

## Education

- 2022–present **PhD, Computer Science**, *University of Groningen*, Groningen, The Netherlands  
Advisor Revantha Ramanayake, Ph.D.
- 2020–2022 **MSc, Computer Science**, *Federal University of Rio Grande do Norte*, Natal, Brazil  
Advisor João Marcos de Almeida, Ph.D. and Sérgio Roseiro Teles Marcelino, Ph.D.  
Final grade 5.0/5.0
- 2018–2019 **BS, Computer Science**, *Federal University of Rio Grande do Norte*, Natal, Brazil  
Advisor João Marcos de Almeida, Ph.D.  
Final grade 9.7/10 summa cum laude
- 2015–2018 **BS, Information Technology**, *Federal University of Rio Grande do Norte*, Natal, Brazil  
Advisor Selan Rodrigues dos Santos, Ph.D.  
Final grade 9.6/10 summa cum laude
- 2011–2016 **Technician Diploma in Informatics**, *Federal Institute of Rio Grande do Norte*, Natal, Brazil  
Advisor Bruno Sielly Jales Costa, Ph.D.
- 2011–2015 **Technician Diploma in Web Programming**, *Federal University of Rio Grande do Norte*, Natal, Brazil

## Publications in Logic and Theoretical Computer Science

### Theses

- 2022 Vitor Greati. “Hilbert-style formalism for two-dimensional notions of consequence”. MA thesis. Universidade Federal do Rio Grande do Norte, 2022. URL: <https://repositorio.ufrn.br/handle/123456789/46792>
- 2019 Vitor Greati. “Hilbert calculi for the main fragments of Classical Logic”. Undergraduate Thesis. Federal University of Rio Grande do Norte, 2019. URL: <https://vitorgreati.me/hcc1f-monograph.html>

### Journal papers

- 2025 Vitor Greati and Revantha Ramanayake. “Tight length theorems for multiset extensions of Higman’s lemma”. In: *Theoretical Computer Science* 1057 (2025), p. 115546. ISSN: 0304-3975. DOI: 10.1016/j.tcs.2025.115546
- 2024 Vitor Greati, Sérgio Marcelino, and Umberto Rivieccio. “Finite Hilbert Systems for Weak Kleene Logics”. In: *Studia Logica* 112.6 (2024), pp. 1215–1241. ISSN: 1572-8730. DOI: 10.1007/s11225-023-10079-w
- 2024 Vitor Greati et al. “Adding an implication to logics of perfect parafinite algebras”. In: *Mathematical Structures in Computer Science* 34.10 (2024), 1138–1183. DOI: 10.1017/S0960129524000227

### Book chapters

- 2024 Vitor Greati et al. “Generating proof systems for three-valued propositional logics”. In: *Handbook of Three-Valued Logics (to appear)*. 2026. URL: [www.arxiv.org/abs/2401.03274](http://www.arxiv.org/abs/2401.03274)

