

JOÃO PEDRO BAZZO

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C.V. last updated in September 2025

EDUCATION

Ph.D. in Civil & Mineral Engineering 2023 - 2027 (expected)

University of Toronto

Supervisor: Prof. Marianne Hatzopoulou

M.Sc. in Environmental Engineering 2020

Federal University of Parana

Title: "Spatiotemporal vehicle emissions inventory model: A case study in Curitiba-PR" [Link] [In portuguese]

Supervisor: Prof. Marcelo Risso Errera

B.Sc. in Environmental Engineering 2016

Federal University of Parana

Exchange Program in Environmental Engineering 2014

University of Waterloo

Science Without Borders Fellowship

EXPERIENCE

Research Assistant

University of Toronto | Department of Civil & Mineral Engineering

Sept. 2023 – Current

Toronto, Canada

- Research focuses on ride-hailing, vehicle emissions, and electrification.
- Teaching Assistant activities.
- Administrative Officer for the Institute of Transportation Engineers Student Chapter (UT-ITE) during 2024-2025.

Research Assistant

Institute for Applied Economic Research (IPEA)

Sept 2019 – June 2023 (3 yrs 10 mos)

Brasília, Brazil

- Research on urban mobility trends, active transportation use, racial and income inequalities in health access, spatial distribution of public services, and sustainable urban form in Brazilian cities.
- Co-authored five working reports, four peer-reviewed articles, and developed two R packages: (1) **gtfs2gps**, for processing GTFS data with high spatiotemporal resolution; and (2) **gtfs2emis**, for estimating emissions from public transportation systems.
- Member of the **Access to Opportunity** project, focused on calculating people's access to jobs, healthcare, and education services by different transport modes in Brazil's largest cities.

Research Coordinator (Volunteering)

Cicloiguaçu Cyclist Association

Jun 2016 – Jun 2019 (3 yrs 1 mo)

Curitiba, Brazil

- NGO focused on increasing and improving bicycle use as a mode of transportation in Curitiba, with a strong emphasis on research and community participation;
- Contributed to vehicle count projects, organized seminars on bicycles and urban mobility, and conducted spatial data analysis on cyclist injuries and fatalities in collaboration with local universities;
- Coordinated the 2017 Curitiba Cycling Profile Survey, which evaluated the socioeconomic characteristics and preferences of 1,500 cyclists;

- Led outreach efforts with local universities, public authorities, and the media, raising awareness about cycling in the urban environment.

Intern

Envex Consulting

📅 Feb 2015 – Mai 2016 (1 yrs 4 mo)

📍 Curitiba, Brazil

- Participated in air quality, noise pollution, hydrology, and environmental impact assessment projects
- Developed R scripts to process and visualize data on air quality and noise monitoring projects

Research intern

University of Waterloo | Climatology Lab

📅 Set – Dec 2014 (4 mos)

📍 Waterloo, Canada

- Research in a project entitled "The study of the relationship between ocean temperature and jet streams displacement in scenarios of climate change", with the supervision of Prof. Christopher Fletcher;
- Conducted literature review and data analysis using R and Linux (Bash Shell).

Intern

Public Prosecutors Office

📅 Nov 2011 – Ago 2013 (1 yrs 10 mo)

📍 Curitiba, Brazil

- Assisted with processes related to municipal solid waste management, atmospheric emissions, environmental licensing, and water resources.
- Co-authored a report on composting and municipal solid waste management.
- Conducted technical analysis on Environmental Impact Studies.
- Inspected industrial and environmentally damaged areas.

Junior Enterprise (Volunteering)

Ciclus Consulting – Federal University of Parana

📅 Mar 2010 – Mar 2013 (2 yrs 11 mo)

📍 Curitiba, Brazil

- Worked in a greenhouse gas inventory project; received entrepreneurship and project management training.
- Supervised project consultants to ensure i) adherence to project deadlines and budget, and ii) proper application of project management methodology.

PUBLICATIONS

Articles

- **Bazzo, J. P.**, Saleh, M., Hatzopoulou, M. (2025). Greenhouse Gas Emissions Trends and Fleet Renewal of Ride-Hailing in Toronto, Canada. *Journal of Cleaner Production*. [\[Link\]](#)
- Tomasiello, D. B., **Bazzo, J. P.**, Parga, J. P. F. A., Servo, L. M. S., Pereira, R. H. M. (2023). Racial and income inequalities in access to health in Brazilian cities. *Journal of Transport and Health*. [\[Link\]](#)
- **Bazzo, J. P.**, Pereira, R. H. M., Andrade, P. R. (2023). Estimating public transport emissions from General Transit Feed Specification data. *Journal of Transportation Research Part D: Transport and Environment*. [\[Link\]](#)
- **Bazzo, J. P.**, Vieira Braga, C. K., Pereira, R. H. M. (2022). The impact of COVID-19 on air passenger demand and CO2 emissions in Brazil. *Journal of Energy Policy*, 164, 112906. [\[Link\]](#)
- Pereira, R. H. M., Andrade, P. R., **Bazzo, J. P.** (2022). Exploring the time geography of public transport networks with the gtfs2gps package. *Journal of Geographical Systems*. [\[Link\]](#)

