Detmold University of Music

Axel Berndt

Center of Music and Film Informatics

Erich Thienhaus Insitute

cemfi

Representatives in the Project
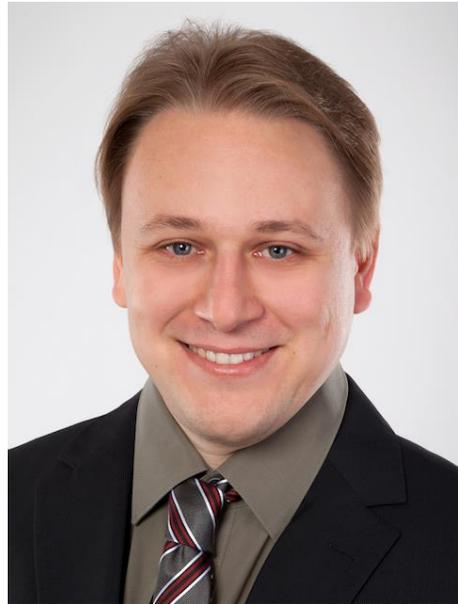
Aristotelis Hadjakos

Music Technology

Malte Kob

Musical Acoustics

Fabien Lévy

Composition

# Musical HCI & Sound Synthesis
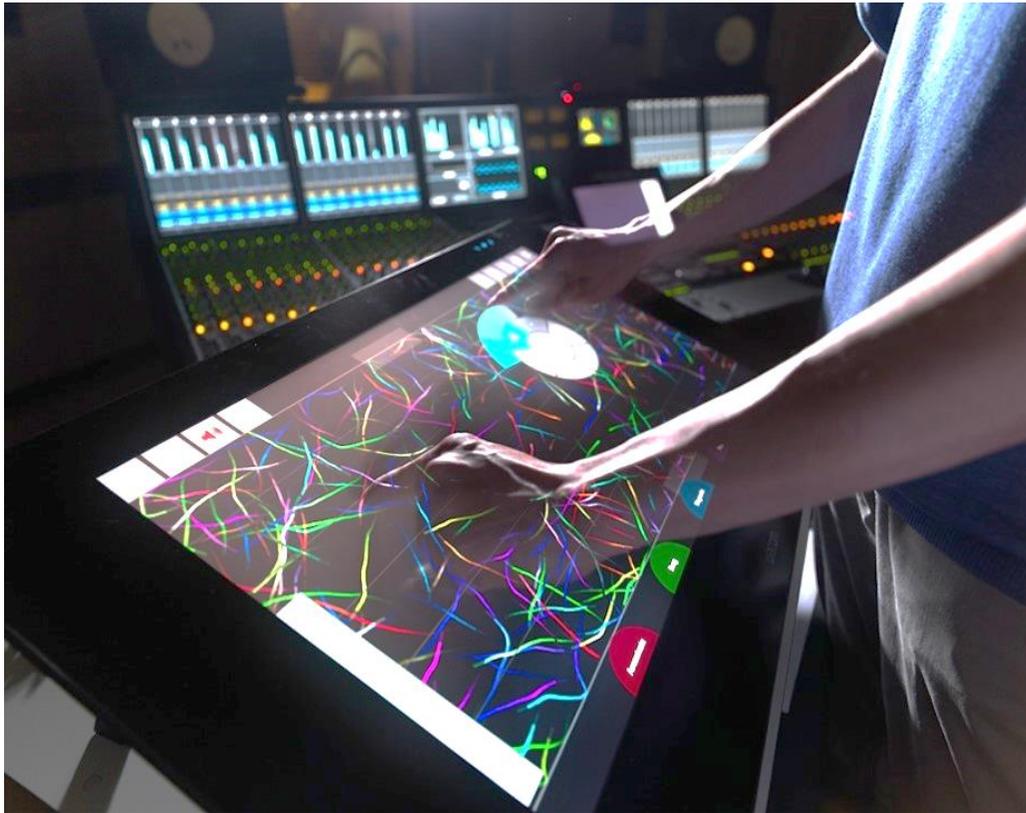
TouchNoise
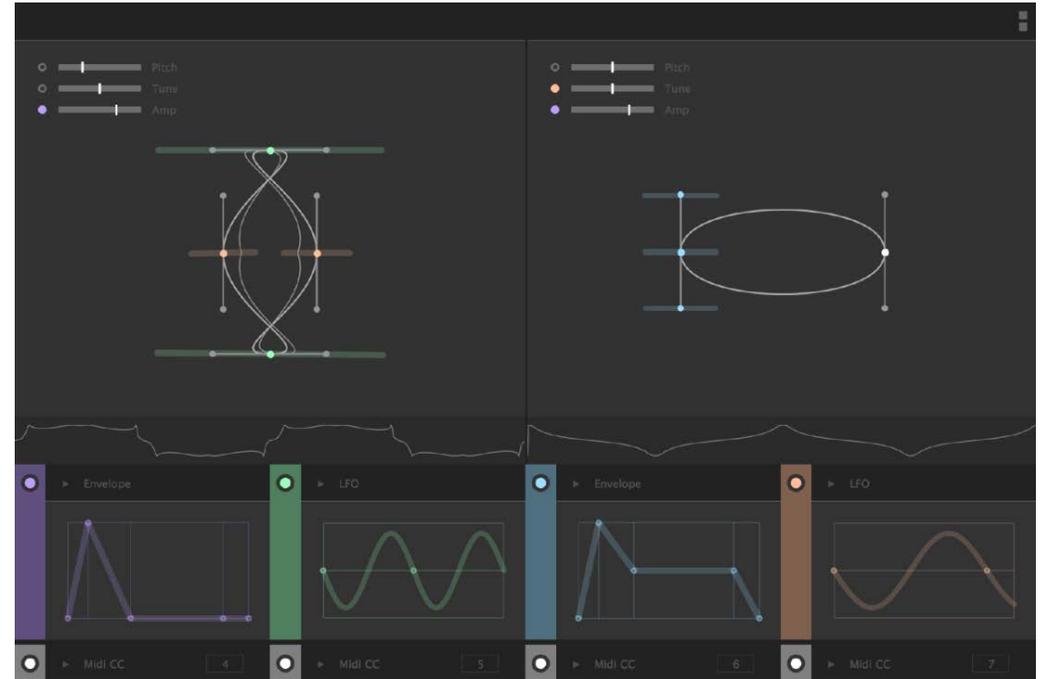

