Rubem Vasconcelos Pacelli

General Information

Fortaleza, Ceará, Brazil
Federal University of Ceará (UFC)
UFC-PPGETI-GPSI

Last update: 2023-11-08
Mobile: +55 85 981824344

Carrer Summary

Skilled Engineer with academic experience in Satellite Communications and multidisciplinary background in

- Deep Learning, Pattern Recognition, System Identification.
- Estimation, Detection and Optimization Theory, Adaptive Filtering.
- FPGA (Field Programmable Gate Array) and DSP (Digital Signal Processor).

Education

BSc in Electronics Engineering — Jan 2013-Dec 2018
University of Fortaleza (Unifor) — Fortaleza, Brazil

Msc in Teleinformatics Engineering — Jan 2019-Jun 2021
Federal University of Ceará (UFC) — Fortaleza, Brazil

PhD in Teleinformatics Engineering — Jul 2021-Present
Federal University of Ceará (UFC) — Fortaleza, Brazil

Experience

E1 IRD-UFC research partnership — Jun 2019-Dec 2020
Federal University of Ceará (UFC) — Fortaleza, Brazil

- Research on Machine Learning and Statistical Signal Processing.
- Developed a research project in collaboration with the IRD (Research Institute Pour Le Développement, France).

Projects and Research Funding

Pr1 Research and development of a fully digital modem for satellite communications — Jun 2019-Jun 2021

Master scholarship from Coordination for the Improvement of Higher Education Personnel (CAPES)

- Fully digital modem for satellite communications, targeting its implementation in FPGAs.
- Design of the logical architecture of the modulator and demodulator.
- Development of synchronization modules for the symbol timing delay and phase offset.

Pr2 Noncoherent GMSK demodulator for CubeSat systems — Feb 2017-Jan 2018

Scientific initiation scholarship from National Council of Scientific and Technological Development (CNPq)

- Development of noncoherent GMSK demodulator for CubeSat systems.

Pr3 Synchronization in OFDM systems — Feb 2016-Jan 2017

Scientific initiation scholarship from National Council of Scientific and Technological Development (CNPq)

- Research on synchronization techiniques applied to OFDM systems.

Pr4 Synchronization of signals with multicarrier — Feb 2015-Jan 2016

Scientific initiation scholarship from National Council of Scientific and Technological Development (CNPq)

- Research on synchronization techniques applied to multicarrier systems.

Skills

Technical

- Scientific programming languages: Python, Julia, R, MATLAB/Simulink, Octave.
- Embedded systems programming languages: C, C++, MicroPython, and Assembly.
- Hardware Description Languages: VHDL.
- Electronic design automation (EDA)
  - PCB (printed circuit board) design: Altium, KiCad, EasyEDA, Proteus.
  - Circuit simulation: LTspice, Multisim, Proteus.
- GNU/Linux: UNIX Shell scripting, Linux system fundamentals, git.
- Typesetting systems: LaTeX, Typst.

Languages

- English: Professional working proficiency (TOEFL IBT and Cambridge FCE exams).
- Portuguese: Native speaker.

Teaching and support

- I have experience as an assistant teacher in Digital Communications at the Federal University of Ceará (UFC) during my Doctorate's degree in Teleinformatics Engineering.
- I have experience as an assistant teacher in Digital Signal Processing at the Federal University of Ceará (UFC) during my Master's degree in Teleinformatics Engineering.
- I have experience as an assistant teacher in Control Theory at University of Fortaleza (Unifor) during my undergraduate in Electronics Engineering.

Academic Activity & membership

Associate member

- Brazilian Telecommunications Society (SBrT)

Publications

My academic publications are also listed on Google scholar.