Online Tools for Musicology in Dariah.lab

DARIAH-PL Digital Research Infrastructure for Arts and Humanities

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MusicPUT

DARIAH-PL, the largest consortium of humanities in Poland, has built Dariah.lab, a research infrastructure aimed at expanding the scope of research in arts and humanities, both in the scientific context and in the area of applications in the economy. It has been co-funded by the EU under the Smart Growth Operational Programme to support the development of large strategic research infrastructures.

As part of the Dariah.lab, we implemented an online system, MusicPUT, intended for users who are not proficient in programming. It provides tools to perform selected computer-aided research in musicology with an emphasis on results visualization. The tools can be used by musicologists, music librarians, musicians, sound engineers, luthiers, singers and educators, as well as computer game developers.
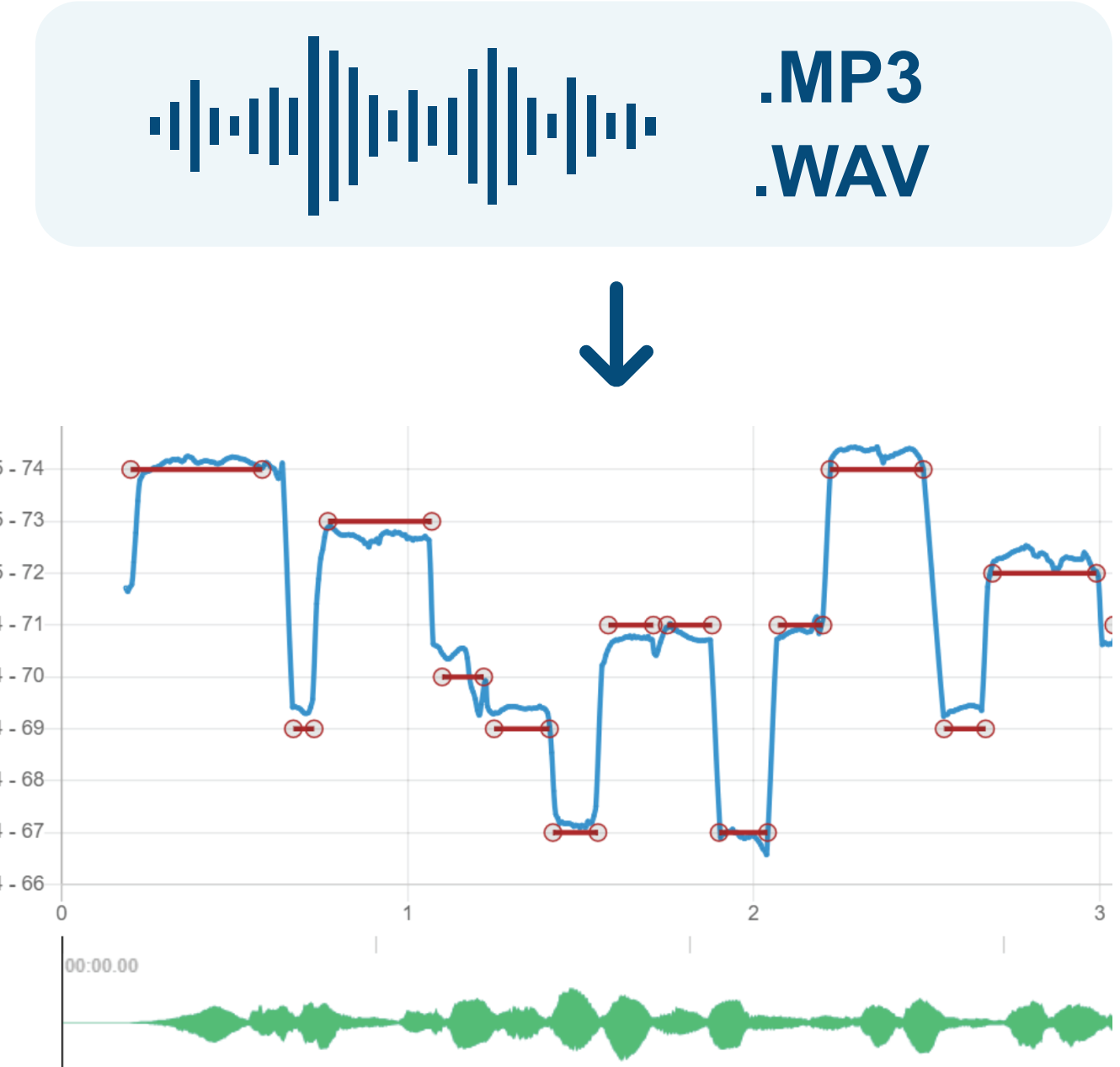
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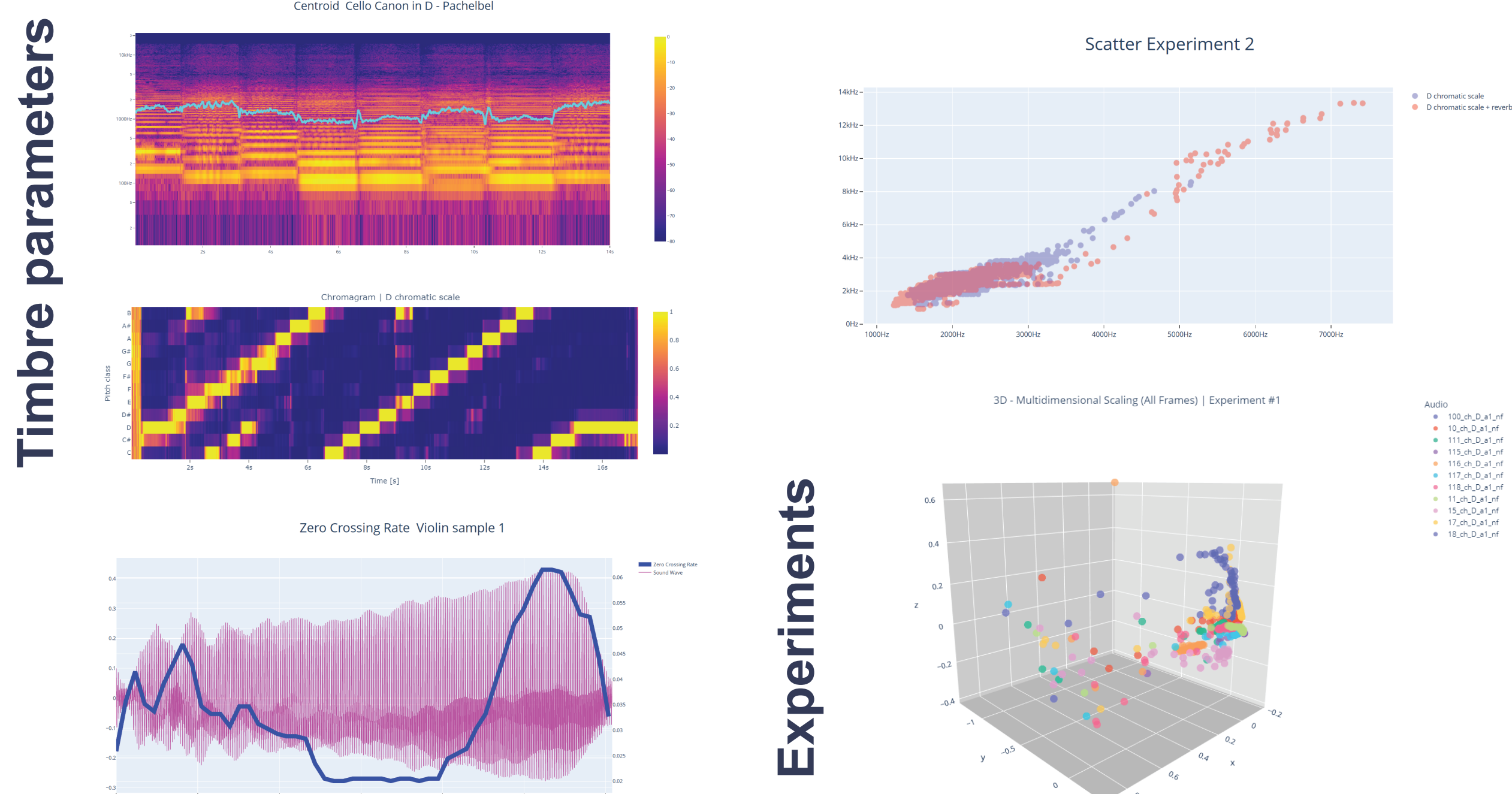
www.music-put.lab.dariah.pl

