

Renam Castro da Silva

RESEARCHER

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Work Experience

Instituto Federal de Educação, Ciência e Tecnologia de São Paulo

São José dos Campos, Brasil

SUBSTITUTE PROFESSOR

March 2021 - Present

- Teaching undergraduate-level courses in the control and automation engineering department
- Teaching technical-level courses in the industrial automation course

Universidade de Brasília

Brasília

COLLABORATING RESEARCHER

February 2021 - Present

- Automatic deforestation detection using artificial intelligence and synthetic aperture radar (SAR) images

Samsung R&D Institute Brazil

Campinas, Brasil

IMAGE AND VIDEO PROCESSING SPECIALIST

March 2018 - September 2020

- Research on image and video compression using both engineered and learning-based approaches
- Technical leader in research projects in partnership with universities
- Patent writing/application
- Draft patent review committee

Instituto de Telecomunicações

Lisboa, Portugal

RESEARCH ASSISTANT

May 2016 - April 2017

- Research on a video coding approach using local visual features
Scholarship from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)

Instituto Nokia de Tecnologia

Manaus, Brasil

INTERN

2008 - 2010

- Software development, driver development for RFID reader, fault detection in radio frequency circuits

Education

Universidade Federal do Rio de Janeiro

Rio de Janeiro, Brasil

DOCTOR OF SCIENCE IN ELECTRICAL ENGINEERING

September 2013 - February 2018

- Thesis: Towards Visualization and Searching: A Dual-purpose Video Coding Approach
- Scholarship from Fundação de Amparo à Pesquisa do Estado do Amazonas (FAPEAM)

Universidade Federal do Rio de Janeiro

Rio de Janeiro, Brasil

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING

March 2011 - September 2013

- Dissertation in Portuguese: Image Compression Using Prediction and Polynomials Approximations
- Scholarship from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)

Universidade do Estado do Amazonas

Manaus, Brasil

BACHELOR OF SCIENCE IN MECHATRONIC ENGINEERING

2006 - 2010

Skills & Courses

Programming/scripting

Matlab, R, python, bash script, c, c++

Miscellaneous

Linux, Docker, Kubernetes, Conda, Git, Confluence, Latex, Tensorflow, Pytorch, Opencv, Scrum

Languages

Portuguese (Native), English (Good listening, writing and speaking skills)

Data science course

Data analysis, unsupervised learning, supervised learning and deep learning

100h - Universidade Estadual de Campinas

Extracurricular activity

IEEE Transactions on Multimedia

REVIEWER

- Has served as volunteer reviewer for IEEE Transactions on Multimedia

Elsevier Signal Processing: Image Communications

REVIEWER

- Has served as volunteer reviewer for Elsevier Signal Processing: Image Communication

IEEE Access

REVIEWER

- Has served as a volunteer reviewer for IEEE Access

Computer and technology week. Universidade Federal de São Carlos (UFSCar)

Sorocaba, Brazil

INVITED SPEAKER

Nov. 2017

- Introduction to image and video compression

Share Knowledge Day. Samsung R&D Institute Brazil

Campinas, Brazil

INVITED SPEAKER

August 2018

- Advances on multimedia signal processing

Publication

LEARNING-BASED END-TO-END VIDEO COMPRESSION USING PREDICTIVE CODING

SIBGRAPI – Conference on Graphics, Patterns and Images, 2021 (Accepted)

MULTI-MODE INTRA PREDICTION FOR LEARNING-BASED IMAGE COMPRESSION

International Conference on Image Processing (ICIP), 2020

JOINT MOTION AND RESIDUAL INFORMATION LATENT REPRESENTATION FOR P-FRAME CODING

Computer Vision and Pattern Recognition (CVPR) Workshops, Online, June 2020

TOWARDS VISUALIZATION AND SEARCHING: A DUAL-PURPOSE VIDEO CODING FRAMEWORK

IEEE Access, vol. 8, no 1, January 2020.

DISTORTION SCALABLE LEARNED IMAGE COMPRESSION

International Workshop on Multimedia Signal Processing (MMSP), Kuala Lumpur, Malaysia, September 2019.

FEATURE-BASED VIDEO CODING: DESIGNING AN RD EFFICIENT AND SEARCH FRIENDLY FRAMEWORK

Picture Coding Symposium (PCS), Nuremberg, Germany, December 2016.

STUDYING THE COMPRESSION PERFORMANCE OF VIDEO DESCRIPTORS.

Simpósio Brasileiro de Telecomunicações (SBrT), Juiz de Fora, Brazil, September 2015. **Best paper award.**

COMPRESSÃO DE MAPAS DE PROFUNDIDADE USANDO PREDIÇÃO E APROXIMAÇÕES POLINOMIAIS

Simpósio Brasileiro de Telecomunicações (SBrT), Fortaleza, Brazil, September 2013.

DETECÇÃO DE FALHAS EM CABOS E ANÁLISE DE QUALIDADE DE CONEXÃO EM CIRCUITOS DE COMUNICAÇÃO

Congresso Brasileiro de Automática, Bonito, Brazil, September 2010.

Professional membership and awards

Member, Brazilian expert group on image and multimedia coding

2018-Present

Member, IEEE member, signal processing society

2015-Present

Awarded, Best paper award from Sociedade Brasileira de Telecomunicações

2015