

# 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 project.

- [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](#) 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 concepts used in the awarded Brasil4D project; undergraduate lecturer; project leader

- [GingaAppStore](#), 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 >50 published papers, >100 citations, h-index 6. See below recent and some selected publications.

<i>Elsevier Book Chapter</i>	2022
<i>ACM Multimedia Systems.</i>	2022
<i>Springer Journal on Multimedia Tools and Applications.</i>	2016, 2020
<i>IEEE Symposium on Multimedia (ISM).</i>	2020
<i>SBC WebMedia</i>	2020, 2020, 2020, 2021, 2021, 2021
<i>ACM Symposium on Document Engineering.</i>	2019
<i>IEEE Multimedia Signal Processing.</i>	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&Multimedia Committee

*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

### 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 (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

*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

### 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* 2012

## Skills

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

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

**Programing:** 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:** .....

## 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.