

EDUCATION

KU Leuven, Belgium

September 2021 - Present

Doctor of Philosophy in Transportation Engineering

Designing future scenarios with autonomous mobility services and quantifying the impacts in the different scenarios with transport planning models. For the design step, I carefully analyse the demand and supply in a region's mobility system.

KU Leuven, Belgium

September 2019 - September 2021

Master in Engineering Science: Traffic and Logistics

GPA: 86.94/100

Thesis: Shared Automated Vehicle (SAVs) Services in Multimodal Network Simulations.

Courses: Intelligent Transport Systems, Traffic Engineering, Transport Models, Public Transportation, Design and Management, Transport Planning and Appraisal, Environmental and Transportation Economics, Distribution Logistics, Statistical Data Analysis, Geographic Information Systems, Traffic and Transport Safety, Freight Transport Management

Honors: With greatest distinction, highest-ranking student of all graduating classes

KU Leuven, Belgium

September 2016 - July 2019

Bachelor in Engineering Science: Civil Engineering Major

GPA: 81.03/100

Courses: Transportation Planning and Road Construction, Probability Theory and Engineering Statistics, Problem Solving and Engineering Design, Numerical Mathematics

Honors: With great distinction

RESEARCH & PROFESSIONAL EXPERIENCE

Fulbright Belgium Foreign Student Program Grantee at University of Virginia

August 2024 - May 2025

PhD Researcher at KU Leuven

September 2021 - Present

- Worked on a European project about Urban Digital Twins (DUET) funded by the EU Horizon 2020 research and innovation programme (No.870697) from 2021-2022.
 - Developed a framework for travel demand estimation, called *Poidpy*, based on point-of-interest data from OpenStreetMap.
 - Journal paper (under review) and the code is publicly available on gitlab.kuleuven.be/ITSCreaLab/public-toolboxes/poidpy.
- Currently working on my PhD research project focusing on designing plausible future scenarios with autonomous mobility services.
 - Funded by a FWO (Research Foundation - Flanders) PhD fellowship.
 - Developed a trip-based simulation of Leuven, Belgium integrating PTV Visum DRT module for tour planning of shared automated vehicles with a combined mode-choice and assignment model.
 - Resulted in two international conference papers (received a Best Junior Paper Award) and a journal paper (under review).
 - Joined a Belgian delegation on a study trip to San Francisco for visiting companies like Waymo and Cruise and meeting officials of San Francisco Municipal Transportation Agency (SFMTA) and California Department of Transportation (Caltrans).
 - Providing recommendations to Flemish government as part of Task Force on Autonomous Transport.
 - Setting up collaboration with USH, a start-up and Belgium's first autonomous shared mobility provider.

Internship at Vectris, Leuven

February 2020

- Processed traffic studies & made recommendations for appropriate traffic management (e.g. parking policy).

Summer Research Intern at KU Leuven

August 2020 - September 2020

- Translated an existing methodology for automated OD matrix generation from OpenStreetMap from QGIS to Python code.

SKILLS

Programming Languages: Python, R, MATLAB

Languages: Dutch (native), English (advanced), French (intermediate)

Software: PTV Visum, QGIS, MS Office, LINDO solver

Soft Skills: time management, leadership, teamwork, problem solving critical thinking, giving and receiving feedback

