

CURRICULUM VITAE

Vitor Hugo Freitas Gomes (Gomes, V. H. F.)



1. PERSONAL DETAILS AND THE DATE OF THE CV

- Surname: Freitas Gomes
- First names: Vitor Hugo
- Researcher ID: Orcid, <https://orcid.org/0000-0002-3855-5584>
- Date of the CV: October 30, 2025

2. DEGREES

- **2019** PhD in Environmental Sciences (with honors), Federal University do Pará, Belém, Brazil. Included a research stay (sandwich program) at Naturalis Biodiversity Center, Leiden, Netherlands.
- **2012** MSc in Local Development, Federal University do Pará, Belém, Brazil.
- **2006** Degree in Data Processing, University Centre of Pará, Belém, Brazil.

3. OTHER EDUCATION AND EXPERTISE

- **Ongoing** – Finnish 3, University of Turku, Finland
- **2025** – Teacher Tutoring, University of Turku
- **2025** – Finnish 2, University of Turku, Finland
- **2025** – Finnish 1, University of Turku, Finland
- **2024** – Finnish for Beginners (level 0), University of Turku, Finland.
- **2022** – Capacity Building of Local Governments for Development with Community Participation, Japan International Cooperation Agency (JICA), Japan.
- **2015** – Applied Statistics for Time Series (30h), Federal University do Pará, Belém, Brazil.
- **2014** – Introduction to R Statistical Program (40h), University of the State of Pará, Belém, Brazil.
- **2011** – Modeling Workshop – Cenários Project (16h), Museu Paraense Emílio Goeldi, Belém, Brazil.

4. LANGUAGE SKILLS

4.1. Native

- Portuguese

4.2. Other language

- English – Understanding (C2), Speaking (C2), Writing (C2)
- Spanish – Understanding (B1), Speaking (B1), Writing (A2)
- Dutch – Understanding (A1), Speaking (A1), Writing (A1)
- Finnish – Understanding (A1), Speaking (A1), Writing (A1)

5. CURRENT EMPLOYMENT

- **Sep 2024 – Present** Postdoctoral Fellow, project Evolution of Landscapes, Rivers and Biota in Amazonia (EVOAMAZ Project), Department of Biology, University of Turku, Turku, Finland. Field: Environmental Science. Supervisor: Prof. Hanna Tuomisto.
- **Mar 2024 – Present Docent**, Postgraduate Program in Territorial Intelligence and Sustainability, University Centre of Pará, Belém, Brazil.
- **Nov 2020 – Present Docent**, Postgraduate Program in Tropical Botany, Federal Rural University of Amazonia, Belém, Brazil.
- **Aug 2019 – Present Docent**, Undergraduate Program in Computer Science, University Centre of Pará, Belém, Brazil.

6. PREVIOUS WORK EXPERIENCE

- **Jan 2022 – Aug 2024** Post-Doctorate fellow, working on climate change effects on ecosystem services and edible species. Biodiversity and Ecosystem Services Group. Instituto Tecnológico Vale, Belém, Pará, Brazil. Field: Environmental Science Supervisor: Tereza Cristina Giannini.
- **Jan 2020 – Dec 2021** Post-Doctorate fellow, working on climate change effects over Amazonian tree flora according to the Paris Agreement. Institute of Geosciences, Federal University of Pará, Belém, Brazil. Field: Environmental Science. Supervisors: Ima Célia Guimarães Vieira.
- **Fev 2020 – Aug 2024** Strategy and Institutional Relations Advisor, Economic Development Company of Pará (CODEC), Belém, Pará, Brazil.
- **Sep 2018 – Jan 2020** Development Manager, Economic Development Company of Pará, Belém, Pará, Brazil.
- **Sep 2014 – Aug 2018** Research Assistant, Institute of Geosciences, Federal University of Pará, Belém, Brazil.

- **Jun 2008 – Aug 2014** Research assistant, Museu Paraense Emílio Goeldi, Belém, Brazil.

7. RESEARCH FUNDING AND GRANTS

- **2023 – 2024** Fundação de Ciência, Tecnologia, Inovação e Desenvolvimento Sustentável Guamá (Fundação Guama), “Sustainable use of natural resources in tropical regions”. Grant number 064/2024, Post-doctorate research ((€ 29,200).
- **202 – 2023** Fundação de Amparo e Desenvolvimento da Pesquisa (FADESP), “Capital Natural da Floresta de Carajás”. Grant number 064/2024, Post-doctorate research ((€ 16,300).
- **2021 – 2022** Fundação de Ciência, Tecnologia, Inovação e Desenvolvimento Sustentável Guamá (Fundação Guama), “Sustainable use of natural resources in tropical regions”. Grant number 064/2024, Post-doctorate research ((€ 9,070).
- **2020 – 2021** Coordination for the Improvement of Higher Education Personnel (CAPES), “Quantification of the climate change effects over Amazonian tree flora according the Paris Agreement”. Grant number 88887.509407/2020-00, Post-doctorate research ((€ 8,850).
- **2015 – 2016** National Council for Scientific and Technological Development (CNPq), “Amazonian tree species barcode (Barcoding Caxiuanã)”. Grant no. 203102/2015-0, Doctorate research developed abroad (€ 29,890)
- **2014 – 2018** National Council for Scientific and Technological Development (CNPq), “Impacts of climate change and deforestation on Amazonian tree flora”. Grand by Social Demand Program, Doctorate research (€ 17,420).

