance prioritisation and on deploying Intelligent Transportation Systems (ITS), and contributed to the planning and execution of infrastructure projects.

Education

- Nov 2022 – Present  **Ph.D. Candidate, Transport Technology and Management**, University of Pardubice, Faculty of Transport Engineering.
Thesis title: *Decision Models with Uncertainty in Transport*.
- Dec 2016 – Feb 2022  **M.Sc., Civil Engineering (Public Works Engineering, Transport Engineering)**, Tanta University, Faculty of Engineering.
Thesis title: *Modeling Ridesharing Passengers Matching Problem Considering Utility Optimization of the System*.
Nostrification: Czech Technical University in Prague (ČVUT).
Recognition Certificate No.: CVUT00008413-3/2023
Recognized for the equivalent education of a Master's degree in *Public Works Engineering* with a focus on *Stavebnictví* (Civil Engineering).
- Sep 2009 – June 2015  **B.Sc., Civil Engineering**, Tanta University, Faculty of Engineering.
Graduation Project: *Advanced Structural Analysis*.
Nostrification: Czech Technical University in Prague (ČVUT).
Recognition Certificate No.: CVUT00023206-3/2022
Recognized for the equivalent education of a Bachelor's degree in *Civil Engineering* with a focus on *Stavebnictví* (Civil Engineering).

Research Publications

Journal rankings follow the Journal Citation Reports 2025 (Clarivate, released June 2026): Q₁ = first quartile, D₁ = top decile of the subject category by Journal Impact Factor.

Journal Articles

- 1 **A. Elomiya**, J. Křupka, V. Simic, L. Švadlenka, S. Jovčić, and D. Pamucar, "A GIS-MCDM framework for the smart parcel locker site suitability analysis and optimizing urban last-mile delivery," *Applied Soft Computing*, vol. 198, p. 115 247, 2026, ISSN: 1568-4946.  DOI: 10.1016/j.asoc.2026.115247 [JCR Q₁].
- 2 F. Zaralı, Ş. F. Yılmaz, N. Demirel, **A. Elomiya**, and S. Jovčić, "Evaluating Sustainable Last-Mile Delivery Modes Using IF-MAIRCA: The Perspective of Local Authorities," *Socio-Economic Planning Sciences*, vol. 104, p. 102 393, 2026, ISSN: 0038-0121.  DOI: 10.1016/j.seps.2025.102393 [JCR Q₁/D₁].
- 3 **A. Elomiya**, J. Křupka, V. Simic, L. Švadlenka, P. Průša, and S. Jovčić, "An advanced spatial decision model for strategic placement of off-site hydrogen refueling stations in urban areas," *eTransportation*, vol. 22, p. 100 375, 2024, ISSN: 2590-1168.  DOI: 10.1016/j.etrans.2024.100375 [JCR Q₁/D₁].
- 4 **A. Elomiya**, J. Křupka, S. Jovčić, V. Simic, L. Švadlenka, and D. Pamucar, "A Hybrid Suitability Mapping Model Integrating GIS, Machine Learning, and Multi-Criteria Decision Analytics for Optimizing Service Quality of Electric Vehicle Charging Stations," *Sustainable Cities and Society*, vol. 106, p. 105 397, 2024, ISSN: 2210-6707.  DOI: 10.1016/j.scs.2024.105397 [JCR Q₁/D₁].

- 5 S. Bošković, L. Švadlenka, S. Jovčić, V. Simic, M. Dobrodolac, and **A. Elomiya**, “Sustainable Propulsion Technology Selection in Penultimate Mile Delivery Using the FullEX-AROMAN Method,” *Socio-Economic Planning Sciences*, vol. 95, p. 102 013, 2024, ISSN: 0038-0121. [DOI](#): 10.1016/j.seps.2024.102013 [**JCR Q1/D1**].
- 6 **A. Elomiya**, J. Křupka, S. Jovčić, and V. Simic, “Enhanced Prediction of Parking Occupancy Through Fusion of Adaptive Neuro-Fuzzy Inference System and Deep Learning Models,” *Engineering Applications of Artificial Intelligence*, vol. 129, p. 107 670, 2024, ISSN: 0952-1976. [DOI](#): 10.1016/j.engappai.2023.107670 [**JCR Q1/D1**].
- 7 I. Abo El-Naga, **A. Elomiya**, and M. Ragab, “Using Metakaolin Material As Additive For Hot Asphalt Mixtures,” *Engineering Research Journal*, vol. 177, pp. 203–211, 2023, ISSN: 1110-5615. [DOI](#): 10.21608/erj.2023.289057
- 8 A. Elkafoury, **A. Elomiya**, I. AboElnaga, and H. Afify, “Multinomial Logit Utility Model for Tanta City Transportation System Considering Ridesharing Mode,” *Journal of Engineering Research*, vol. 5, no. 2, pp. 65–73, 2021. [DOI](#): 10.21608/erjeng.2021.79733.1017

Conference Proceedings

- 1 **A. Elomiya**, J. Křupka, and S. Jovčić, “A Smart Parking System Using Surveillance Cameras and Fuzzy Logic: A Case Study at Pardubice University’s Campus,” in *Procedia Computer Science*, 27th International Conference on Knowledge Based and Intelligent Information and Engineering Systems (KES 2023), vol. 225, 2023, pp. 4881–4890. [DOI](#): 10.1016/j.procs.2023.10.488

Book Chapters (Forthcoming, 2026)

- 1 **A. Elomiya**, J. Křupka, V. Simic, S. Jovčić, and L. Švadlenka, “Green Transportation and Logistics Optimization,” in *Sustainable Supply Chain Management: Computational Approaches and Modelling*, Elsevier, 2026, ISBN: 9780443338076, forthcoming.
- 2 **A. Elomiya**, J. Křupka, L. Švadlenka, S. Jovčić, and M. Radovanović, “Fuzzy Set Theory Applications in Smart Cities and IoT,” in *Fuzzy Sets and Triangular Norms: Aggregation in Decision-Aided Intelligent Systems*, Routledge (Taylor & Francis), 2026, ISBN: 9781032867670, Publisher page [link](#), forthcoming.

Manuscripts Under Review

- 1 **A. Elomiya**, J. Křupka, V. Simic, L. Švadlenka, S. Jovčić, and R. G. Thompson, “Multi-Horizon Occupancy Prediction for Urban Loading Zones using a Hybrid Deep Learning and Gradient Boosting Framework,” Manuscript under review, 2026.

Skills

Programming & Data	 Python, R, and MATLAB for statistical modelling, machine learning, and deep learning; $\LaTeX$ for scientific writing.
GIS & Spatial Analysis	 ArcGIS Pro for spatial analysis and suitability mapping; integration of GIS with multi-criteria decision analysis for site-selection studies.
Research Methods	 Multi-criteria decision-making (including fuzzy and hybrid approaches), neuro-fuzzy systems, predictive modelling, and traffic simulation.
Engineering Software	 AutoCAD, Civil 3D, Revit, SAP2000, ETABS, and VISSIM for infrastructure design, structural analysis, and traffic simulation.
Teaching & Communication	 University teaching since 2016; presentations at international conferences; peer review for an international journal.
Languages	 Arabic (native), English (full professional proficiency), Czech (basic, in progress).

Research Metrics

Citation Summary  As reported by the major indexing platforms, June 2026. Each platform name links () to the corresponding author profile.

	Documents	Citations	<i>h</i> -index
Google Scholar 	9	147	5
Scopus 	7	109	5
Web of Science 	6	81	4

Citations per Year (2026 is partial, year to date)