#### Conference papers

- 2025 Vitor Greati et al. “Analytic Calculi for Logics of Indicative Conditionals”. In: *Automated Reasoning with Analytic Tableaux and Related Methods*. Ed. by Gian Luca Pozzato and Tarmo Uustalu. Cham: Springer Nature Switzerland, 2026, pp. 59–81. ISBN: 978-3-032-06085-3. DOI: 10.1007/978-3-032-06085-3\_4
- 2025 Vitor Greati, Sérgio Marcelino, and Umberto Rivieccio. “Axiomatizing the Logic of Ordinary Discourse”. In: *Information Processing and Management of Uncertainty in Knowledge-Based Systems*. Ed. by Marie-Jeanne Lesot et al. Cham: Springer Nature Switzerland, 2025, pp. 390–405. ISBN: 978-3-031-74000-8. DOI: 10.1007/978-3-031-74000-8\_32
- 2024 Vitor Greati and Revantha Ramanayake. “Deducibility in the Full Lambek Calculus with Weakening Is H<sub>ACK</sub>-Complete”. In: *Advances in Modal Logic, AiML 2024, Prague, Czech Republic, August 19-23, 2024*. Ed. by Agata Ciabattoni, David Gabelaia, and Igor Sedlár. College Publications, 2024, pp. 401–422
- 2022 Vitor Greati and João Marcos. “Finite Two-Dimensional Proof Systems for Non-finitely Axiomatizable Logics”. In: *Automated Reasoning*. Ed. by Jasmin Blanchette, Laura Kovács, and Dirk Pattinson. Cham: Springer International Publishing, 2022, pp. 640–658. ISBN: 978-3-031-10769-6. DOI: 10.1007/978-3-031-10769-6\_37
- 2021 Vitor Greati, Sérgio Marcelino, and João Marcos. “Proof Search on Bilateralist Judgments over Non-deterministic Semantics”. In: *Automated Reasoning with Analytic Tableaux and Related Methods*. Ed. by Anupam Das and Sara Negri. Springer International Publishing, 2021, pp. 129–146. ISBN: 978-3-030-86059-2. DOI: 10.1007/978-3-030-86059-2\_8
- 2021 Joel Gomes et al. “On Logics of Perfect Parafinite Algebras”. In: *Proceedings 16th Logical and Semantic Frameworks with Applications, LSFA 2021, Buenos Aires, Argentina (Online), 23rd - 24th July, 2021*. Ed. by Mauricio Ayala-Rincón and Eduardo Bonelli. Vol. 357. EPTCS. 2021, pp. 56–76. DOI: 10.4204/EPTCS.357.5

#### Preprints

- 2025 Amirhossein Akbar Tabatabai, Vitor Greati, and Revantha Ramanayake. *Predicative Ordinal Recursion on the Constructive Veblen Hierarchy*. 2025. Submitted to *Annals of Pure and Applied Logic*. arXiv: 2510.18497 [math.LO]. URL: <https://arxiv.org/abs/2510.18497>
- 2025 Nikolaos Galatos et al. *Complexities of Well-Quasi-Ordered Substructural Logics*. 2025. arXiv: 2504.21674 [cs.LO]. URL: <https://arxiv.org/abs/2504.21674>

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## Other publications (Data Science and Material Sciences)

#### Journal papers

- 2021 Gilles Silvano et al. “Synthetic image generation for training deep learning-based automated license plate recognition systems on the Brazilian Mercosur standard”. In: *Design Automation for Embedded Systems 25.2 (2021)*, pp. 113–133. ISSN: 1572-8080. DOI: 10.1007/s10617-020-09241-7
- 2020 Gilles Velleneuve Trindade Silvano et al. “Artificial Mercosur license plates dataset”. In: *Data in Brief 33 (2020)*, p. 106554. ISSN: 2352-3409. DOI: <https://doi.org/10.1016/j.dib.2020.106554>

- 2020 André Fiel Borges et al. "Wearable optical device for the visually impaired in the classroom". In: *Research, Society and Development* 9.9 (2020). DOI: 10.33448/rsd-v9i9.7623
- 2019 Roberto R. C. Lima et al. "Sodium-Modified Vermiculite for Calcium Ion Removal from Aqueous Solution". In: *Industrial & Engineering Chemistry Research* 58.22 (2019), pp. 9380–9389. DOI: 10.1021/acs.iecr.9b00045

