



Muhammad Tabish Bilal

| **Gender:** Male | **Phone number:** (+39) 3480558960 (Mobile) |

Email address: muhammad.tabish.bilal@edu.unige.it | **Email address:** tabish.bilal@uet.edu.pk |

LinkedIn: <https://www.linkedin.com/in/muhammad-tabish-bilal-b76b3377/> |

WhatsApp Messenger: +393480558960 |

● ABOUT ME

Adjunct Professor and **Research Fellow** at the **Universita Degli Studi di Genoa Italy** in the lab of Transportation and Logistics.

Seasoned in **Transport Modelling with Autonomous Vehicles** and **Micro-Mobility, Transportation Planning, Sustainable Urban Mobility,** and **Agent-Based Travel Demand Modelling.**

Researcher in European Union PNRR funded project **RAISE.**

Researcher in European Union funded multinational project **OMICRON.**

● WORK EXPERIENCE

15/02/2024 – CURRENT Genova, Italy

PROFESSORE DI CONTRATTO (ADJUNCT PROFESSOR) DIME, UNIVERSITÀ DEGLI STUDI DI GENOVA

- Teaching the course "**Safe & Reliable Transport Systems - 101499**" for the first-year class of "**Master's in SAFETY ENGINEERING for TRANSPORT, LOGISTICS, AND PRODUCTION**"

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**".

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

INTERNEE TRANSPORTATION ENGINEER TRAFFIC ENGINEERING & TRANSPORT PLANNING AGENCY (TEPA)

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

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

RESEARCH OFFICER TRANSPORTATION THE URBAN SECTOR PLANNING & MANAGEMENT UNIT (USPMU)

- 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 DTEM, UNIVERSITY OF ENGINEERING & TECHNOLOGY

- 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.

● 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 Telecoms, 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

● PUBLICATIONS

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

[S. Sarwar, S. Sauri, M.T. Bilal and G. Majoral, "Analysis of Superblocks During Transition Phase from Manual Car to Fully Automated Vehicle Environment: A Case Study of Barcelona City"](#)

2021

[M. T. Bilal and D. Giglio, "Realization of the penetration rate for autonomous vehicles in multi-vehicle assignment models," 2021, Transportation Research Procedia](#)

2021

[M. T. Bilal and D. Giglio, "Evaluation of macroscopic fundamental diagram characteristics for a quantified penetration rate of autonomous vehicles," 2021 European Transport Conference Online.](#)

European Transport Conference 2021

2021

[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.](#)

2019

[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.](#)

2024

Bilal, M.T., Giglio, D. Appraisal of the dynamic vulnerability of multi-modal public transport network on the assimilation of shared micro-mobility services, Transportation Research Part C, 2023. Under review

Under Peer Review for publication

● **CONFERENCES AND SEMINARS**

01/05/2024 – 03/05/2024 Dallas, TX, USA

2nd IEEE International Conference on Mobility: Operations, Services, and Technologies (MOST 2024)

Presented a research article entitled "Evaluating Impressions on Urban Transportation Networks via Seaport-Induced Traffic".

15/04/2024 – 18/04/2024 Dublin, Ireland

10th Transport Research Arena (TRA)

Presented research articles:

1. Adaptive MaaS Planning via Demand Elasticity Scenario Analysis.
2. GeTUP: An Internet of things based navigation system architecture for high-level route planning

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

49th European Transport Conference

Presented a research article entitled "Evaluation of macroscopic fundamental diagram characteristics for a quantified penetration rate 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 research articles:

1. Inequity evaluation for land use and transportation model on introduction of autonomous vehicles.
2. 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

● **DIGITAL SKILLS**

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