

# RODRIGO MIRA

Postdoctoral Researcher at Meta, PhD Graduate from Imperial College London

 London, GB

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## EDUCATION

### PhD in Machine Learning

Imperial College London

 Oct 2019 – July 2023

 London, GB

- Focused on applying self-supervised learning and generative modeling to leverage unlabelled audio-visual speech effectively.
- Supervised by Björn Schuller and Maja Pantic (both Professors of AI at Imperial College).
- Published **5 first-author papers**, 8 papers in total, and presented in 3 workshops.
- Published in **IEEE Transactions on Cybernetics**, **CVPR**, **ICLR**, **Interspeech**, and **ICASSP**.

### MSc in Advanced Computing

Imperial College London

 Oct 2017 – Oct 2018

 London, GB

- Taught courses (9 modules): 68.2 % (Merit) | Master's thesis: 75 % (Distinction)
- Modules included: Dynamical Systems and Deep Learning, Mathematics for Machine Learning, Advanced Statistical Machine Learning and Pattern Recognition, and Reinforcement Learning.
- Thesis was focused on leveraging Reinforcement Learning to create automatic musical composers that consistently adhere to specific genres and styles, which led to a **journal publication**.

### BSc in Computer Engineering and Information Systems

Instituto Superior Técnico

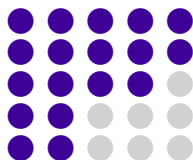
 Sep 2014 – Jul 2017

 Lisbon, Portugal

- Taught courses (29 modules): 18.00/20
- **3 academic excellence diplomas** (one for each academic year).
- Modules included: Artificial Intelligence, Object-Oriented Programming, Databases, and Distributed Systems.

## LANGUAGES

English  
Portuguese  
Spanish  
German  
French



## EXPERIENCE

### Postdoctoral Researcher

Meta

 Nov 2023 – Current

 London, GB

- One of the 4 original members of the team that created the facial animation for the **Instagram Reels dubbing project**. Designed, trained, and deployed a new facial animation model from scratch and helped ship our Alpha and Beta prototypes to production.
- Published **5 papers** (**NeurIPS 2024**, **CVPR 2025**, **Interspeech 2024**, **ICASSP 2025**, and **arXiv** (under review)).

### Research Intern

Sony

 Sep – Nov 2023

 Tokyo, Japan

- Developed a novel video-to-audio synthesis model for Sony R&D.
- Proposed and organized a workshop on audio-visual generation with my colleagues, later presented at **ECCV 2024**.

### Research Intern

Meta

 Jun – Sep 2022

 London, GB

- Published **2 papers**: **LA-VocE: Low-SNR Audio-visual Speech Enhancement using Neural Vocoders (ICASSP 2023)** and **Jointly Learning Visual and Auditory Speech Representations from Raw Data (ICLR 2023)**.

### Research Intern

Meta

 Aug – Dec 2021

 London, GB

- Led a new audio-visual speech enhancement project, in collaboration with Meta Reality Labs Audio Research.

### Teaching Assistant

Imperial College London


 Jan – April 2021

 London, GB

- Worked as a teaching assistant for the Introduction to Machine Learning (70050) course, led by Dr. Josiah Wang.
- Engaged in weekly in-person teaching sessions where I presented learning materials and led discussions with students.

### Research Assistant

Imperial College London

 Feb – Oct 2019

 London, GB

- Developed research projects on video-to-speech synthesis and audio-visual self-supervised learning, which led to 2 papers that were later published during my PhD (**IEEE Trans. Cybernetics** and **Interspeech 2021**).

