

MICHELE MANCUSI

Senior Research Scientist @Sony, Ph.D.

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LATEST EDUCATION

Ph.D. in Computer Science
Sapienza University of Rome

Nov 2019 – Jan 2024
Rome, Italy

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

M.Sc. in Physics
Sapienza University of Rome

Sep 2016 – Jan 2019
Rome, Italy

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

LATEST WORK EXPERIENCES

Senior Research Scientist
Sony

Apr 2024 – Present
Stuttgart, Germany

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

Visiting Research Scientist
Sony

Nov 2023 – Jan 2024
Stuttgart, Germany

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

Research Scientist Intern
Microsoft

Jun 2023 – Sep 2023
Redmond, Washington, USA

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

Data Scientist Intern
Musixmatch

Sep 2022 – Mar 2023
Bologna, Italy

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

SELECTED PUBLICATIONS

- Mancusi, M.**, Halychanskyi, Y., Cheuk, K., Lai, C., Moliner, E., Uhlich, S., Koo, J., Martínez, M., Liao, W., Fabbro, G., & Mitsufuji, Y. (2025). *Latent Diffusion Bridges for Unsupervised Musical Audio Timbre Transfer*. **ICASSP 2025**
- Mancusi, M.**, Ruben Ciranni, R., Mariani, G., Postolache, E., Fabbro, G., Cosmo, L., & Rodolà, E. (2025). *COCOLA: Coherence-oriented contrastive learning of musical audio representations*. **ICASSP 2025**
- 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**

ACHIEVEMENTS

ICLR notable top 1% paper (oral)
ICLR 2024

2024

First-author paper selected among the top 1% submissions for an oral presentation at ICLR 2024

Winner of AWS Cloud Credit for Research
Amazon

2024

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

Winner of Imminent Research Grant
Translated's Research Center

2022

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

Best Ph.D. Research Project
Sapienza University of Rome

2020

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

ACADEMIC EXPERIENCE

Teaching Assistant
Sapienza University of Rome

2023
Rome, Italy

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

Invited Talk
Yale University

Feb 13, 2023
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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