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Shorbio

I am Computer Scientist (PhD & Postdoc), and my career can be seen threefold. In research, I have contributed to projects on Multimedia & Machine Learning (ML) and participated in technical committees ([ACM SIGMM](#) and [SBC WebMedia](#)). And I am currently interested in ML methods, particularly non-Euclidean, for the next generation of immersive and multimedia systems. Second, I have added value to the industry by contributing to applied projects and standards at industry forums ([ITU-T SG16](#) and [BR TV Forum](#)). While in teaching, I acted as an undergrad lecturer and postgraduate assistant. Also, I got involved in public engagement and promoted student interests in social impact.

Experiences

Work

UCL, LASP Lab

Postdoc Researcher on ML project 2021–today
Highlights: EPSRC project; ACM SIGMM committees and workshop organizer; co-supervised undergrad students.

PUC-Rio, TeleMidia Lab

Postdoc Researcher on ML & Multimedia projects 2017–2020
Highlights: project PI; team leader; standards contributions; SBC WebMedia committees and workshop organizer (students for social impact); co-supervised under/postgrad students; postgraduate lecturer assistant.

Dynavideo, TV Division

Research Engineer on World Bank funded Brasil4D project 2012–2012
Highlights: multiple awarded social impact project.

Dynavideo, TV Division

Part-Time Intern software developer 2007–2008
Highlights: prototype TV software in ST boards.

Education

PUC-Rio

PhD. in Informatics. [Multimodal-multiuser support in multimedia scene descriptions](#) 2013–2017
Highlights: thesis used in SBTVD standard; industry committees.

UFPB

MSc. in Informatics. [Multi-device support in TV app stores](#) 2010–2012
Highlights: thesis used in the awarded World Bank funded Brasil4D project; undergraduate lecturer; project leader

UFPB

BSc. in Computer Science 2005–2009
Highlights: Algorithms undergraduate tutor.

Research

Publications

[Google Scholar](#) shows 250 published papers, 2100 citations, h-index 6. See below recent and some selected publications.

Elsevier Book Chapter 2022

ACM Multimedia Systems. 2022

Springer Journal on Multimedia Tools and Applications. 2016, 2020

IEEE Symposium on Multimedia (ISM). 2020

SBC WebMedia 2020, 2020, 2020, 2021, 2021, 2021

ACM Symposium on Document Engineering. 2019

Projects on Machine Learning

- SpheryStream (Funded by EPSRC): Improve 360-video streaming with profile-based methods
- VideoMR (Funded by RNP and Microsoft): detect inappropriate content in video scenes
- AML – Anti-Money Laundry (Funded by BTG Bank): Financial risk identification and anomaly detection

Projects on Multimedia systems

- PUC-Rio Ginga reference implementation, funded by PUC-Rio Software Licenses to TV manufacturers
- SBTVD Conformance Test Suite for TV for Ginga implementers
- GT-RAP (Funded by RNP): blockchain-based authentication of academic certificates
- GingaAppStore (Funded by RNP): design broadband system to deliver TV applications
- Art TVDI (Funded by RNP): design agile methods for TV applications development
- Ginga CDN (Funded by RNP): develop reusable TV middleware components.
- Brasil4D (Funded by World Bank): design a transmission of social impact TV content to low-income families. Its results were published at a [public report](#)

Awards

Approved as PI in [VideoMR](#) project (Funded by RNP and Microsoft). 2019

Brasil 4D 2013-2014

- SET Conference Award for Best TV interactivity solution
- TV Award Honorable mention in Innovation and Creativity
- FRIDA Award for innovative TV technological solutions

GingaStore 2012

- ITU IPTV Application Challenge Honorable mention in User-friendliness

Travel Awards 2017-2022

- SIGMM Travel Award for MMSys (2022)
- SIGWeb Travel Award for DocEng (2017, 2019)
- SIGHI Gary Marsden Travel Award for IMX (2022)

Committees

ACM

SIG Multimedia 2020-today

- Multimedia conference: reviewer (2022), area chair (2022), reproducibility chair (2023)
- Multimedia Systems (ACM MM): MMVE review (2021, 2022, 2023) and demo chair (2022)
- Immersive Experiences(ACM IMX) conference: reviewer (2022) and area chair (2022)
- QoMex conference (ACM QoMEX): reviewer (2023)

Brazilian Computing Society (SBC)

Web and Multimedia Especial Committee 2017-today

- WebMedia conference: Steering Committee (2019-today), reviewer (2013-today), chair of Undergrad workshop (2018), chair of Demos Workshop (2019-today), and chair of Social Impact Workshop (2018-today)

Springer

Reviewer 2022-today

- Journal of Multimedia Tools and Applications: reviewer (2022, 2023)
- Iberoamerican Conference on TV Applications and Usability: reviewer (2020, 2021, 2022)

Training

UCL

Data Protection for Researchers; Fundamentals in Research Funding. 2022-2021

Nature

Interpreting Scientific Results; Nature Focus on Peer Review. 2022-2023

Industry

Committees

Brazilian TV Forum (SBTVD)

Academic member at *Technical Module* contributing to *TV middleware standards* 2017-2021

International Telecommunication Union (ITU)

Academic member at *SG-16/Q13* contributing to *IPTV middleware standards* 2017-2021

Training

ITU

ITU-T A.1: Working Methods of ITU-T Study Groups 2023

Teaching

Experiences

PUC-Rio

Lecturer assistant on *Multimedia and Machine Learning* to postgrad students (*i20*) 2019

Lecturer assistant on *TV development (Ginga Brasil, Funded by RNP)* to undergrad students (*i30*). 2013

Japan International Cooperation Agency

Lecturer (and course design) on *TV development* to South American countries professionals(*i20*) 2012

RNP ESR

Assistant on *Linux Administration* to IT professionals (*i20*) 2011

UFPB

Lecturer (and course design) on *Programming Introduction (C language)* to undergrad students(*i30*) 2010

Lecturer Assistant on *Analysis and design of Algorithms* to undergrad students (*i30*). 2008

Public Engagement

Chair of *SBC WebMedia* workshop to students researching on *Social Impact* . 2018-today

Brasil4D social impact project to low-income families. 2013-2014

Skills

Languages: Portuguese (mother tongue), English (advanced, SELT certification), and Spanish (advanced).

Programing: Python, Bash, C++, Lua, Java, JavaScript.

Tools: GitHub Actions, Docker, CMake, Latex, Docusaurus.

Social: Good and empathic communication. Positive, make-it-happen, team-work, lead-by-example attitudes.

Academic: Scientific and standard writting. Teaching and presentation skills.

References

- Laura Toni |l.toni@ucl.ac.uk|: Postdoc. supervisor at UCL.
- Simone DJ Barbosa |simone@inf.puc-rio.br|: PhD supervisor at PUC-Rio.
- Marcelo Moreno |moreno@ice.ufjf.br|: ITU SG-16/Q13 and SBTVD collaborator.
- Roberto Azevedo |roberto.azevedo@disneyresearch.com|: TeleMidia collaborator.