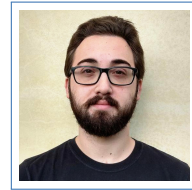


Marco Tiraboschi



✉ marcotiraboschi@hotmail.it
in [marco-tiraboschi-975930b1](#)





Education

- 2020-2021 **PhD in *Computer Science***, *Università degli Studi di Milano*, Milan, *current*.
PhD student in Computer Science at University of Milan. My research project is about “*Novel Methods for Generative Modelling of Audio and Music*”.
- 2017-2020 **Master in *Computer Science***, *Università degli Studi di Milano*, Milan, 110/110 cum laude.
Master degree in Computer Science at University of Milan. “*Perceptual Computing*” curriculum, focussed on analysis, learning and synthesis of physical, behavioural and affective signals.
- 2014-2017 **Bachelor in *Music Information Science***, *Università degli Studi di Milano*, Milan, 110/110 cum laude.
Bachelor degree in Music Information Science at University of Milan. Computer Science core courses and specific courses on Sound and Music computing. Extracurricular courses on Python and C++.
- 2009-2014 **Maturity Diploma of Science**, *I.S.I.S Luigi Einaudi*, Dalmine, 100/100.
Scientific Lyceum, P.N.I. programme (National Programme for Computer Science)

Working Experience

- 2020 **Software Developer**, *Sound Design Toolkit*, ZHdK, Zurich.
Developing native Open Sound Control and JSON support for the [Sound Design Toolkit](#) open-source sound-design library written in C, for MAX and Pure Data. SDT is indexed in the official package manager of MAX.  

- 2020 **Computer Scientist**, [Covmatic](#), ASST Bergamo Est, Calcinato. Volunteering as a Computer Scientist at the Calcinato hospital for the project "[E2E High-throughput COVID-19 testing in the Bergamo area with OpenTrons machines](#)". Mainly writing the Python code for operating the OpenTrons robots, but also assisting the Biologists in supervising the operations and as immediate IT support.  
- 2016-2017 **Teacher of Informatics**, *I.S.I.S Luigi Einaudi*, Dalmine. Teacher of Informatics and Communication Technologies for 3rd and 4th grade of Economic Institute (Administration, Finance and Marketing and A.F.M. for International Relations)

Theses






Master thesis

- title *A Brain-Computer Interfaced Affectively-Driven Soundtrack Generator*
- supervisors Prof. Giuseppe Boccignone
Prof. Eduardo Reck Miranda
- languages OpenViBE, Python
- description The purpose of this project was to develop an intelligent system that could automatically generate a soundtrack using electrical information detected from the brain while the subject watches a movie. The generated music should reflect the affective state of the subject.

Bachelor thesis

- title *Separation and Classification of Acoustic Events in a Stereo Scene*
- supervisors Prof. Luca Andrea Ludovico
Dr. Giorgio Presti
- language Matlab
- description The goal was to develop a system that could separate and then classify overlapping environmental sounds in a stereo signal. The source separation is approached as a clustering problem, using Gaussian Mixture Models over the Bivariate Mixture Space. The classifier is a Naive-Bayes predictor that uses GMMs as a PDF estimator over cepstral features.

Publications

- [1] M Tiraboschi, F Avanzini and G Boccignone. "Listen to your Mind's (He)Art: A System for Affective Music Generation via Brain-Computer Interface". In: *Proceedings of the 18th Sound and Music Computing Conference*. SMC. 2021.  
- [2] M Tiraboschi, F Avanzini and S Ntalampiras. "Spectral Analysis for Modal Parameters Linear Estimate". In: *Proceedings of the 17th Sound and Music Computing Conference*. SMC. 2020.   

Musical Education

2015-2020 **Electric Bass**, *Scuola di Musica G. Tassis*, Dalmine.
2016-2017 **Modern Singing**, *Scuola di Musica G. Tassis*, Dalmine.
2011-2013 **Electric Guitar**, *Accademia Centro Studi Musicali*, Bergamo.

Languages

Italian Native
English Proficient

Programming Languages

Python Intermediate High
C/C++/CUDA Beginner High
Julia Beginner
Matlab Intermediate
Java Beginner
PHP/Js Beginner