

Call for Papers
IEEE Signal Processing Society
IEEE Journal of Selected Topics in Signal Processing

Music Signal Processing

The extraction of meaningful information from audio waveform data is a central application of digital signal processing. When dealing with specific audio domains such as speech or music, it is crucial to properly understand and apply the appropriate domain-specific properties, be they acoustic, linguistic, or musical. This special issue seeks to gather contributions that address aspects of music signal processing by explicitly incorporating the distinctive characteristics of music audio, such as the presence of multiple, coordinated sources, the existence of structure at many temporal levels, and the peculiar kinds of information being carried.

Of particular interest are papers that aim to establish a rigorous foundation for the processing of music signals, in contrast to the widespread approach of borrowing and adapting techniques from speech processing. For example, new signal models and parameter estimation algorithms are required that can accommodate polyphonic and multitimbral music signals. Furthermore, in the design of musically meaningful audio features, approaches must account for high-level musical aspects regarding melody, harmony, rhythm, and other acoustic and structural properties. All contributions should have a clear focus on the processing of waveform-based music audio recordings. However, the work may also exploit complementary sources of musical information such as lyrics, symbolic score data, MIDI, or textual annotations.

The complexity and diversity of music data makes automatic music signal processing a challenging field of research. Music processing systems may need to take account of aspects such as genre (e. g., pop music, classical music, jazz, ethnological music), instrumentation (e. g., orchestra, piano, drums, voice), and many other musical properties (e. g., dynamics, tempo, or timbre). Our goal for this special issue is to spur progress in core techniques needed for the future signal processing systems that will enable users to access and explore music in all its different facets.

Prospective authors should visit <http://www.signalprocessingsociety.org/publications/periodicals/jstsp/> for information on paper submission. Manuscripts should be submitted using the Manuscript Central system at <http://mc.manuscriptcentral.com/jstsp-ieee>. Manuscripts will be peer reviewed according to the standard IEEE process.

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First review completed:	December 20, 2010
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Lead guest editor:

Meinard Müller, Saarland University and MPI Informatik, Germany, meinard@mpi-inf.mpg.de

Guest editors:

Shigeki Sagayama, The University of Tokyo, Japan, sagayama@hil.t.u-tokyo.ac.jp

Anssi Klapuri, Queen Mary University of London, UK, anssi.klapuri@elec.qmul.ac.uk

Gaël Richard, Télécom ParisTech, France, gael.richard@enst.fr

Daniel Ellis, Columbia University, USA, dpwe@ee.columbia.edu