8. RESEARCH OUTPUT

8.1. Secondary occupations

I have 26 peer-reviewed articles, with 663 citations in Scopus (Database: Scopus) and H-index 16, 1056 citations in Google Scholar (Database: Google Scholar). Research spans quantitative community ecology, species distribution modelling, large-scale analyses of Amazonian biodiversity, conservation, ecosystem services and forest restoration. Publications include papers in *Nature*, *PNAS*, *Science*, *Nature Climate Change*, *Communications Biology*, *Journal of Biogeography*, *Biological Conservation*, many developed through international collaborations. I am a member of the Amazonian Tree Diversity Network (ATDN), which includes more than 200 researchers and over 2,000 plots across the Amazon Rainforest (<https://sites.google.com/naturalis.nl/amazon-tree-diversity-network/homepage>).

Top-10 most cited publications (according to Google Scholar):

- **Gomes, V.H.F.**, Vieira, I.C.G., Salomão, R.P., ter Steege, H. (2019). Amazonian tree species threatened by deforestation and climate change. *Nature Climate Change* *9*, 547–553. doi.org/10.1038/s41558-019-0490-2
- **Gomes, V.H.F.**, IJff, S.D., Raes, N., Amaral, I.L., Salomão, R.P., de Souza Coelho, L., *et al.* (2018). Species Distribution Modelling: Contrasting presence-only models with plot abundance data. *Scientific Reports* *8*, 1003. doi.org/10.1038/s41598-017-18927-1
- **Gomes, V.H.F.**, Andrino, C.O., Barbosa-Silva, R.G., Acosta, A.L., González-Chaves, A.D., Slătis, J., Giannini, T.C. (2025). Food insecurity under global human-induced changes: Plants of the future in the Amazonian biome. *Biological Conservation* *311*, 111398. doi.org/10.1016/j.biocon.2025.111398
- Peripato, V., Levis, C., Moreira, G.A., Gamerman, D., ter Steege, H., Pitman, N.C.A., Souza, J.G., Iriarte, J., Robinson, M., ..., **Gomes, V.H.F.**, *et al.* (2023). More than 10,000 pre-Columbian earthworks are still hidden throughout Amazonia. *Science* *382*, 103–109. doi.org/10.1126/science.adi1235
- Cooper, D.L.M., Lewis, S.L., Sullivan, M.J.P., Prado, P.I., ter Steege, H., Barbier, N., ..., **Gomes, V.H.F.**, *et al.* (2024). Consistent patterns of common species across tropical tree communities. *Nature* *625*, 1–10. doi.org/10.1038/s41586-024-07566-2
- Correa, S.B., Coronado-Franco, K.V., Jézéquel, C., Cantarute-Rodrigues, A., Evans, K.O., Granger, J.J., ter Steege, H., Leão do Amaral, I., ..., **Gomes, V.H.F.**, *et al.* (2025). Floodplain forests drive fruit-eating fish diversity at the Amazon Basin-scale. *PNAS* *122*, e2414416122. doi.org/10.1073/pnas.2414416122
- Householder, J.E., Wittmann, F., Schöngart, J., Piedade, M.T.F., Junk, W.J., Latrubesse, E.M., Quaresma, A.C., Demarchi, L.O., Lobo, G.S., ..., **Gomes, V.H.F.**, *et al.* (2024). One sixth of Amazonian tree diversity is dependent on river floodplains. *Nature Ecology & Evolution* *8*, 1034–1042. doi.org/10.1038/s41559-024-02289-9
- Luize, B.G., Tuomisto, H., Ekelschot, R., Dexter, K.G., do Amaral, I.L., de Souza-Coelho, L., de Almeida-Matos, F.D., de Andrade Lima Filho, D., Salomão, R.P., Castilho, C.V., ..., **Gomes, V.H.F.**, *et al.* (2024). The biogeography of the Amazonian tree flora. *Communications Biology* *7*, 1240. doi.org/10.1038/s42003-024-06577-7
- Sanchez-Martinez, P., Draper, F.C., Baraloto, C., Leão do Amaral, I., de Souza Coelho, L., de Almeida-Matos, F.D., de Andrade Lima Filho, D., ..., **Gomes, V.H.F.**, *et al.* (2024). Phylogenetic conservatism in the relationship between functional and demographic characteristics in Amazon tree taxa. *Functional Ecology* *38*, 1–18. doi.org/10.1111/1365-2435.14579

