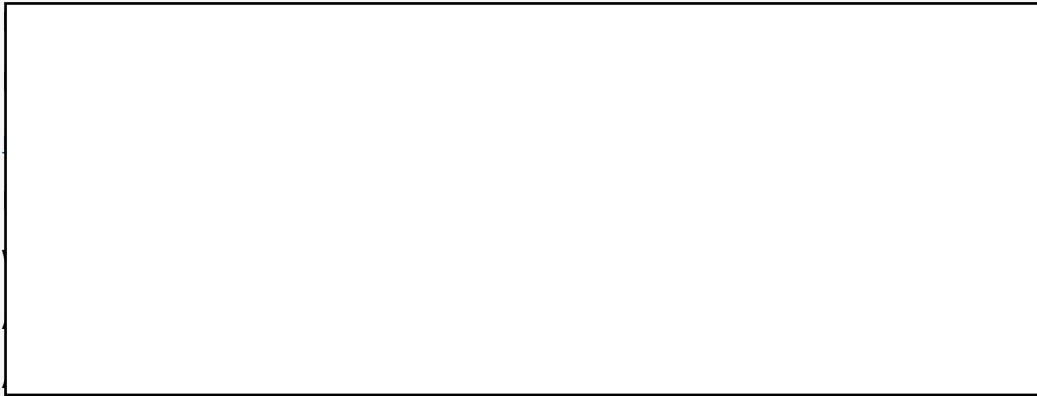




Muhammad Tabish Bilal



● ABOUT ME

Researcher at the **Universita Degli Studi di Genoa Italy** in the lab of Transportation and Logistics. Former **Doctoral candidate** at the Italian Center of Excellence for Logistics, Transportation, and Infrastructure. Seasoned in **Transport Modelling with Autonomous Vehicles** and **Micro-Mobility** Transportation Planning, Sustainable **Urban Mobility**, and **Agent-Based Travel Demand Modelling**. Former Scholar of M.Sc Transportation Systems Engineering at Budapest University of Technology and Economics, Hungary.
Researcher in European Union PNRR funded project **RAISE**.
Researcher in European Union funded multinational project **OMICRON**.

● WORK EXPERIENCE

29/04/2023 – CURRENT Genova, Italy

RESEARCH FELLOW (ASSEGNISTA DI RICERCA) DIME, UNIVERSITÀ DEGLI STUDI DI GENOVA

- Under the project of **Ecosystem of Innovation "RAISE (Robotics and AI for Socio-economic Empowerment)"**.
 - Serving to develop the **"Tools and simulators of port activities and transport network optimization** (for the spoke 4 "Smart and sustainable ports" of RAISE ecosystem)".
 - Development of a detailed **Transport model of the city of Genova**.
- Under the **OMICRON Project as a part of EU Horizon 2020**.
 - Serving to develop **optimization models** and algorithms for More efficient road intervention processes and reduction of traffic disruptions.
 - Development of a state-of-the-art **Decision Support System** to be used by the Infrastructure Manager to assist in the planning of maintenance activities.

01/12/2022 – 31/03/2023 Genova, Italy

RESEARCH FELLOW - GREEN MAAS FOR ADAPTIVE URBAN PLANNING (GETUP) PROJECT DIME, UNIVERSITÀ DEGLI STUDI DI GENOVA

- Worked on the development of a **Navigation Algorithm** converted into an **API** to be used as a plugin for a navigation application in the **GetUP project for commercial firm AlgoWatt Italia**.
- **Pilot testing** of the GetUP app and deliverable report for the GetUP project.
- **Network analysis** for the city of Genova for proposing a new sustainable **MaaS transit system** with the firm **EXIS International**.

01/09/2022 – 31/12/2022 Genova, Italy

TEACHING SUPPORT ASSISTANT DIME, UNIVERSITÀ DEGLI STUDI DI GENOVA

- Providing teaching support for the practical part in the subject of "**SMART & SAFE LOGISTICS**" (cod. 90941) for the class "**Master's in SAFETY ENGINEERING for TRANSPORT, LOGISTICS, AND PRODUCTION**".

20/10/2021 – 30/07/2022 Genova, Italy

TEACHING TUTOR UNIVERSITÀ DEGLI STUDI DI GENOVA

- **Tutor** for the subject of "**Analisi e Verifica Strutturale**" (**Structural analysis and verification**) for the class of "**Bachelor's of Science in Civil Engineering**".

31/10/2016 – 21/08/2017 Lahore, Pakistan

RESEARCH OFFICER - TRANSPORTATION THE URBAN SECTOR PLANNING & MANAGEMENT UNIT

- Provided technical research services for the **UNDP** project of **Pakistan Sustainable Transportation Project (PAKSTRAN)**.
- Served as **Lead policy consultant** in the transport team for devising **Punjab Road Policy** under the project of **PUNJAB SPATIAL STRATEGY 2020**.
- Formulated the first **Punjab Public Transport Manual**.
- Developed the **Public Transport Accessibility Index** for Punjab using ArcGIS and PTV Visum software together with junction and public transportation optimization.
- Facilitated **Workshops and Seminars** training professionals and engineers from the transport sector all around the country together with writing and editing the proposals for collaborative research initiatives to different organizations.
- Performed **Feasibility studies, Surveys and Supervision** of staff in **Parking Design project** for MAO Hospital Lahore.