Cyclone

Musical HCI & Physical Computing
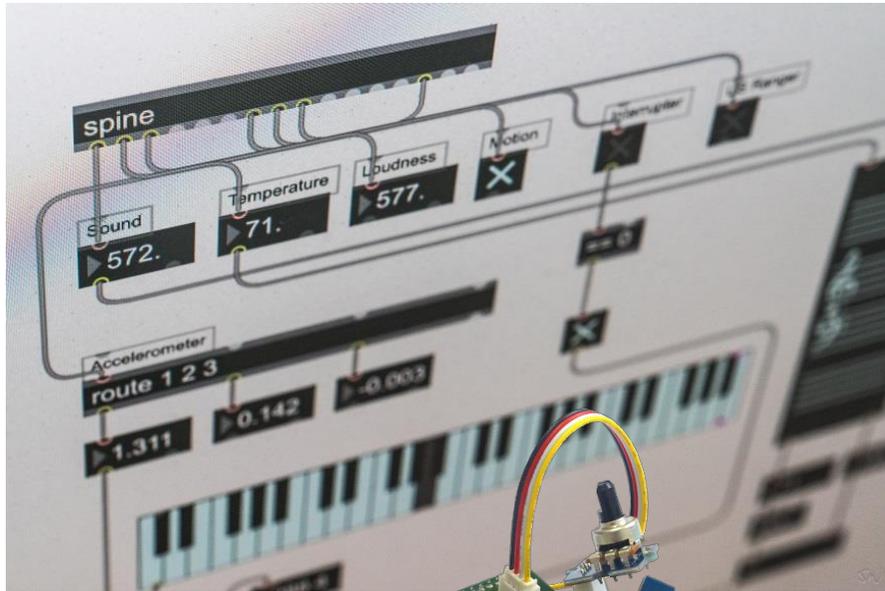
SPINE
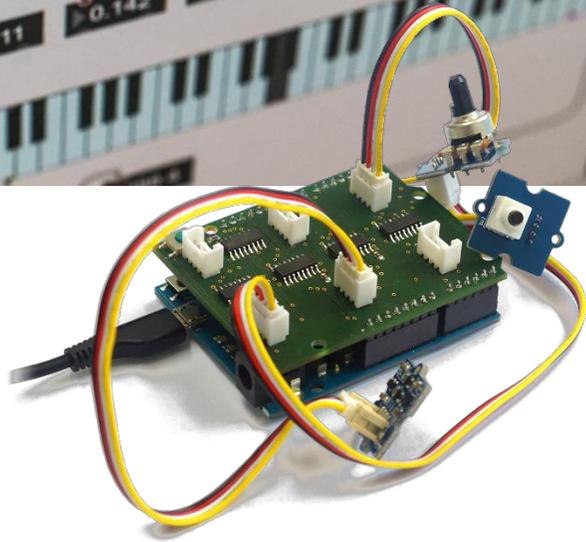
AmbiDice