- ter Steege, H., Prado, P.I., de Lima, R.A.F., Pos, E., de Souza Coelho, L., ..., **Gomes, V.H.F.**, *et al.* (2020). Biased-corrected richness estimates for the Amazonian tree flora. *Scientific Reports* 10, 1–13. doi.org/10.1038/s41598-020-62859-6

9. RESEARCH SUPERVISION AND LEADERSHIP EXPERIENCE

9.1. Research supervision

I have supervised 25 students across different levels, including 2 PhD (1 supervisor, 1 co-supervisor), 3 Master's dissertations (2 supervisor, 1 co-supervisor), and 20 Undergraduate projects (17 supervisor, 3 co-supervisor). These activities reflect continuous engagement in undergraduate and postgraduate training since 2017.

- **Ongoing** Ukko Romu. Master dissertation. University of Turku, Finland (co-supervisor).
- **Ongoing** Inaê Vilhena de Souza. PhD thesis, Federal Rural University of Amazonia, Brazil (supervisor).
- **Ongoing** Maricélia Gonçalves Barbosa. PhD thesis, Federal Rural University of Amazonia, Brazil (co-supervisor).
- **Ongoing** Ricardo Carneiro Raymundo. Master dissertation. University Centre of Pará, Brazil (co-supervisor).
- **Ongoing** Adib Said Cavaleiro De Macêdo Aboul Hosn. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **Ongoing** Fabio Gabriel Barros Oliveira. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **Ongoing** Guilherme Tadayuki Yokokura. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **Ongoing** Joao Vitor Farias De Farias. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2025** Inaê Vilhena de Souza. Master dissertation, Federal Rural University of Amazonia, Brazil (supervisor).
- **2025** João Renan Santanna Lopes. Undergraduate project, University Centre of Pará, Brazil (co-supervisor).
- **2024** Israel Queiroz Aires. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2023** Victória de Paula Paiva Teresawa, Master's dissertation, Federal Rural University of Amazonia, Brazil (supervisor).
- **2023** Abimael Ferreira de Oliveira. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2023** Carlos Eduardo Nylander Bitencourt Dias. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2023** Rafael Luís Carvalho Barros. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2023** Eduardo Maeda de Oliveira Araújo. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2023** Ocivaldo Bruno Nascimento dos Santos. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2022** André Akira Prazeres Yamase. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2022** Larissa Nascimento Negrão. Undergraduate project, University Centre of Pará (supervisor).
- **2022** Renan Figueiredo Carneiro. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2021** André Paes de Lima Soares. Undergraduate project, University Centre of Pará (supervisor).
- **2021** Isabelle Tavares Silva Santos. Undergraduate project, University Centre of Pará (supervisor).
- **2020** Alvaro Somensi Magnenti. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2020** Vitor Henrique Moreira de Souza. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2020** Anne Beatriz Martins Goncalves. Undergraduate project, University Centre of Pará, Brazil (supervisor).
- **2020** Camila Fernandes Barra. Master dissertation. Federal Rural University of Amazonia, Brazil (co-supervisor).
- **2018** Letícia Porto Picanço. Undergraduate Project. University of the State of Pará, Brazil (co-supervisor).
- **2017** André Luis Ferreira Hage. Undergraduate project. University of the State of Pará, Brazil (co-supervisor).

9.2. Leadership experience

- **2022 – Present** Steering Committee member of the Pará State Systems on Climate Change (COGES-CLIMA), contributing to strategic planning and policy-science interface on climate adaptation and mitigation.
- **2020 – 2024** Strategy and Institutional Relations Advisor, Economic Development Company of Pará (CODEC), coordinating research-based strategies for sustainable economic development and institutional partnerships.
- **2020 – 2024** Research leadership in biodiversity projects: Coordinated postdoctoral research at Instituto Tecnológico Vale and UFPA (2020–2024), integrating multi-institutional collaborations on climate change, ecosystem services, and species selection for restoration.
- **2018 – 2019** Development Manager, CODEC, leading applied projects on environmental sustainability and regional planning.

10. TEACHING MERITS

- Pedagogical expertise: Research-based teaching integrating biodiversity data, geospatial analysis, and climate change scenarios. Development of interdisciplinary modules linking ecology, computer science, and sustainability.

- Collaborative development: Creation of teaching materials for postgraduate programs; involvement in supervision of 25 theses and projects, enhancing student-led research capacity.

