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Shorbio

I am Computer Scientist (PhD & Postdoc), and my career can be seen threefold. First, 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). And 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 markup multimedia languages   *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 ¿50 published papers, ¿100 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*

IEEE Multimedia Signal Processing. *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

SIGMM contributor *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)

Mulimedia Especial Commitee *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 Techincal 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 (¿20)   2019
Lecturer assistant on TV development (Ginga Brasil, Funded by RNP) to undergrad students (¿30).   2013

Japan International Cooperation Agency
Lecturer (and course design) on TV development to South American countries professionals(¿20)   2012

RNP ESR
Assistant on Linux Administration to IT professionals (¿20)   2011

UFPB
Lecturer (and course design) on Programming Introduction (C language) to undergrad students(¿30)   2010
Lecturer Assistant on Analysis and design of Algorithms to undergrad students (¿30).   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.