31/05/2016 – 30/10/2016 Lahore, Pakistan

JUNIOR ESTIMATION ENGINEER CONSTRUCTION SOLUTIONS: TOTAL BID DATA NEW YORK

- Worked on **United States** projects for Building and Highway construction. Performed intense **Estimations** for the construction and maintenance works using **Plan Swift v 9.0** facilitating bidding for the tender of projects. Take-offs for estimation sheets using project plans and detailed drawings.

14/01/2016 – 14/06/2016 Lahore, Pakistan

SUPERVISING ENGINEER UNIVERSITY OF ENGINEERING & TECHNOLOGY, LAHORE

- Worked on **Army Ammunition Depot construction project, Pattoki** by providing supervision services to the survey team and carrying out Soil investigation and detailed chemical analysis of the in-situ soil.

30/06/2015 – 30/07/2015 Lahore, Pakistan

INTERNEE TRANSPORTATION ENGINEER TRAFFIC ENGINEERING & TRANSPORT PLANNING AGENCY (TEPA), LAHORE DEVELOPMENT AUTHORITY

Served as an Internee Engineer by performing **Analysis of Intersections** of Lahore city on **HCS, SIDRA** and **Synchro 8**.

● **EDUCATION AND TRAINING**

01/11/2019 – 31/10/2022 Genova, Italy

PH.D. TRANSPORTATION & LOGISTICS University degli studi di Genova

Address Via Montellegro 1, 16145, Genova, Italy |

Thesis Compound Impacts on Private and Public Transport Network Performance on Inclusion of New Forms of Mobility

31/01/2022 – 31/07/2022 Barcelona, Spain

VISITING PHD RESEARCHER Centre d'Innovació del Transport - CENIT

Address Carrer Jordi Girona, Plaça Telecos, 1-3, C3, 08034, Barcelona, Spain |

Website <https://cenit.es/about/meet-our-team/muhammad-tabish/>

12/11/2017 – 10/07/2019 Budapest, Hungary

MSC TRANSPORTATION ENGINEERING Budapest University of Technology and Economics, Budapest, Hungary.

Major task was to find the parameters of travel time reliability that can affect the perceived journey times of public transport and their effect on inclusion into assignment model using PTV Visum. The model developed for this research was of the city of Karlsruhe, Germany

Field of study Transportation Systems Engineering |

Thesis Travel time reliability in public transport route assignment

30/09/2012 – 14/06/2016 Lahore, Pakistan

BSC TRANSPORTATION ENGINEERING University of Engineering & Technology

Major task was to characterize bitumen and aggregate for usage in hot mix asphalt for better long term functional properties.

Thesis Evaluation of locally available bitumen & aggregate used in hot mix asphalt production in Pakistan

● **DIGITAL SKILLS**

PTV VISUM | PTV Vissim | MATLAB | R | ArcGis 10.8 | Good knowledge of Latex | IELTS 7 | Plan Swift (Estimation Software) | Microsoft Office

● **LANGUAGE SKILLS**

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
ITALIAN	A2	A2	A2	A2	A2
HUNGARIAN	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **ADDITIONAL INFORMATION**

PUBLICATIONS

[Sarwar, S., Saurí, S., Bilal, M. T., & Majoral, G. \(2023\). Analysis of Superblocks During the Transition Phase from traditional vehicles to Fully Automated Vehicle Environment: A Case Study of Barcelona City. *Transportation Engineering*, 13, 100203. <https://doi.org/10.1016/j.treng.2023.100203>](#)

– 2023

[Bilal, M.T., Giglio, D. Analysing inequity in land use and transportation models by genetic algorithm for realistically quantified penetration rate of Advanced Driving System Equipped Vehicles. *Transportation Research Interdisciplinary Perspectives*, Volume 20, 2023, 100841, ISSN 2590-1982.](#)

– 2023

[Bilal, M.T., Giglio, D. Evaluation of macroscopic fundamental diagram characteristics for a quantified penetration rate of autonomous vehicles. Eur. Transp. Res. Rev. 15, 10 \(2023\).](#)

– 2023

[Bilal, M. T., & Giglio, D. \(2022b\). Realization of the penetration rate for autonomous vehicles in multi-vehicle assignment models. Transportation Research Procedia, 62, 171–180. <https://doi.org/10.1016/j.trpro.2022.02.022>](#)

– 2022

[M. T. Bilal and D. Giglio, "Inequity evaluation for land use and transportation model on introduction of autonomous vehicles," 2021 7th International Conference on Models and Technologies for Intelligent Transportation Systems \(MT-ITS\), 2021, pp. 1-7, doi: 10.1109/MT-ITS49943.2021.9529278.](#)