10.1. Development of teaching methods

- **2019 – Present** Data and scripts for teaching in different courses. al exercises of the Quantitative methods of data analysis in
- Materials available at: <https://gitlab.com/vitorhfgomes-group/species-distribution-modelling>

10.2. Teaching experience

- Over 5 years of teaching at undergraduate and postgraduate levels. Since 2019, courses in Undergraduation Computer Science Program (Algorithms, Image Processing, Research Methodology) at CESUPA. Since 2021, courses in MSc and PhD in Tropical Botany Program (Biodiversity Conservation, Statistical and Species Distribution Modeling) at UFRA/MPEG.

11. AWARDS AND HONOURS

- **2019** CAPES National Thesis Award for the best thesis in Environmental Science, Brasilia, Brazil.
- **2019** Highly cited paper award. Top 100 highly accessed articles across Scientific Reports in 2018 <https://doi.org/10.1038/s41598-017-18927-1>
- **2019** Highly cited paper award. Top 100 Highly accessed ecology articles across Scientific Reports in 2018 <https://doi.org/10.1038/s41598-017-18927-1>
- **2019** Alexander von Humboldt Anniversary Collection. Article selected to the collection on ecology, global change, and geoscience from across six Nature journals to celebrate Alexander von Humboldt 250th Anniversary <https://doi.org/10.1038/s41558-019-0500-2>

12. OTHER KEY ACADEMIC MERITS

12.1. Pre-examiner or opponent of a doctoral dissertation; memberships in doctoral dissertation committees or boards

- **2025** PhD jury member Ecology Program, Federal University of Goias, Goiania, Brazil.
- **2023** MSc jury member Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2024** PhD jury member Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2023** PhD jury member, Environmental Sciences Program, University of the State of Pará, Belém, Brazil.
- **2023** PhD jury member Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2023** MSc jury member, Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2023** MSc jury member, Environmental Sciences Program, University of the State of Pará, Belém, Brazil.
- **2022** MSc jury member, Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2022** MSc jury member, Environmental Sciences Program, University of the State of Pará, Belém, Brazil.
- **2021** MSc jury member, Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2021** MSc jury member, Environmental Sciences Program, University of the State of Pará, Belém, Brazil.
- **2020** MSc jury member, Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.
- **2019** MSc jury member, Environmental Sciences Program, University of the State of Pará, Belém, Brazil.
- **2019** MSc jury member, Tropical Botany Program, Rural Federal University of Amazonia, Belém, Brazil.

12.2. Memberships in national or international expert, evaluation or steering groups and other expert roles

- **2022 – Present** Member of the Steering Committee of the Pará State Systems on Climate Change (COGES-CLIMA), Belém, Pará, Brazil.

12.3 Membership of scientific communities

The International Biogeography Society.

12.4. Referee for scientific publications

- **2019 – 2025** Reviewer of 30 manuscripts in the following peer reviewed journals: Nature Climate Change, Annals of Forest Science, Biodiversity and Conservation, Environmental Conservation, Plant Ecology and Diversity, Diversity and Distributions, Global Change Biology, Global Ecology & Conservation, Journal of Biogeography, Scientific Reports, Theoretical and Applied Climatology, Biodiversity Data Journal, Journal of Applied Ecology, Nature Communications, Oikos, Regional Environmental Change.

12.5. Higher education roles

- **2020 – 2024** Strategy and Institutional Relations Advisor at the Economic Development Company of Pará, coordinating science-policy integration and sustainability projects.

12.6. Invited lectures

- **2020** What pollen can tell us about Amazonian tree species distribution? Palynology Talks – The Palynological Society.
- Global changes and their impact on Amazonian biodiversity. 2019. I Seminário PPGBE, Museu Paraense Emilio Goeldi, Belém, Brazil.

12.7. Inter-disciplinary activities

- **2015-2017** Invited expert, Development and availability of free software access for restoration of degraded legal reserve (arl) and permanent preservation (app) areas in Amazonia.

12.8. Conferences and invited presentations

- **2025** How research on Amazonian biodiversity can guide climate adaptation and wellbeing policies. In: Bridging knowledges for science with impact in the Amazon. Manaus, Brazil.
- **2025** Food insecurity under global human-induced changes: plants of the future in the Amazonian biome. In: European Conference for Tropical Ecology.
- **2023** Usos das árvores por comunidades tradicionais. 73º Congresso Nacional de Botânica. 2023. Belém Brazil.

13. SCIENTIFIC AND SOCIETAL IMPACT

- Open science: Active in producing and sharing large-scale biodiversity datasets (ATDN, restoration prioritization frameworks, geospatial platforms), with commitment to EU Open Science policies and open-access publishing.
- Research utilization: Outputs applied in biodiversity conservation, forest restoration planning, and climate policy (e.g. Pará State Climate System, Planaveg discussions).
- Responsible research: Engagement in multi-institutional collaborations (EVOAMAZ, ATDN, ITV) with transparent data practices and methodological reproducibility.