### Conference papers

- 2020 Aguinaldo Bezerra et al. "Enabling Interactive Visualizations in Industrial Big Data". In: *IFAC-PapersOnLine* 53.2 (2020). 21st IFAC World Congress, pp. 11162–11167. ISSN: 2405-8963. DOI: <https://doi.org/10.1016/j.ifacol.2020.12.292>
- 2019 Vinícius Ribeiro et al. "Brazilian Mercosur License Plate Detection: a Deep Learning Approach Relying on Synthetic Imagery". In: *2019 IX Brazilian Symposium on Computing Systems Engineering (SBESC)*. 2019, pp. 1–8. DOI: 10.1109/SBESC49506.2019.9046091
- 2019 Aguinaldo Junior et al. "An Industrial Big Data Processing Engine". In: *14<sup>o</sup> Simpósio Brasileiro de Automação Inteligente*. 2019. DOI: 10.17648/sbai-2019-111445
- 2019 Joel Gomes, Vitor Greati, and João Marcos. "Towards the automated extraction of Hilbert calculi for fragments of classical logic". In: *19th Brazilian Logic Conference*. 2019
- 2018 Vitor Greati et al. "Monitoring platform for vehicle irregularities in Smart Cities". In: *Congresso Brasileiro de Automática*. 2018 (in Portuguese)
- 2017 Vitor Greati et al. "Method for license plate recognition in uncontrolled environments". In: *Simpósio Brasileiro de Automação Industrial*. 2017 (in Portuguese)
- 2017 Vitor Greati, Vinícius Campos, and Ivanovitch Silva. "System based on automatic license plate recognition for vehicle monitoring and characterization of patrons in closed environments". In: *Escola Potiguar de Computação e suas Aplicações*. 2017 (in Portuguese)
- 2017 Vitor Rodrigues Greati et al. "A Brazilian License Plate Recognition Method for Applications in Smart Cities". In: *2017 IEEE First Summer School on Smart Cities (S3C)*. 2017, pp. 43–48. DOI: 10.1109/S3C.2017.8501395
- 2015 Bruno Sielly Jales Costa et al. "A visual protocol for autonomous landing of unmanned aerial vehicles based on fuzzy matching and evolving clustering". In: *2015 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)*. 2015, pp. 1–6. DOI: 10.1109/FUZZ-IEEE.2015.7337907

## Presentations

### Conferences

- 2025 Analytic calculi for logics of indicative conditionals. *TABLEAUX'25*, Reykjavík, Iceland.
- 2025 Predicative recursion on the Veblen hierarchy. *Proof Society Workshop*, Ghent, Belgium.
- 2024 Deducibility in the full Lambek calculus with weakening is HACK-complete. *AiML'24*, Prague, Czech Republic.
- 2024 Axiomatizing the Logic of Ordinary Discourse. *IPMU 2024*, Lisbon, Portugal.
- 2024 Knotted substructural logics have fast-growing complexity. *Logic Colloquium 2024*, Gothenburg, Sweden.
- 2023 Decidability and complexity upper bounds for weakly commutative knotted substructural logics. *MOSAIC 2023*, Vienna, Austria.

- 2023 Hilbert-style formalism for two-dimensional notions of consequence. *VCLA Awards*, Vienna, Austria.
- 2022 Finite analytic two-dimensional proof systems for non-finitely axiomatizable logics. *IJCAR 2022*, Haifa, Israel.
- 2022 Finite and analytic Hilbert-style systems for Paraconsistent Weak Kleene and Bochvar-Kleene logics. *Trends in Logic XXII*, online.
- 2021 Proof search on Bilateralist Judgments over Non-deterministic Semantics. *TABLEAUX 2021*, online.
- 2019 Towards the automated extraction of Hilbert calculi for fragments of classical logic. *19th Brazilian Logic Conference*, Joao Pessoa, Brazil.
- 2018 Platform for monitoring irregularities in vehicles in Smart Cities. *Congresso Brasileiro de Automática (CBA)*, Joao Pessoa, Brazil.
- 2017 A Brazilian License Plate Recognition Method for Applications in Smart Cities. *1st IEEE Summer School on Smart Cities*, Natal, Brazil.
- 2015 A Visual Protocol for Autonomous Landing of Unmanned Aerial Vehicles Based on Fuzzy Matching and Evolving Clustering. *FUZZ-IEEE 2015*, Istanbul, Turkey.

