

MICHELE MANCUSI

Senior Research Scientist @Sony, Ph.D.

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EDUCATION

Ph.D. in Computer Science

Nov 2019 – Jan 2024

Sapienza University of Rome

Rome, Italy

Conducted research on Deep Learning, Signal Processing, NLP, and Generative AI, advised by Prof. Emanuele Rodolà.

M.Sc. in Physics

Sep 2016 – Jan 2019

Sapienza University of Rome

Rome, Italy

Grade: 110/110 magna cum laude. Conducted research on Quantum Information with Prof. Fabio Sciarrino.

WORK EXPERIENCE

Senior Research Scientist

Apr 2024 – Present

Sony Europe

Stuttgart, Germany

Working in the AI, Speech and Sound Group. Conducting research on deep learning for generative models for speech and audio with LLM and diffusion models.

Visiting Research Scientist

Nov 2023 – Jan 2024

Sony Europe

Stuttgart, Germany

Worked with Dr. Stefan Uhlich in the AI, Speech and Sound Group. Conducted research on deep learning for effects removal and timbre transfer with diffusion models.

Research Scientist Intern

Jun 2023 – Sep 2023

Microsoft Research

Redmond, Washington, USA

Worked with Dr. Sebastian Braun in the Audio and Acoustics Research Group. Conducted research on deep learning for unsupervised speech separation.

Data Scientist Intern

Sep 2022 – Mar 2023

Musixmatch

Bologna, Italy

Worked with Dr. Loreto Parisi in the AI Team. Conducted research on deep learning for singing voice detection.

SELECTED PUBLICATIONS

- Mancusi, M., Mariani, G., Tallini, I., Postolache, E., Cosmo, L., & Rodolà, E. (2024). *Multi-Source Diffusion Models for Simultaneous Music Generation and Separation*. **ICLR 2024 (Oral)**
- Santilli, A., Severino, S., Postolache, E., Maiorca, V., Mancusi, M., Marin, R., & Rodolà, E. (2023). *Accelerating Transformer Inference for Translation via Parallel Decoding*. **ACL 2023**
- Mancusi, M., Postolache, E., Mariani, G., Santilli, A., Cosmo, L., & Rodolà, E. (2023). *Latent Autoregressive Source Separation*. **AAAI 2023**
- Mancusi, M., Zonca, N., Rodolà, E., & Zuffi, S. (2023). *Towards the Evaluation of Marine Acoustic Biodiversity through Data-Driven Audio Source Separation*. **I3DA 2023**
- Mancusi, M., Bonzi, F., Del Deo, S., Melucci, P., Tavella, M. S., Parisi, L., & Rodolà, E. (2023). *Exploiting Music Source Separation for Singing Voice Detection*. **MLSP 2023**

ACHIEVEMENTS

Notable top 5% paper (oral)

2024

ICLR 2024

First-author paper selected among the top 5% submissions for an oral presentation at ICLR 2024

Winner of AWS Cloud Credit for Research

2024

Amazon

Awarded €50,000 in AWS credit for the best generative AI research project

Winner of Imminent Research Grant

2022

Translated's Research Center

Awarded €20,000 for the best machine translation research project

Best Ph.D. Research Project

2020

Sapienza University of Rome

Recognized as one of the top doctoral research projects and awarded research funding

ACADEMIC EXPERIENCE

Teaching Assistant

2023

Sapienza University of Rome

Rome, Italy

Lectured at the Deep Learning and Applied AI MSc course and mentored students for their Master's Thesis

Invited Talk

2023

Yale University

New Haven, Connecticut

Delivered a guest lecture on the *Latent Autoregressive Source Separation* paper upon the invitation of Prof. Ronald Coifman

TECHNICAL SKILLS

PyTorch WandB Lightning Hydra

AWS SageMaker Azure ML

Slurm HTCondor

REFEREES

Prof. Emanuele Rodolà *ERC grantee*

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Dr. Sebastian Braun

Microsoft

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