JOÃO PEDRO BAZZO VIEIRA

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C.V. last updated in November 2023

EDUCATION

Ph.D. in Civil & Mineral Engineering 📅 Sept. 2023 - 2027 (expected)
University of Toronto

Ph.D. student
Advisor: Prof. Marianne Hatzopoulou

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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*]
Advisor: Prof. Marcelo Risso Errera **Co-Advisor**: Luiz Carlos Daemme

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B.Sc. in Environmental Engineering 📅 2016
Federal University of Parana

Title: "Flow rates regionalization using RBF Neural Artificial Networks" [Link][*In portuguese*]
Advisor: Prof. Ricardo Carvalho de Almeida

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Exchange Program in Environmental Engineering 📅 2014
University of Waterloo

Fellowship Science Without Borders Grant

EXPERIENCE

Research Assistant
Department of Civil & Mineral Engineering (University of Toronto)

📅 Sept. 2023 – Current   📍 Toronto, Canada

- Teaching Assistant activities;
- Research focuses on transportation, air quality, and vehicle emissions, under the supervision of Prof. Marianne Hatzopoulou.

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Research Assistant
Institute for Applied Economic Research (IPEA)

📅 Sept 2019 – June 2023 (3 yrs 10 mos)   📍 Brasília, Brazil

- Development of R packages to process GTFS in a high spatiotemporal resolution (**gtfs2gps package**) and to estimates tailpipe emissions from public transportation (**gtfs2emis package**);
- Research on multiple topics of urban mobility in Brazil (e.g. trends and inequalities of urban mobility in Brazil; the impact of COVID-19 in the air travel demand and emissions; racial and income inequalities in access to health; urban form and sustainable mobility; time geography in the context of public transport networks)
- Member of **Access to Opportunity** project, which aims to calculate people's access to jobs, health, and education services by different transport modes for Brazil's largest cities;
- International comparison of urban buses emissions based on GTFS data [*In progress*].

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Research Coordinator
Cicloiguaçu Cyclist Association

📅 Jun 2016 – Jun 2019 (3 yrs 1 mo)   📍 Curitiba, Brazil

- NGO aims to increase and improve bicycle use as a mode of transportation in Curitiba

- Coordination of Curitiba's cyclist profile 2017, an initiative of Metropolitan Observatory UFRJ; Transporte Ativo and LABMOB
- Participation in vehicle counts projects, seminars about bicycles in the urban environment, spatial data analysis on cyclist injuries and deaths, with partnership with local universities

Intern
Envex Consulting

📅 Fev 2015 – Mai 2016 (1 yrs 4 mo) 📍 Curitiba, Brazil

- Air quality, noise pollution, hydrology, and environmental impact assessment projects
- Development of 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;
- Programming using R and Linux (Bash Shell), as part of the Science Without Borders project grant.

Intern
Public Prosecutors Office

📅 Nov 2011 – Ago 2013 (1 yrs 10 mo) 📍 Curitiba, Brazil

- Assistance on processes related to municipal solid waste management, atmospheric emissions, environment licensing, and water resources;
- Development of report on composting and municipal solid waste management
- Technical analysis on Environment Impact Studies, Solid waste management plans, and other projects related to environmental management of cities and industries
- Inspection of industrial and environmental damaged areas; Studies involving environmental law.

Junior Enterprise
Ciclus Consulting – Federal University of Parana

📅 Mar 2010 - Mar 2013 (2 yrs 11 mo) 📍 Curitiba, Brazil

- Greenhouse gas inventory project; Entrepreneurship and project management training;
- Supervision of project consultants responsible for: i) Meet the project deadline and budget; ii) Follow methodology for project management.

PUBLICATIONS

Articles

- Tomasiello, D. B., **Vieira, 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. Accepted in the Journal of Transport . Health. [Link]
- **Vieira, 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]
- **Vieira, 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., **Vieira, J. P. B.** (2022). Exploring the time geography of public transport networks with the gtfs2gps package. Journal of Geographical Systems. [Link]

Working papers and reports

- Tomasiello, D.B., **Vieira, 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., **Vieira, 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., **Vieira J.P.B.**, 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 **Vieira J.P.B.** (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 **Vieira, J.P.B.**(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.; **Vieira, J.P.B.**; 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 Articles

- **Vieira, J. P. B.**, Errera, M. R., Daemme, L. C. (2019, October 1). Air Pollutants Modeling using Bottom-up Vehicular Emissions Inventory. Zenodo. https://doi.org/10.5281/zenodo.7314409 [Link]
- **Vieira, J. P. B.**, 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.; **Vieira, J. P. B.**; 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

- **Vieira, J.P.B.**; 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.; **Vieira, J.P.B.** (2021). vein: Vehicular Emissions Inventories. Version 0.9.4. [Link]. [*Contributor*]
- Pereira, R.H.M.; Andrade, P.R.; **Vieira, J.P.B.** (2019) gtfs2gps: Converting GTFS data to GPS format. Zenodo[Link].[*Autor*]
- Herszenhut, D.; Pereira, R. H. M., Andrade, P. R., **Vieira, J.P.B.** (2022, May). gtfstools: General Transit Feed Specification (GTFS) Editing and Analysing Tools (Version v1.1.0). Zenodo. [Link].[*Autor*]

AWARDS & GRANTS

- 2023 — Dr. Mazen Hassounah Graduate Scholarship in Mass Events Transportation and Crowd Management
- 2023 — project **gtfs2emis** — International Geospatial Innovation Awards — Highly Commended [Link]
- 2022 — project **gtfs2emis** — International Transport Forum (ITF) Decarbonising Transport Award — finalist [Link]
- 2021 — "Enjoy Science UFPR" — Award due to master thesis excellence
- 2017-2019 — CAPES Studentship for Master Degree at Federal University of Parana (UFPR)
- 2013-2014 — Exchange program at University of Waterloo (Canada), Science Without Border program