Musical Acoustics: Simulation & Rendering
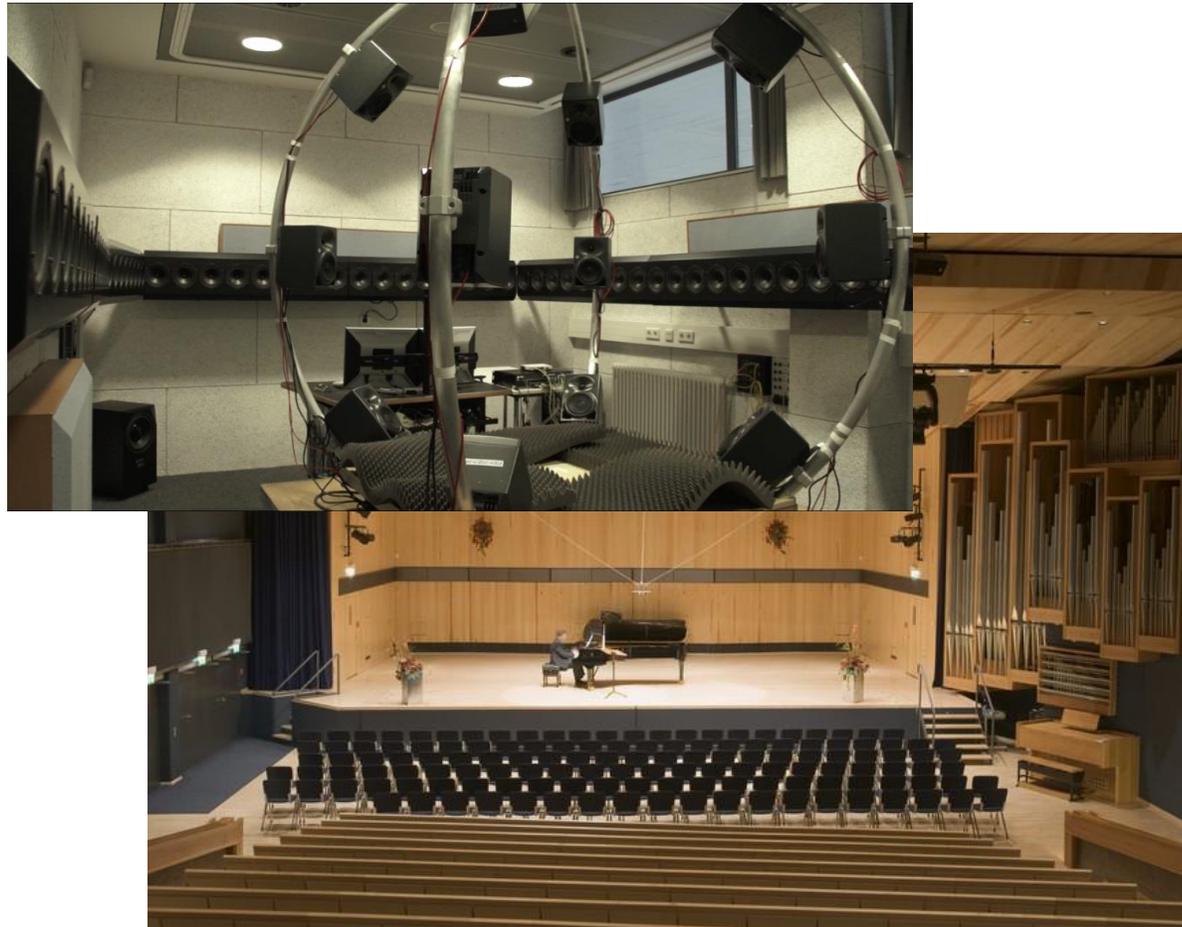
Wave Field Synthesis in Concert Hall,
Lab and portable