– 2021

[M. T. Bilal, S. Sarwar and D. Giglio, "Optimization of public transport route assignment via travel time reliability," 2021 7th International Conference on Models and Technologies for Intelligent Transportation Systems \(MT-ITS\), 2021, pp. 1-6, doi: 10.1109/MT-ITS49943.2021.9529303.](#)

– 2021

[S. Sarwar, T. Sipos, M. T. Bilal, and B. Verebelyi, "Exploring Correlation between Highway Intersection Capacity and Traffic Parameters", Period. Polytech. Transp. Eng., vol. 49, no. 4, pp. 344–353, 2021.](#)

– 2019

[Bilal, M.T., Giglio, D. Appraisal of the dynamic vulnerability of multi-modal public transport network on the assimilation of shared micro-mobility services.](#)

– 2023

Under Peer Review for publication in Transportation Research Part A

CONFERENCES AND SEMINARS

07/01/2023 – 11/01/2023 – Washington D.C, USA

102nd TRANSPORTATION RESEARCH BOARD ANNUAL MEETING

Presented a research article entitled "Assessment of Dynamic Vulnerability of Public Transport Bus Network on the Integration of Micro-Mobility Services".

08/09/2021 – 10/09/2021 – Aveiro, Portugal

24th EURO Working Group on Transportation Meeting (EWGT 2021)

Presented a research article entitled "Realization of the penetration rate for autonomous vehicles in multi-vehicle assignment models".

07/09/2021 – 15/09/2021 – Milan, Italy

European Transport Conference

Presented a research article entitled "Evaluation of macroscopic fundamental diagram characteristics for a quantified penetration rate of autonomous vehicles".

Link <https://aetransport.org/past-etc-papers/conference-papers-2021?abstractId=7364&state=b>

16/06/2021 – 17/06/2021 – Crete, Greece

7th International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS), 2021

Presented a research article entitled "Inequity evaluation for land use and transportation model on introduction of autonomous vehicles".

16/06/2021 – 17/06/2021 – Crete, Greece

7th International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS), 2021

Presented a research article entitled "Optimization of public transport route assignment via travel time reliability".

REVIEWER ACTIVITIES

31/12/2019 – CURRENT

Reviewer for multiple conferences and a Journal

1. Member of Peer review committee for **103rd Transportation Research Board Annual Meeting 2024**.
2. Peer Reviewer for the journal **Transportation Research Interdisciplinary Perspectives**.
3. Peer Reviewer for the journal **Transport Policy**.
4. Peer Reviewer for the **Journal of Advanced Transportation**.
5. Peer Reviewer at **International Journal of Transportation Engineering and Technology**.
6. Member of the review committee for the **Transport Research Arena in Dublin 2024**.
7. Reviewer for The **5th International Conference on Social Science, Public Health and Education (SSPHE 2022)**.
8. Reviewer for the **24th IEEE Intelligent Transportation Systems Conference (ITSC 2021)**.
9. Reviewer for the **International Conference on Transport & Health (ICTH 2022)**.
10. Reviewer for the **7th International IEEE Conference on Models and Technologies for Intelligent Transportation Systems (2021)**.

COURSES, TRAINING AND WORKSHOPS

Trainings

- Ø MATLAB onramp, online at Mathworks.org, 2020
 - Ø Electric Cars: Introduction, TU DelftX, Course by TU Delft on EdX platform, (11/2019 – 11/2020)
 - Ø Electric cars: Policy, TU DelftX, course by TU Delft on EdX platform, (11/2019 – 11/2020)
 - Ø Data Science: R basics, HarvardX, Course from Harvard University through EdX platform (01/2020-06/2020)
 - Ø Data Science: Inference and Modeling, HarvardX, Course from Harvard University through EdX platform, (01/2020-06/2020)
 - Ø Introduction to Machine Learning, online course at Mathworks.org, 2019.
 - Ø PTV Talks Webinar:
 1. Modelling ride sharing systems in PTV Visum.
 2. Activity based modeling with PTV Visum.
 3. Autonomous Vehicles Features in PTV Vissim from the CoExist Project
 4. Traffic Optimization for Signalized Corridors (TOSCo) Development and Analysis of Vehicle Systems with VISSIM.
 5. Modeling Public Transport: an IT-TRANS wrap-up, 2020.
 - Ø Operating the sidewalk and curb (kerb) of the future Confirmation, webinar under the banner of project titled Harmonized Mobility
 - Ø Mobility Boot camp, cycling innovation contest under the banner of Genoa Metropolitan City Authority, 2019.
 - Ø TRANSCAD Training at The Urban Unit, 2017.
 - Ø Punjab Road Policy, stake-holders workshop at The Urban Unit, 2017.
 - Ø Signal Timing Optimization and Hands on training of **SYNCHRO 8.0** by DTEM, UET Lahore, 2015.
 - Testing at **Road Research & Material Testing Institute**, Lahore
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