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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). I am currently interested in non-Euclidean ML methods 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: ACM SIGMM committees and workshop organizer; co-supervised undergrad students.
- SpheryStream (Funded by EPSRC) to Improve 360-video streaming with profile-based methods

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.
- VideoMR (Funded by RNP and Microsoft) to detect inappropriate content in video scenes;
- AML – Anti-Money Laundry (Funded by BTG Bank) to detect financial transcations risk and anomaly detection;
- GT-RAP (Funded by RNP) to develipe a blockchain-based system for academic certificates;

Dynavideo, TV Division

Software engineer   *2012–2012*

Highlights: multiple awarded social impact project.
- 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

Education

PUC-Rio

PhD. in Informatics. Thesis on Multimodal-multiuser support in multimedia scene descriptions   *2013–2017*

Highlights: thesis used in SBTVD standard; industry committees.
- PUC-Rio Ginga reference implementation, funded by PUC-Rio Software Licenses to TV manufacturers;
- From SBTVD Conformance Test Suite for TV manufacturers

UFPB

MSc. in Informatics. Thesis on Multi-device support in TV app stores   *2010–2012*

Highlights: thesis used in the awarded World Bank funded Brasil4D project; undergraduate lecturer; project leader
- GingaAppStore (Funded by RNP) to design broadband system to deliver TV applications;
- Art TVDI (Funded by RNP) to design agile methods for TV applications development;
- Ginga CDN (Funded by RNP) to develop reusable TV middleware components.

UFPB

BSc. in Computer Science   *2005–2009*

- Algorithms course undergraduate tutor;
- Part-Time software developer at Dynavideo TV Division to prototype TV software in ST boards.

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*

Research Committees

ACM SIG Multimedia

Reviwer and chairing *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)

Web and Mulimedia Commitee of Brazilian Computing Society (SBC)

Reviwer and chairing *2017-today*

- WebMedia conference: Steering Committee (2019-today), reviewer (2013-today), chair of Undergrad workshop (2018), chair of Demos Workshop (2019-2022), and chair of Social Impact Workshop (2018-2022)

Springer

Reviewer *2022-today*

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

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*

Teaching

Experiences

PUC-Rio

Lecturer assistant on Multimedia and Machine Learning to postgrad students (30) *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(30) *2012*

RNP ESR

Assistant on Linux Administration to IT professionals (30) *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. *2018-2022*

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

Funding & Awards

Aproved Funding

Approved as PI in VideoMR project (Funded by RNP and Microsoft). *2019*

ACM 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)

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

ITU

IPTV Application Challenge User-friendliness for GingaStore   *2012*

Skills

Academic: Execute research agenda. Scientific and standard writting.

Teaching: Course design. Presentation skills.

Programing: Python, TensorFlow, Bash, C++, Lua, Java, JavaScript, Latex, Dcoker.

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

Languages: Portuguese (mother tongue), English (fluent), and Spanish (fluent).

UCL

Data Protection for Researchers; Fundamentals in Research Funding.   *2022-2023*

Nature

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

ITU

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

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.