AMISE

amise.netzwerk-musikhochschulen.de

Musical Acoustics
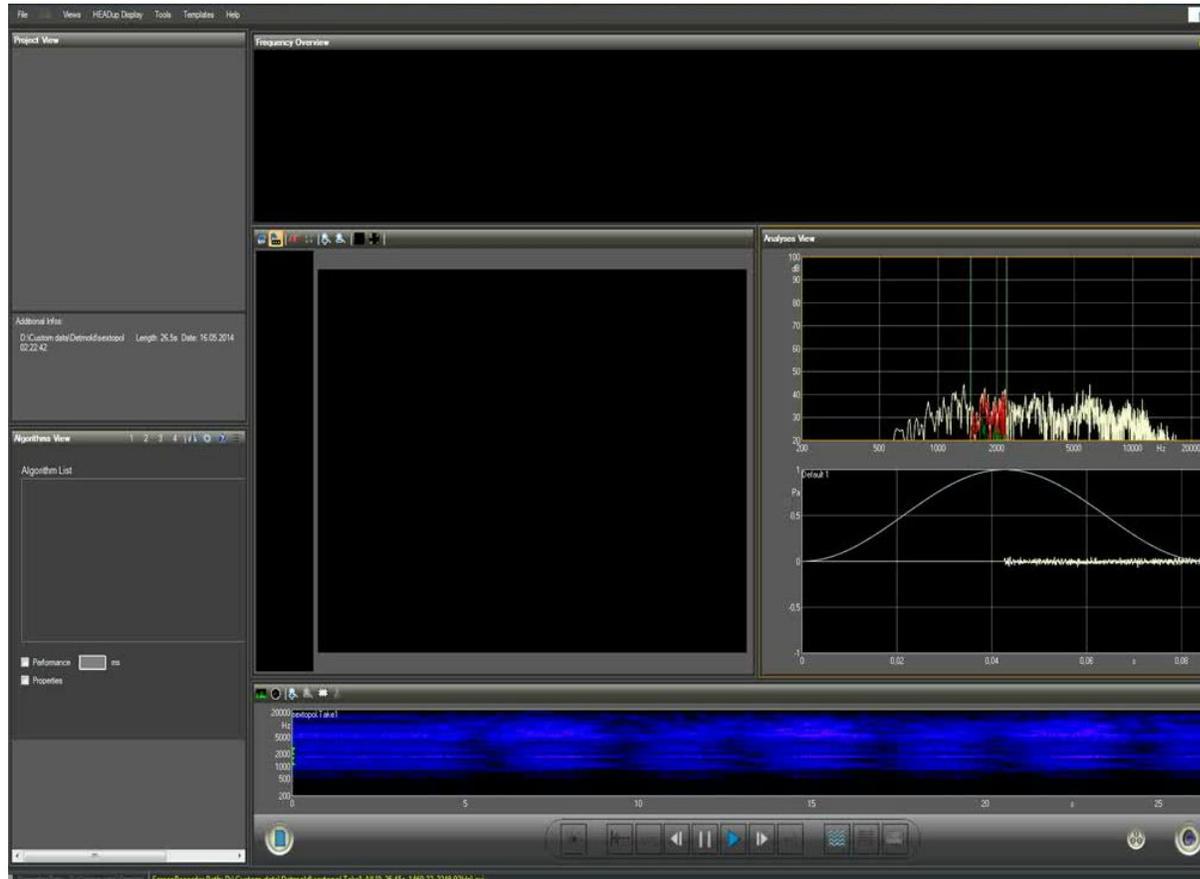
Sound Radiation from Music Stand