TEACHING & MENTORING EXPERIENCE

Teaching Assistant at KU Leuven, Belgium

September 2021 - Present

- *H0075A: Integrated Practicum 2: Models and Tools for Mobility and Supply Chain Engineering - Concept (graduate course)* Fall semester 2021, 2022, 2023
 - Proposing relevant and interesting project topics that cover the latest research and state-of-the-art on models and concepts within the broad domain of transportation engineering, guiding students in managing their project, informing and teaching them about new theoretical concepts and providing ideas on how they can be applied to a real-life problem, and evaluating and scoring the student's projects.
- *H0076A: Integrated Practicum 3: Models and Tools for Mobility and Supply Chain Engineering - Application (graduate course)* Spring semester 2022, 2023, 2024
 - Guiding students in the application of some modeling technique, qualitative or quantitative method, or an integration thereof from the broader domain of transportation engineering to solve some practical case study or problem, informing students about open data sources and developer tools, guiding them in data collection and analysis process, and evaluating and scoring the student's projects.
- *H0T95A: Transport Models (graduate course)* Spring semester 2022, 2023
 - Supporting students in making exercises on paper, and on PC in which the theory of the lectures (Traffic flow theory and Dynamic Network Loading models) are converted into working algorithms, explaining the theory and how it is applied to specific problems, providing correct interpretations of the results.
- *H00M8B: Intelligent Transportation Systems (graduate course)* Fall semester 2021, 2022
 - Guiding students in conceiving and creating their own ITS application and building a proof of concept, informing and teaching students about open data sources and developer tools that are relevant for their application, and evaluating and scoring the student's projects.
- *Athens course: Dynamic network traffic modeling using LTM (summer course)* March 2022
 - Supporting international students with no or little background in transportation engineering in understanding the fundamental concepts of traffic flow theory and the Cell and Link-Transmission Model (CTM & LTM) by solving simple exercises on paper and more advanced exercises with solution algorithms on PC.

Master Thesis Assessor at KU Leuven, Belgium

September 2023 - Present

- Wouters, L., & Vansteenwegen, P. (2024). *MIVB-STIB - "Cargotram": can Public Transport play a role in urban logistic?*. KU Leuven. Faculty of Engineering Science.

Master Thesis Tutor at KU Leuven, Belgium

September 2021 - Present

- Gomez Morales, M., Linderman, A, Tampère, C., & Joubert, J. (2023). *Measuring accessibility with open-source tools*. KU Leuven. Faculty of Engineering Science.
- Sempels, E., Borremans, D., & Tampère, C. (2023). *Optimization of the Travel Behaviour of Students Living in Dorm Rooms in the Strategic Passenger Model Flanders v4.2.2*. KU Leuven. Faculty of Engineering Science.
- Vanderstraeten, T., & Tampère, C. (2022). *Analyse en voorspelling van routekeuze en verdeling van herkomstlocaties van woon-school fietsverkeer*. KU Leuven. Faculty of Engineering Science.

Ombudsperson Mobility and Supply Chain Engineering Master

September 2021 - September 2023

- Advising students on educational matters which are not related to the content of the courses. For example, making additional arrangements with professors and students in case of long-term illness or for students with special needs, and referring students with mental problems to specialised help.

TRAINING & WORKSHOPS

Passenger Transport Systems: Networks, Operations and Behavioral Models (*doctoral coursework*) February 2022 - March 2022

Instructors: Dr. Oded Cats and Dr. Marie Schmidt

Organized by: Research School for Transport, Infrastructure and Logistics (TRAIL) & Research School for Operations Management and Logistics (Beta), in Utrecht, the Netherlands

Grade: Passed

Trainings and Workshops on Soft Skills

- at KU Leuven: Networking (Feb. 2022), Management of PhD (Mar. 2023), Pitching and Public Speaking (May 2023)
- at Let's talk Science Conference (July 2023): Persuading people, Online Presenting, Storytelling via LinkedIn

PUBLICATIONS

- **Notelaers, L., Verstraete, J., Vansteenwegen, P. et al.** A travel demand modeling framework based on OpenStreetMap. *Discov Civ Eng* 1, 26 (2024). <https://doi.org/10.1007/s44290-024-00020-y>

PAPERS UNDER REVIEW FOR PUBLICATION

- **Notelaers, L., Arman, M.A., Tampère, C.** (2024). Stated Preferences on Shared Automated Vehicles in the Context of Mode Choice Model Estimation for Different Trip Purposes. In progress for submission to European Transport Research Review.
- **Notelaers, L., Verstraete, J., Vansteenwegen, P., Tampère, C.** (2023). The Influence of Service Design on the Impact of Shared Autonomous Vehicles. Under review for publication in *Journal of Urban Technology*