### Seminars

- 2024 Deducibility in the full Lambek calculus with weakening is HAcK-complete. *NetTCS*, Leiden, The Netherlands.
- 2024 Computational properties of non-classical logics. *AILO talk*, Groningen, The Netherlands.

## Research Experience

### Federal University of Rio Grande do Norte

- 2022-present **Computational study of substructural logics via proof theory**
- 2020-2022 **Hilbert-style systems for two-dimensional notions of consequence**
- 2019-2019 **Data-driven wind prediction and fault prognosis in wind turbines**
- 2018-2019 **Hilbert calculi for the main fragments of Classical Logic**
- 2018-2020 **Big Data for the Oil and Gas Smart Industry**
- 2016-2017 **Data Science for vehicle monitoring and diagnosys**

### Federal Institute of Rio Grande do Norte

- 2014-2015 **New landing protocol for unmanned aerial vehicles using fuzzy clustering**

## Work Experience

- 2020-2022 **Researcher and developer**, *Logap Systems*, Natal/RN, Brazil
- 2015-2016 **Web Development Intern**, *IT Department*, Federal University of Rio Grande do Norte

## Teaching Experience

### University of Groningen

- 2023-2025 **Teaching assistant**, *Computational Complexity*, BSc course, Faculty of Science and Engineering

### Federal Institute of Rio Grande do Norte

- 2014-2015 **Tutoring high school students for programming contests**

## Federal University of Rio Grande do Norte

- 2021–2021 **Teaching assistant**, *Mathematics for Computer Science III*, BSc course, Computer Science Department (DIMAP)
- 2012–2012 **Teaching assistant**, *Web Programming*

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## Grants

- 2023 **E.W. Beth foundation**, *Visits from external researchers and a three-day symposium on computational properties of substructural logics*.

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## Skills and competences

### Languages

Portuguese	Native
English	Advanced

### Programming languages

■■■■■	C++, Java, Python
■■■□□	Haskell, Scala
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### Others

■■■■■	Web frontend	<i>HTML5, CSS3, Javascript</i>
■■■■■	Web backend in Java	<i>Spring, Hibernate</i>
■■■■□	Web backend in Python	<i>django</i>
■■□□□	Web backend in PHP	<i>PHP Ignite</i>
■■■■■	Data science in Python	<i>pandas, scikit-learn, dask</i>
■■■■■	Databases	<i>MySQL, PostgreSQL, MongoDB</i>
■■■■□	Desktop programming	<i>Java</i>
■■■■□	Android programming	<i>Java</i>

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## Honors

- 2023 **VCLA Outstanding Master Thesis Award – Runner-up**, *Vienna Center for Logic and Algorithms*, Vienna, Austria
- 2020 **Bachelor in Computer Science with honours**, *Federal University of Rio Grande do Norte*, Natal, Brazil
- 2019 **2nd Best Paper Award**, *IX Brazilian Symposium on Computing Systems Engineering*, Natal, Brazil
- 2018 **Bachelor in Information Technology with honours**, *Federal University of Rio Grande do Norte*, Natal, Brazil
- 2014 **Silver Medal**, *CRIA's Algorithm Cup*, Rio Info, Rio de Janeiro, Brazil
- 2014 **Bronze Medal**, *10th OBMEP*, IMPA, Brazil
- 2014 **Third best project of Natural Science and Mathematics**, *MOCITEC*, Federal Institute of Rio Grande do Norte, Natal, Brazil
- 2014 **Outstanding research award**, *MOCITEC IFRN*, ABRITEC, Natal, Brazil
- 2014 **Outstanding student award**, *Federal Institute of Rio Grande do Norte*, Natal, Brazil

## Conference organization

- 2018 IEEE Symposium on Computers and Communications.
- 2016 IEEE Conference on Evolving and Adaptive Intelligent Systems.

## Additional information

- 2020-2022 Student member of the Association for Symbolic Logic (ASL).
- 2019-2020 Volunteer in IEEE Computer Society at UFRN.