Vertical isobars: Outline Globesource 6 channels no reflections

without music stand

Vertical isobars: Outline Globesource 6 channels with score stand to the right

with music stand
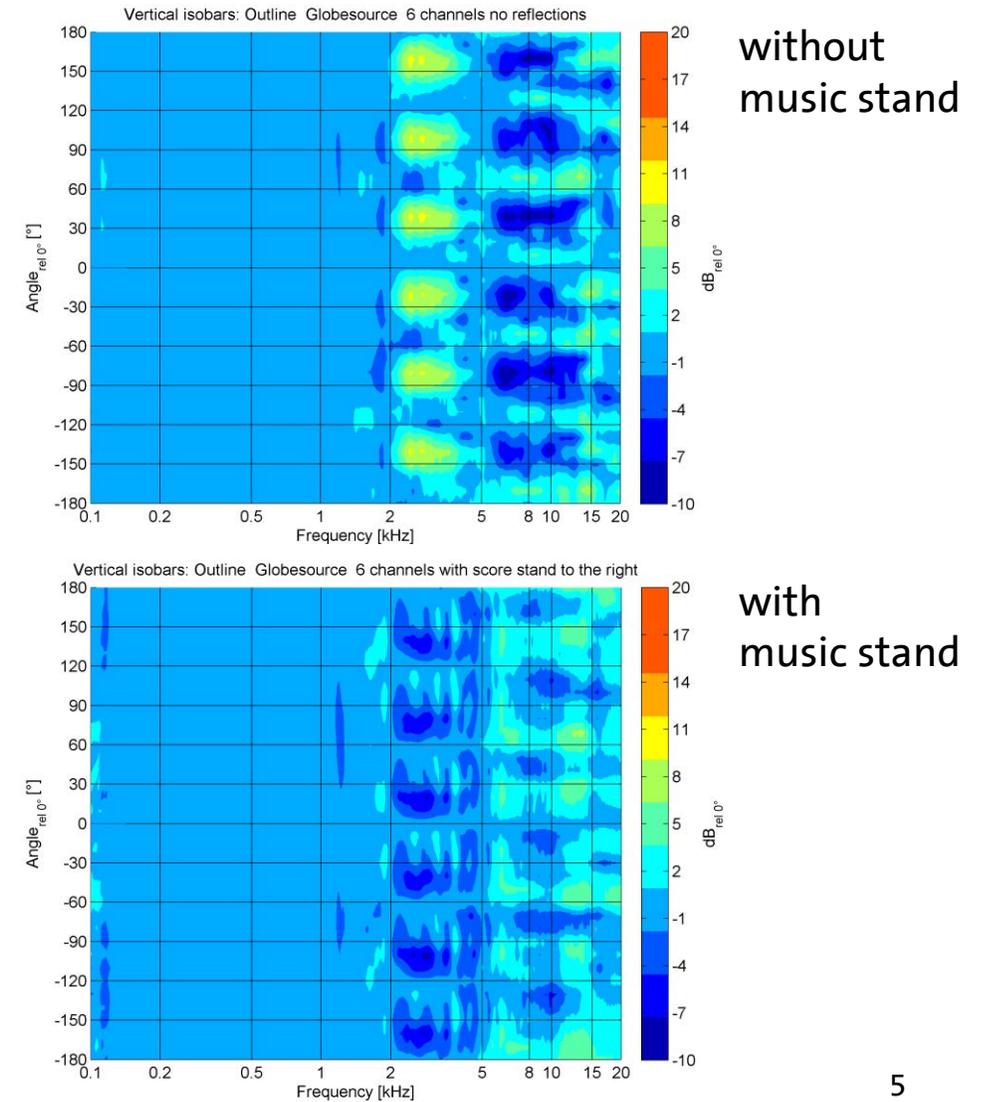
Digital Music Archive

Digitization of the whole archive
of the Erich Thienhaus Institute

Digital Music Editions

Edirom

Digital Music Editions
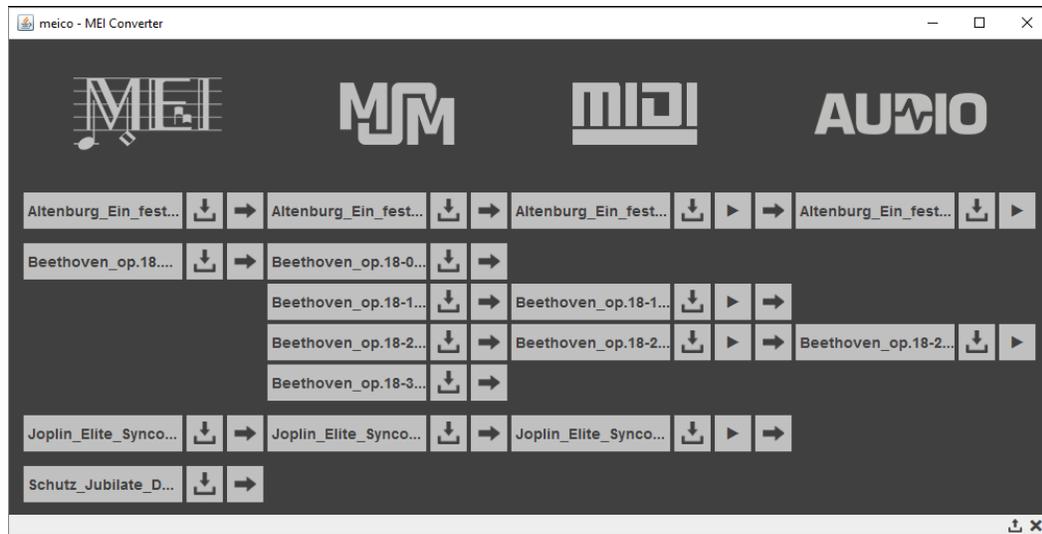
meico: MEI Converter

