CURRICULUM VITAE

Prof. Dr. Luís Felipe Ignácio Cunha
Computer Science Department
Institute of Computation
Fluminense Federal University

Av. Gal. Milton Tavares de Souza,
s/nº São Domingos Niterói – RJ – Brazil
CEP: 24210-346
Phone: +55 21 98911-1984
Email: lfignacio@ic.uff.br
Homepage: http://profs.ic.uff.br/~lfignacio

Academic Background

2013-2017: PhD in Computer Science, Federal University of Rio de Janeiro, Brazil
Subject: Algorithms and Combinatorics for Bioinformatics

2011-2013: MSc in Computer Science, Federal University of Rio de Janeiro, Brazil
Subject: Algorithms and Combinatorics for Bioinformatics

2007-2011: Mathematics, Fluminense Federal University, Brazil

Professional career

2020-present: Professor of Computer Science, Fluminense Federal University, IC/UFF, Brazil

2020-present: Professor of Computer Science, Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro, CEDERJ/UFF, Brazil

2017-2018: Postdoctoral researcher at Fluminense Federal University, IC/UFF, Brazil, PDJ-CNPq Scholarship
Subject: Algorithms and Combinatorics for Strings and Graphs

2018-2019: Postdoctoral researcher at Federal University of Rio de Janeiro, PESC/UFRJ, Brazil, PNPD-CAPES Scholarship
Subject: Algorithms and Combinatorics for Strings and Graphs

Projects coordinator and Academic services

2022-present: Young Scientist of Our State Program, JCNE-FAPERJ

2021-present: Universal Research Project, Universal-CNPq

2018-present: Program Committee at the Brazilian Symposium on Bioinformatics

2023-present: Editor of the Journal of the Brazilian Computer Society

2013-present: Reviewer of Journals: Theoretical Computer Science, Discrete Applied Mathematics, IEEE/ACM Transactions on Computational Biology and Bioinformatics, and others

Administrative experience

2023-present: Vice-coordinator of the undergraduate course in Computer Science at Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro, CEDERJ/UFF, Brazil

Synergistic Activities

2020-present: Disseminator of academic courses (on Theoretical Computer Science studies) at YouTube https://www.youtube.com/user/lfignacio1

2014: Top 10 of the best MSc dissertations in Computer Science of Brazil - Sociedade Brasileira de Computação

Selected publications

1. Abreu, A.; Cunha, L.; Figueiredo, C.; Kowada, L.; Marquezino, F.; Posner, D.; Portugal, R.. The graph tessellation cover number: Chromatic bounds, efficient algorithms and hardness. Theoretical Computer Science (Section Natural Computing), v. 801, p. 175-191, 2020. http://dx.doi.org/10.1016/j.tcs.2019.09.013

2. Abreu, A.; Cunha, L.; Figueiredo, C.; Kowada, L.; Marquezino, F.; Posner, D.; Portugal, R.. A Computational Complexity Comparative Study of Graph Tessellation Problems. Theoretical Computer Science (Section Algorithms, automata, complexity and games), v. 858, p. 81-89, 2021. http://dx.doi.org/10.1016/j.tcs.2020.11.045

3. Abreu, A.; Cunha, L.; Figueiredo, C.; Marquezino, F.; Posner, D.; Portugal, R.. Total tessellation cover: bounds, hardness, and applications. Discrete Applied Mathematics. http://dx.doi.org/10.1016/j.dam.2021.09.032

4. Cunha, L.; Kowada, L.; Hausen, R.; Figueiredo, C.. Advancing the Transposition Distance and Diameter through Lonely Permutations. SIAM Journal on Discrete Mathematics. v. 27(4), p. 1682–1709, 2013. https://doi.org/10.1137/120899753

5. Cunha, L.; Kowada, L.; Hausen, R.; Figueiredo, C.. A Faster 1.375-Approximation Algorithm for Sorting by Transpositions. Journal of Computational Biology. v. 22, p. 1044-1056, 2015. http://dx.doi.org/10.1089/cmb.2014.0298

6. Abreu, A.; Cunha, L.; Fernandes, T.; Figueiredo, C.; Kowada, L.; Marquezino, F.; Posner, D.; Portugal, R.. The Graph Tessellation Cover Number: Extremal Bounds, Efficient Algorithms and Hardness. Latin American Symposium on Theoretical Informatics. v. 10807, p. 1-13, 2018. http://dx.doi.org/10.1007/978-3-319-77404-6_1

7. Cunha, L.; Protti, F.. Genome Rearrangements on Multigenomic Models: Applications of Graph Convexity Problems. Journal of Computational Biology, v. 26, p. 1214-1222, 2019. http://dx.doi.org/10.1089/cmb.2019.0091

8. Couto, F.; Cunha, L.. Hardness and efficiency on minimizing maximum distances in spanning trees. Theoretical Computer Science (Section Algorithms, automata, complexity and games), v. 838, p. 168-179, 2020. http://dx.doi.org/10.1016/j.tcs.2020.06.012

9. Cunha, L.; Diekmann, Y.; Kowada, L.; Stoye, J.. Identifying Maximal Perfect Haplotype Blocks. Lecture Notes in Computer Science. BSB, 2018, v. 11228, p. 26-37. http://dx.doi.org/10.1007/978-3-030-01722-4_3

10. Cunha, L.; Dantas, S.; Gagie, T.; Wittler, R.; Kowada, L.; Stoye, J.. Fast and Simple Jumbled Indexing for Binary Run-Length Encoded Strings. In: 28th Annual Symposium on Combinatorial Pattern Matching (CPM 2017), 2017 v. 78. p. 19:1-19:9. http://dx.doi.org/10.4230/LIPIcs.CPM.2017.19