## SELECTED PUBLICATIONS

### End-to-End Video-to-Speech Synthesis using Generative Adversarial Networks

Rodrigo Mira, Konstantinos Vougioukas, Pingchuan Ma, Stavros Petridis, Björn W. Schuller, Maja Pantic

📖 IEEE Trans. Cybern. 📅 2022

### LA-VocE: Low-SNR Audio-visual Speech Enhancement using Neural Vocoder

Rodrigo Mira, Buye Xu, Jacob Donley, Anurag Kumar, Stavros Petridis, Vamsi Krishna Ithapu, Maja Pantic

📖 ICASSP 📅 2023

### SVTS: Scalable Video-to-Speech Synthesis

Rodrigo Mira, Alexandros Haliassos, Stavros Petridis, Björn W. Schuller, Maja Pantic

📖 Interspeech 📅 2022

### LiRA: Learning Visual Speech Representations from Audio through Self-Supervision

Pingchuan Ma and Rodrigo Mira (equal contribution), Stavros Petridis, Björn W. Schuller, Maja Pantic

📖 Interspeech 📅 2021

### Leveraging Real Talking Faces via Self-Supervision for Robust Forgery Detection

Alexandros Haliassos, Rodrigo Mira, Stavros Petridis, Maja Pantic

📖 CVPR 📅 2022

### Jointly Learning Visual and Auditory Speech Representations from Raw Data

Alexandros Haliassos, Pingchuan Ma, Rodrigo Mira, Stavros Petridis, Maja Pantic

📖 ICLR 📅 2023

### Unified Speech Recognition: A Single Model for Auditory, Visual, and Audiovisual Inputs

Alexandros Haliassos, Rodrigo Mira, Honglie Chen, Zoe Landgraf, Stavros Petridis, Maja Pantic

📖 NeurIPS 📅 2024

### KeyFace: Expressive Audio-Driven Facial Animation for Long Sequences via KeyFrame Interpolation

Antoni Bigata, Michał Stypułkowski, Rodrigo Mira, Stella Bounareli, Konstantinos Vougioukas, Zoe Landgraf, Nikita Drobyshhev, Maciej Zieba, Stavros Petridis, Maja Pantic

📖 CVPR 📅 2025

### Laughing Matters: Introducing Laughing-Face Generation using Diffusion Models

Antoni Bigata Casademunt, Rodrigo Mira, Nikita Drobyshhev, Konstantinos Vougioukas, Stavros Petridis, Maja Pantic

📖 BMVC 📅 2023

## WORKSHOPS AND TALKS

### Workshop organizer at ECCV 2024

#### AVGenL Workshop, ECCV

📅 Sep 2024

📍 Milan, Italy

- One of the organizers for the first edition of the Audio-Visual Generation and Learning (AVGenL) workshop at ECCV 2024.

### Workshop presentation at CVPR 2023

#### Sight and Sound Workshop, CVPR

📅 Jun 2023

📍 Vancouver, Canada

- Presented 3 of our group's new research papers (LA-VocE, RAVEn, and Auto-AVSR).

### Conference Poster Presentation

#### ICASSP

📅 Jun 2023

📍 Rhodes, Greece

- Gave a 2-hour poster presentation about our new audio-visual speech enhancement model (LA-VocE), demonstrating our state-of-the-art results.

### Conference Oral Presentation

#### Interspeech

📅 Sep 2022

📍 Incheon, South Korea

- Gave a 20-minute oral presentation about our new scalable video-to-speech model (SVTS), demonstrating our state-of-the-art results.

### Workshop presentation at CVPR 2022

#### Sight and Sound Workshop, CVPR

📅 Jun 2022

📍 New Orleans LA, USA

- Presented our new scalable video-to-speech model (later published in Interspeech 2022).

### Research Presentation with the President of Portugal

#### Imperial College London

📅 Jun 2022

📍 London, GB

- Presented a summary of my PhD's research contributions to the president of Portugal, Marcelo Rebelo de Sousa, as well as 50+ other attendees in a special event held at Imperial College London.

### Show & Tell Demo

#### ICASSP

📅 May 2020

📍 Barcelona, Spain

- Showcased an interactive demo of our video-to-speech synthesis model.