Aristeidis Papadopoulos

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Education

Trinity College Dublin Started Sept 2024
PhD student in Neural Architectures for Multimodal Speech Recognition. Supervised by Prof. Naomi Harte. *Dublin, Ireland*

- **Related Topics:** Audio-visual speech recognition, interpretability, visual speech representations, world models
- **Related Demonstrator Work:** Teaching Assistant in Digital Signal Processing, Electronic Engineering, Computational Methods, Deep Learning, Advanced Audio Technologies, Signals & Systems

Democritus University of Thrace Graduated Dec 2022
Integrated MEng in Electrical & Computer Engineering (Grade: 7.97 / 10.00, approx. 2:1 equivalent) *Xanthi, Greece*

- **Thesis:** Indoor Sound Detection & Classification
- **Relevant Coursework:** Computer Vision, Pattern Recognition, Digital Image Processing

Publications & Conferences

IEEE Spoken Language Technologies (SLT) 2026 December 2026
Candor-LR: A Dyadic Conversational Dataset for Audio-Visual Speech Recognition *Rishabh Jain, **Aristeidis Papadopoulos**, et al.*

28^{th} **International Conference on Pattern Recognition (ICPR) 2026** August 2026
VisG AV-HuBERT: Viseme-Guided AV-HuBERT ***Aristeidis Papadopoulos** et al.*

UK & Ireland Speech (UKIS) Workshop 2026 June 2026
Decoding Phonemic Structure from Facial Muscle Activations ***Aristeidis Papadopoulos** & Naomi Harte*

IEEE Automatic Speech Recognition & Understanding (ASRU) 2025 December 2025
Interpreting the Role of Visemes in Audio-Visual Speech Recognition ***Aristeidis Papadopoulos** & Naomi Harte*

UK & Ireland Speech (UKIS) Workshop 2025 June 2025
What does an Audio-Visual Speech Recognition Model know about Visemes? ***Aristeidis Papadopoulos** & Naomi Harte*

Experience

Greek Army Jan 2023 – Aug 2023
Computer & Network Specialist *Alexandroupolis, Greece*

- Provided IT and network support for military personnel, troubleshooting hardware and connectivity issues and monitoring infrastructure to keep operations running reliably.

Projects

VisG AV-HuBERT: Viseme-Guided AV-HuBERT | *PyTorch, Python, Bash, LaTeX*

- Introduced viseme-based visual speech units as an auxiliary training signal to push AV-HuBERT to rely more on the visual stream, improving recognition accuracy across clean and noisy conditions, with the largest gains in noise.

Indoor Sound Detection & Classification | *Python, Tensorflow-Keras, LaTeX*

- Indoor sound classification using ML techniques. Classification of nine different audio scenes, such as vacuuming or eating, using different models, such as Vision Transformers and Ensemble approaches. *Grade: 10/10.*

Color Reduction Using Kohonen's Self-Organizing Maps | *Image Processing, MATLAB*

- Implemented Kohonen's Self-Organizing Maps for image color reduction, minimizing memory requirements through efficient representation of image colors.

MPI Implementation of Strassen's algorithm | *C*

- Applied Strassen's matrix multiplication algorithm in MPI for parallel computing. Using a cluster of university computers, our team tested when the method becomes computationally efficient.

Skills

Languages: Python, MATLAB, C, C#, LaTeX, Bash
Tech Stack: TensorFlow, PyTorch, Keras, Weights and Biases, Git, PowerBI, Microsoft Office Suite
Soft Skills: Quick Learner, Teamwork, Communication, Problem Solving, Analytical Thinking

Languages

Greek: Native **English**: Proficient **German**: Beginner

Hobbies

Football **Badminton** **Music** **Cinephile** **Book worm** **Travelling** **Gaming**