Marco Tiraboschi

✉ *marcotiraboschi@hotmail.it*
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 an 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, Calcinate.
Volunteering as a Computer Scientist at the Calcinate 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 watchies 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

Last updated on 8 July 2021

View my updated résumé at chromaticisobar.github.io/cv