Preface

The instructional approaches presented in this book are not oblivious to the advances in our networked society. Indeed, audiophiles around the globe, plunging into oceans of music clips and hearings, are intimately accustomed with the digital substrate of computer music production and distribution. Terms and notions for the subject domain of digital audio, like synthesis techniques, performance software, music editing and processing systems, algorithmic composition, musical input devices, MIDI, karaoke, synthesizer architectures, system interconnection, psychoacoustics, music libraries, song competitions and voting systems, are more or less on the lips of the average music surfer.

Without a doubt, computer music not only succeeded in replacing big, cumbersome and expensive studios by computer oriented hardware and software that in most cases can produce and distribute music, but also, has directed the average listener in hearing music via his/hers computer, tablet or smartphone. And it should be noted, that virtually all residents of this planet indulge into music synaesthesia at least for a while every day.

Taking into account that mobile devices are crafty in recording audiovisual proceedings, with unprecedented accuracy and proximity, multimedia social networks become capable of delivering a multitude of music renditions in vast webcasting repositories. Therefore, it could be claimed that nearly every noteworthy music event produced in the synchrony of this world, ranging from amateur performances up to niche festivities, has significant opportunities to be part of a huge mosaic that imprints the collective memory of humanity. Gigantic repositories, acting as interactive multimedia libraries, mold the mood for the design of a new paradigm for producing, distributing and hearing music. New software modules come up, along with promotional web architectures, biased by a strong and prolific industry hidden behind.

Concomitantly, privacy concerns arise for inner core surveillance practices that penetrate the sphere of anonymity, which most people account for their social movements.
This book is written with an interdisciplinary orientation. It probes into the
main actors for this march of events: the listeners, the producers-distributors, and
the regulators.

For that reason, the book is divided into three sections:

In section 1, titled Hearing and Music Perception, the substrate for properly listen-
ing to music is explored. Hearing aids and bionic devices are analyzed in an attempt
to outline the new frontiers for scientific resources on listening comprehension.

The second section, titled Audiovisual Tools for Rich Multimedia Interaction,
dips into the theory, the technology, and the tools that reshape what links music
with visual, kinetic and sensory-intensive robotic interaction.

The last part, Legal Action and Jurisprudence, gives a proscriptive norm on how
the world-wide Internet screen can cope with matters of confidentiality, protection of
intellectual property, and after all human integrity, as far as digital audio is concerned.

Overall, an international culture of listening streamlined music has commenced
to prevail. As a result, the human factors that leverage enactment in music are
emphatically promoted. The same time, the hurling, insulting abuse of the private
sphere of communications via public channels is behaviorally abjured, especially
when social networks are intermingled.