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EDUCATION

2020 PhD – Computer Science – Goldsmiths, University of London

2013 MA – Management in Creative Industries – Universidade Católica Portuguesa

2009 MSc – Mobile Systems – University of Minho

2006 *Licenciatura (300 ECTS)* – Computer Science and Systems Engineering – University of Minho

EXPERIENCE

ACADEMIC POSITIONS HELD

January 2021 – current **University of Sussex, UK**

Postdoctoral Researcher in project Innovating Sema ([AH/R005154/1](#))

- Leading software engineering, user experience design and product development for <https://sema.codes>.
- Development and maintenance of OSS middleware <https://github.com/frantic0/sema-engine>.
- Managing instructional content design and community-building activities.

September 2020 – Jan 2021 **City, University of London, HCI Design Centre**

- Visiting lecturer and module leader for INM401 Information Architecture of the MSc degree in HCI Design.

January 2019 – July 2020 **University of Sussex, UK**

Postdoctoral Researcher in project MIMIC ([AH/R002657/1](#))

- Led frontend software architecture and engineering with high-performance Web technologies (Javascript, CSS, HTML, Svelte, Webpack, Web Audio API, WebAssembly, Emscripten, Tensorflow.js).
- Co-authored a new method for client-side browser compilation of domain-specific languages (DSL) for music and audio signal processing (won a Best Paper Award, published in the Audio Engineering Society).
- Co-created a new live coding system for machine learning and user community (<https://sema.codes>).
- Organised community-building actions (3 performances, 4 public speaking events and 2 summer schools).
- Core contributor to the MIMIC platform (<https://mimicproject.com>) and the Maximilian DSP library.
- Lectured the Interactive Music Systems module to a Music Technology degree cohort of 19 students.
- Conducted mixed methods research (ethnography, usability evaluation, 5 workshops, 3 large scale surveys) to design and improve workflows, user experience, instructional content, and video tutorials.

May 2019 – July 2019 **University of Arts London, UK**

Summer Course Instructor at the Creative Computing Institute (CCI)

- Created a 5-day intensive hands-on course with design sprints, physical computing and rapid prototyping with user-friendly machine learning tools, which filled to capacity in 2 days.
- Facilitated the course and applied constructivist and experiential pedagogical techniques, which yielded a satisfaction index of 8.5 out of 10 from a 25 Masters students' cohort (<https://youtu.be/WYAxsw39buc>).

Feb 2015 – Dec 2018 **Goldsmiths, University of London, UK**

Doctoral Researcher in project [RAPID-MIX](#) (EU H2020 ID 644862)

- Designed and developed a user-friendly machine learning development toolkit (<https://rapidmixapi.com>) which accelerated the adoption by creative software developers (C++, Emscripten, Javascript, HTML).
- Structured a user-centred design research system for a consortium of 3 European research centres and 5

music technology start-ups, which contributed to the final official EU evaluation rating of “Excellent”.

- Led research interventions with machine learning researchers and creative developers (2 co-design workshops, 3 hackathons, 40+ interviews, ethnography, concurrent prototyping, cognitive walkthroughs, usability evaluation, mixed methods data analysis) which informed the development of 6 new products.
- Conducted systematic data collection, analysis and reporting for 12 official deliverables to the EU H2020 project officers, on findings, processes, design principles and recommendations for best practices.
- Produced 3 data visualisation prototypes and a middleware for Google Soli Alpha Developers program.

May 2013 – Dec 2014

Portuguese Catholic University, Portugal

Research Assistant in project VisualYzArt (ERDF–COMPETE, ID 23201)

- Developed experimental prototypes for augmented reality and 3D natural user interfaces with motion capture (Unity3D, C#, Vicon, Kinect, LeapMotion), published technical papers, documentation and reports.
- Lectured the Interactive Sound Design module of the Digital Design Post-Graduation.
- Facilitated workshops on Research Strategy and Methodology Design to Master degree cohorts.

INDUSTRY POSITIONS HELD

Jan 2011 – April 2013

Primavera Business Software Solutions, Portugal

Frontend Software Engineer for Business Intelligence products

- Co-developed the software architecture and components for business analytics dashboards with OLAP and data warehousing connectors (Silverlight, C#.NET, SQL Server, Analysis Services, WCF).
- Developed the UI architecture, user experience and content for Business Intelligence dashboards.
- Designed, developed and managed a mobile iOS app for ERP global sales indicators (Objective-C).

May 2007 – May 2013

Ubisign, Corporate TV and Digital Signage, Portugal

Senior software engineer and project manager

- Accelerated the evolution of product from desktop software to cloud-based software-as-a-service, contributing to the company’s acquisition by a larger market player.
- Instituted best practices for software architecture and engineering of complex Web user interfaces.
- Developed single-page and progressive Web applications for network, channel, and content management of digital signage and corporate TV networks (Silverlight, XAML, C#.NET, WCF).
- Developed a high-performance desktop multimedia system and plugins (WPF, C#.NET and DirectShow).
- Created a gestural-based interactive product catalogue for multimedia kiosks with audience analytics for automatic content segmentation (Kinect, WPF, C#.NET, Intel AIM, DirectShow, OpenCV).

AWARDS AND HONOURS

2019 Best Paper award at Web Audio Conference, Trondheim, Norway.

2016 Best-in-Show award at the Sex Tech Hackathon, Goldsmiths.

2016 Google ATAP Soli Alpha Developer prototypes featured at the Google I/O 2016.

2015 PhD scholarship funded by the EU H2020 project RAPID-MIX.

2013 Best Paper award at Vienna Music Business Research Days, Vienna, Austria.

2006/7/13 Three research grants awarded by *Fundação da Ciência e Tecnologia* (FCT), Portugal.

ADDITIONAL INFO

Languages: Portuguese (native), English (proficient), Spanish (intermediate), French (basic).

Canadian-Portuguese (dual) citizenship, UK settled status.

Multi-instrumentalist experienced in piano (6 years), guitar (20+ years), electronics and audiovisuals.