CONFERENCES & PRESENTATIONS

- **Notelaers, L., Arman, M.A., Tampère, C.** (2024). Stated Preferences on Shared Automated Vehicles in the Context of Mode Choice Model Estimation for Different Trip Purposes: a Case Study for Flanders, Belgium. Presented at the *Transportation Research Board 103th Annual Meeting, Washington D.C., 07 Jan 2024-11 Jan 2024*.
- **Notelaers, L., Vansteenwegen, P., Tampère, C.** (2023). How Service design affects the Impacts of Shared Automated Vehicles. Presented at the *2023 Annual POLIS Conference, Leuven, 29 Nov 2023-30 Nov 2023*.
- **Notelaers, L., Tampère, C.** (2023). Restricted Deployment of Shared Automated Vehicles: a Case Study for the City of Leuven, Belgium. In: *Proceedings of the BIVEC-GIBET Transport Research Days 2023, (390-401)*. Presented at the *BIVEC-GIBET Transport Research Days 2023, Leuven, 01 Jun 2023-02 Jun 2023*. ISBN: 9789082383317.
- **Notelaers, L., Vansteenwegen, P., Tampère, C.** (2023). A Generic Tool for Estimating Travel Demand based on OpenStreetMap. Presented at the *Transportation Research Board 102th Annual Meeting, Washington D.C., 08 Jan 2023-12 Jan 2023*
- **Notelaers, L., Tampère, C., Landtmeters, J.** (2022). Estimating travel demand based on OpenStreetMap in the context of urban digital twins. In: *Proceedings of hEART 2022*. Presented at the *10th Symposium of the European Association for Research in Transportation (hEART 2022), Leuven, 01 Jun 2022-03 Jun 2022*.
- **Notelaers, L., Tampère, C.** (2022). Deploying Level 4 Shared Automated Vehicle Services on ODD-compliant Subnetworks: a Multimodal Analysis. In: *Proceedings of hEART 2022*. Presented at the *10th Symposium of the European Association for Research in Transportation (hEART 2022), Leuven, 01 Jun 2022-03 Jun 2022*.

GRANTS, AWARDS & HONORS

- **Fulbright Belgium Foreign Student Program Grantee 2024-2025**
- **Best Junior Paper Award** at the 2023 BIVEC-GIBET Transportation Research Days (bi-annual BENELUX conference), for paper titled 'Restricted Deployment of Shared Automated Vehicles: a Case Study for the City of Leuven, Belgium'.
- Obtained the highly-competitive **4-year PhD fellowship** on Strategic Basic Research funded by the Research Foundation Flanders (FWO), starting in 2022 till 2026.
- **Highest-ranked student** in the Master in Engineering: Traffic and Logistics of all graduating classes of 2021 and earlier.

VOLUNTEERING

Co-organizer Alumni Event Master in Mobility and Supply Chain Engineering

- An evening with multiple interesting presentations on transport related topics given by speakers from academia, industry and governmental institutions and organizations. Responsible for deciding topic, inviting speakers, arranging practicalities, inviting the public and marketing the event. Topics:
 - Autonomous Mobility May 2024
 - The Zero Emission Mission: Electrification of person and freight transport by Pieter Leonard (Colruyt Group), Tim Asperges (city of Leuven) and Sarah Lauwereys (Volvo Trucks) May 2023
 - City Logistics by Laura Tavernier (Rebel Group) May 2022

Student Representative, KU Leuven

- PhD Student representative in Permanent Education Committee September 2021 - Present
- Master student representative in Permanent Education Committee September 2019 - September 2021

Volleyball Coach at Datovac, Tongeren, Belgium

August 2021 - May 2024

- Teaching 9 till 12 year old children the techniques of volleyball, organising practices and coaching games.