Tiago Carneiro Pessoa

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I received my Master's degree in Computer Science from the State University of Ceará (Brazil) and my PhD in Computer Science – with international mobility at INRIA Lille (France) – from the Federal University of Ceará (Brazil). Since 2010, I research different topics related to parallel and distributed computing, mainly the use of heterogeneous architectures for solving combinatorial optimization problems. Currently, I'm a research associate in the Parallel Computing & Optimization Group at the University of Luxembourg. My research is focused on the use of high-productivity languages for the design and implementation of large-scale distributed heterogeneous algorithms.

Research Interests: Parallel and distributed algorithms, GPU and heterogeneous computing, combinatorial optimization, high-productivity languages.

Google Scholar: https://scholar.google.com/citations?user=aHpFVBMAAAAJq&hl
Researchgate: https://www.researchgate.net/profile/Tiago_Pessoa/
Publons: https://publons.com/researcher/1481471/tiago-carneiro-pessoa/
Personal website: https://tcarneirop.github.io/

EDUCATION

PhD in Computer Science *2013 - 2017*
Federal University of Ceará (UFC). Fortaleza - CE, Brazil

· *International mobility*: from September 2015 to August 2016 at INRIA Lille - Nord Europe, Dolphin team.

Master's Degree in Computer Science *2010 - 2012*
State University of Ceará (UECE). Fortaleza - CE, Brazil

Bachelor's Degree in Computer Science *2004 - 2009*
State University of Ceará (UECE). Fortaleza - CE, Brazil

AWARDS

· **[2021]** The **Outstanding Paper Award** received in the International Conference on High Performance Computing & Simulation - HPCS 2020 for the work *Towards Chapel-based Exascale Tree Search Algorithms: dealing with multiple GPU accelerators.*
· **[2016] Certification of Outstanding Contribution in Reviewing** for the year of 2016 received from the Journal of Parallel and Distributed Computing (JPDC).

LANGUAGES

· Portuguese (Native), English (full professional proficiency), and French (working proficiency).

SKILLS

Programming Languages	C/C++, Chapel, Fortran, Julia, Java, and Python
Parallel Programming	CUDA, OpenCL, OpenACC, OpenMP, PThreads MPI, PGAS, Numba, and Vectorization

EXPERIENCE

Research associate — Mar 2021 - present
University of Luxembourg, Luxembourg

Postdoctoral researcher — Nov 2018 - Jun 2020
INRIA Lille - Nord Europe, France.

Postdoctoral researcher — Mar 2018 - Oct 2018
Federal Institute of Education, Science and Technology (IFCE). Fortaleza-CE, Brazil.

International mobility — Sep 2015 - Aug 2016
INRIA Lille - Nord Europe, France.

PhD student / Research intern — Mar 2013 - Dec 2017
Federal University of Ceará (UFC). Fortaleza-CE, Brazil.

Lecturer — Aug 2012 - Jul 2014
State University of Ceará (UECE). Fortaleza-CE, Brazil

Lecturer — Aug 2012 - Jul 2013
Christus University Center - UniChristus. Fortaleza-CE, Brazil

Master student / Research intern — Mar 2010 - Jun 2012
State University of Ceará (UECE). Fortaleza-CE, Brazil

Undergraduate researcher — Mar 2008 - Jul 2009
State University of Ceará (UECE). Fortaleza-CE, Brazil.

Trainee software developer — Feb 2007 - Sep 2007
State University of Ceará (UECE). Fortaleza-CE, Brazil.

PUBLICATIONS

Table 1: Summary

International journals	7
International conferences	16
National conferences	5
Other	5
Software development	3
Total	36

Visit my Google Scholar profile or my full CV for more details.

Selected publications:

- **[1]** Carneiro, T.; Melab, N.; Hayashi, A.; Sarkar, V. Towards Chapel-based Exascale Tree Search Algorithms: dealing with multiple GPU accelerators. In: The International Conference on High Performance Computing & Simulation - HPCS 2020 - held in March 2021. **Outstanding Paper Award**.
- **[2]** Gmys, J.; Carneiro, T.; Melab, N.; Tuyttens, d.; Talbi, E-G. A Comparative Study of High-productivity High-performance Programming Languages for Parallel Metaheuristics. Swarm and Evolutionary Computation, 57:100720 (2020). DOI: 10.1016/j.swevo.2020.100720.
- **[3]** Carneiro Pessoa, T.; Gmys, J.; de Carvalho Junior, F. H.; Melab, N.; Tuyttens, D. GPU-accelerated Backtracking Using CUDA Dynamic Parallelism. Concurrency and Computation: Practice and Experience, Wiley Online Library, 30(9): e4374 (2018). DOI: 10.1002/cpe.4374.