Working papers and reports

- Pereira, R. H. M., **Bazzo, J.P.** (2024). Trends and Inequalities of Urban Mobility in Brazil III: The Use of Active Mobility. Working Paper 3024. Ipea - Institute for Applied Economic Research. [\[Link\]](#)[\[In portuguese\]](#)
- Tomasiello, D.B., **Bazzo, J.P.**, Parga, J.P., Servo, L.M, Pereira, R. H. M. (2023). Racial and income inequalities in access to health in Brazilian cities. Working Paper 2832. Ipea - Institute for Applied Economic Research. [\[Link\]](#)[\[In portuguese\]](#)
- Pereira, R. H. M., Herszenhut, D., Braga, C. K. V., **Vieira, J.P.**, Oliveira, J. L. A. O., Parga, J.P., Saraiva, M., Silva, L.P., Tomasiello, D.B., Warwar, L. (2022) Spatial distribution of sociodemographic characteristics and public services in the 20th major cities of Brazil. Working Paper 2772. Ipea - Institute for Applied Economic Research. [\[Link\]](#)[\[In portuguese\]](#)

- Pereira, R. H. M., Parga, J. P., Saraiva, M., **Bazzo, J. P.**, Tomasiello, D., Silva, L. P., Nadalin, V. G., Barbosa, R. J. (2022). TD 2802: Urban form and sustainable mobility: evidences from Brazilian cities. [[Link](#)][*In portuguese*]
- Pereira H.M.R., Warwar L., Parga J., **Bazzo J.P.**, Braga C.K., Herszenhut D. and Saraiva M. (2021). TD 2673: Trends and inequalities of urban mobility in Brazil I: the use of public and individual transport. [[Link](#)][*In portuguese*]
- Miranda, A.C. and **Bazzo J.P.** (2020).The use of bicycles in the context of urban mobility. p.335 In: Urban mobility: a multidisciplinary approach. Ed. by Cristina Araújo Lima. Curitiba: UFPR. ISBN: 978-65-86233-02-5 [*In portuguese*]
- Belloto, J.C. A., Nakamori, S. and **Bazzo, J.P.**(2020). Public institutions and traffic sources: practices to encourage sustainable mobility at UFPR and CELEPAR. In: Brazilian public management: inovation and network sustainability. Ed. by Villac, T. v. 1, p. 203-221 [*In portuguese*]
- Moreira, H.J.; **Bazzo, J.P.**; Dittert, L.F.; Miranda, A.C.M.; Reck,Y.B. (2020). Temporary infrastructure for active mobility: Cycle mobility solutions to adapt the streets in the fight against the pandemic. UCB & Cicloiguaçu. Curitiba. [[Link](#)][*In portuguese*]

Congress Presentations

- **Bazzo, J. P.**, Saleh, M., Hatzopoulou, M. (2025). Longitudinal Analysis of Trends in Greenhouse Gas Emissions and Fleet Renewal for Transportation Network Companies in Toronto, Canada. *Transportation Research Board*. [[Link](#)]
- **Bazzo, J. P.**, Errera, M. R., Daemme, L. C. (2019). Air Pollutants Modeling using Bottom-up Vehicular Emissions Inventory. [[Link](#)]
- **Bazzo, J. P.**, Almeida, R. (2016, October 22). Flow regionalization using Neural Artificial Networks RBF. Zenodo. <https://doi.org/10.5281/zenodo.7314385> [[Link](#)] [*In portuguese*]
- Gasparovic, C. L. M.; Ostroski, A.; **Bazzo, J. P.**; Errera, M. R. . Elementary Constructal Design of a carbon capture systems based on carbonation over fly ashes.. In: Constructal Law Second Law Conference 2019 CLC 2019, 2019, Porto Alegre. Proceedings of Constructal Law Second Law Conference - CLC - 2019. Porto Alegre: Unisinos Porto (Brazil), 2019. v. 1. p. 184-187

R packages

- **Bazzo, J.P.**; Pereira, R.H.M.;Andrade, P.R.(2022) gtfs2emis: Generating estimates of public transport emissions from GTFS data. GitHub [[Link](#)]. [*Autor, Mantainer*]
- Espinosa, S.I.; **Bazzo, J.P.** (2021). vein: Vehicular Emissions Inventories. Version 0.9.4. [[Link](#)]. [*Contributor*]
- Pereira, R.H.M.; Andrade, P.R.; **Bazzo, J.P.** (2019) gtfs2gps: Converting GTFS data to GPS format. Zenodo[[Link](#)]. [*Autor*]
- Herszenhut, D.; Pereira, R. H. M., Andrade, P. R., **Bazzo, J.P.** (2022, May). gtfstools: General Transit Feed Specification (GTFS) Editing and Analysing Tools (Version v1.1.0). Zenodo. [[Link](#)]. [*Autor*]

AWARDS & GRANTS

- 2024 – Sustainable Development Goals at University of Toronto Graduate Student Award [[Link](#)]
- 2024 – Richard Soberman Graduate Student Fellowships
- 2023 – Dr. Mazen Hassounah Graduate Scholarship in Mass Events Transportation and Crowd Management
- 2023 – Highly Commended at the International Geospatial Innovation Awards – **gtfs2emis** project [[Link](#)]
- 2022 – Finalist at the International Transport Forum (ITF/OCDE) Decarbonising Transport Award – **gtfs2emis** project [[Link](#)]
- 2021 – Master's dissertation award by Federal University of Paraná – "Enjoy Science UFPR" Award
- 2017-2019 – CAPES Studentship for Master Degree at Federal University of Parana (UFPR)
- 2013-2014 – Science Without Border scholarship for an exchange program at the University of Waterloo (Canada)