

# Alan Guedes — C.V.

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## Shorbio

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I am a Computer Scientist (PhD & Postdoc) interested in geometric Machine Learning (ML) for the next generation of immersive systems and graph-based data. My career can be seen threefold. In research, I worked on research Multimedia & ML projects, contributed to communities (Springer, [ACM SIGMM](#) and [SBC WebMedia](#)), and have been awarded research funding. In teaching, I co-supervised students, acted as a lecturer on under- and post-graduate courses, and organized workshops to promote student interest in public engagement. Last, I added value to the industry through open source and standards in TV forums ([ITU-T SG16](#) and [BR TV Forum](#)).

## Experiences

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### Work.....

#### UCL, LASP Lab

*Postdoc Researcher on ML project*

2021–today

Highlights: ACM SIGMM committees and workshop organizer; co-supervised undergrad students.

- SpheryStream project 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](#) project, funded by Microsoft & RNP to detect inappropriate content in video scenes;
- AML (Anti-Money Laundry) project, funded by BTG Bank, to detect financial transactions risk and anomaly detection;
- [GT-RAP](#) project, funded by RNP, to develop a blockchain-based system for academic certificates.

#### Dynavideo, TV Division

*Software engineer*

2012–2012

Highlights: multiple awarded social impact projects.

- [Brasil4D](#) project, funded by World Bank, to transmit interactive TV content with social features to low-income families. Its results were published in a [public report](#)

### Education.....

#### PUC-Rio

*PhD. in Informatics. Thesis on [Multimodal-multiuser support in multimedia scene descriptions](#)* 2013–2017

Highlights: thesis concepts used in SBTVD standard; industry committees.

- [PUC-Rio Ginga](#), funded by PUC-Rio Software Licenses, to develop a reference implementation for TV manufacturers;
- SBTVD Conformance Test Suite project, funded by Brazilian Ministry of Science and Technology, to be used by TV manufacturers

#### UFPB

*MSc. in Informatics. Thesis on [Multi-device support in TV app stores](#)*

2010–2012

Highlights: thesis concepts used in the awarded Brasil4D project; undergraduate lecturer; project leader

- [GingaStore](#), funded by RNP, to design a broadband system to deliver TV applications;
- [Art TVDI](#), funded by RNP, to design agile methods for TV applications development;

#### UFPB

*BSc. in Computer Science. Final report on [Component-based architecture for TV middleware](#)* 2005–2009

- [Ginga CDN](#), funded by RNP, to develop reusable TV middleware components.
- Tutor on Analysis and design of Algorithms;
- Part-Time software developer at Dynavideo [TV Division](#) to prototype TV software in ST boards.

## Research

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### Publications.....

Google Scholar shows >40 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

### Committees.....

#### ACM, Special Interest Group on Multimedia

Reviewer 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)

#### BR Computing Society (SBC), Web&Mulimedia Commitee

Steering Committee 2021-today

Reviewer and chairing 2017-today

- WebMedia conference reviewer (2017-today), chair of Undergrad workshop (2018), chair of Demos Workshop (2019-2022), and chair of Social Impact Workshop (2019-2022)

#### Springer

Reviewer 2022-today

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

#### 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

## Teaching

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#### UCL

Co-supervise undergrad engineering projects. 2022-today

#### SBC WebMedia

Organizer of students workshop to promote Social Impact research. 2018-2022

#### PUC-Rio

Invited Lecture on ML for Multimedia to postgrad students (>30) 2019

Lecturer on TV development 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

Lecturer on Linux Administration to IT professionals (>30) 2011

#### UFPB

Lecturer and course design on Programming Introduction (C language) to undergrad students (>15) 2010

## Funding & Awards

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#### Microsoft&RNP

Approved as PI in VideoMR project 2019

## ACM

*SIGMM Travel Award for MMSys* 2022

*SIGHI Gary Marsden Travel Award for IMX* 2022

*SIGWeb Travel Award for DocEng* 2019

## Multiple TV associations

*FRIDA Innovative TV technological solutions award for Brasil4D project* 2014

*SET Conference award on Best TV interactivity solution for Brasil4D project* 2013

*PremioTV on Innovation and Creativity for Brasil4D project* 2013

## ITU

*IPTV Application Challenge User-friendliness for GingaStore project* 2012

## Skills

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**Academic:** Execute research agenda. Scientific and standard writing.

**Teaching:** Course design. Presentation skills.

**Programming:** Python, TensorFlow, Bash, C++, Lua, Java, JavaScript, Latex, Docker.

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

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

## Training

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### 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

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- 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.