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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 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 ¿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*

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.