OMRAT

OMRAT (Optical Music Recognition Annotation Tool) is used for automatic annotation of sheet music documents based on optical music recognition using deep neural networks combined with machine learning solutions. Annotated documents are saved in the MEI format, and can be printed and played back. The tool is mainly intended for music libraries to enable automatic score content extraction and indexing.

scoreScribe

ScoreScribe is a tool for automatic transcription of monophonic music from an audio file to piano roll and sheet music representations, as well as to symbolic formats such as MIDI, MusicXML, MEI, and ABC. Its target users are ethnomusicologists that transcribe field recordings for research and digital archivisation.

.MP3 .WAV

.MIDI .MEI .ABC .MusicXML

Timbra

Timbra (Timbre Analyzer) is a tool for calculating, visualizing and comparing different timbre characteristics of audio objects. The tool is aimed at specialists interested in analyzing and evaluating sound timbre in various applications.

Timbre parameters

Experiments

GOST

GOST (Game Original SoundTrack) is a tool for automatic generation of soundtracks with positive or negative sentiment. It has been built with independent game developers in mind. Deep neural networks are deployed to generate the music. The tool supports postprocessing, e.g. changing the pitch of individual notes, keys, musical instruments, or reverberation.

MEi convert

MEI converter implements batch conversion between different music symbolic formats (MusicXML, MEI, MIDI, ABC).