Vertaktoid

Interactive Scores: Audio-to-Score Alignment

ScoreTube

Interactive Scores: Digital Music Stand
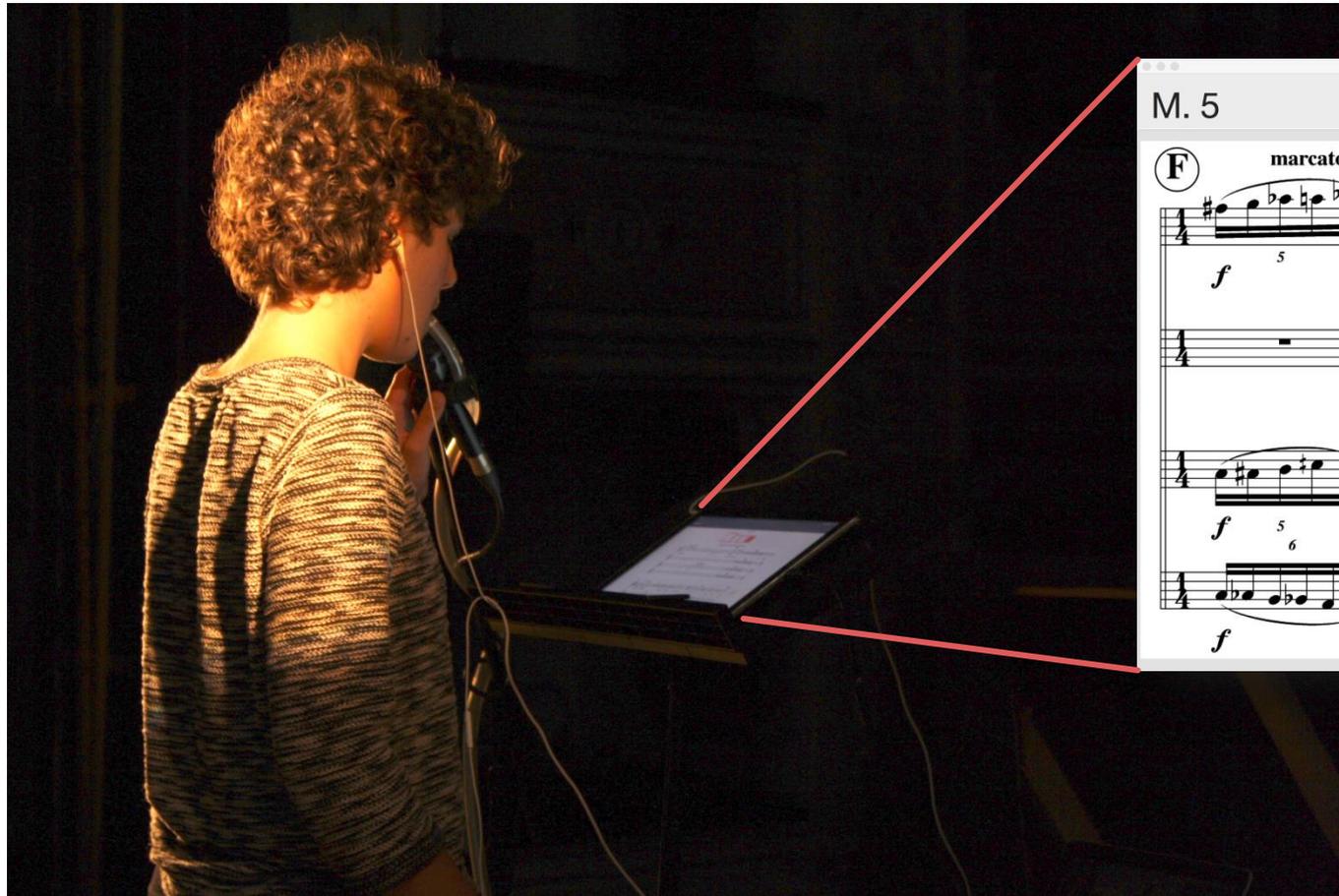
Digital Music Stand for Distributed Ensembles

Interactive Scores: Music Production

Expressive Music Performance

musical raw material

sounding result

Music **P**erformance **M**arkup

https://github.com/axelberndt/MPM

Future Plans & Sub-Axes Alignment

Sub-axis 1:   MEI processing, orchestration analysis algorithms

Sub-axis 3:   Audio-to-Score Alignment, spatial rendering (AMISE),
room-musician-listener interaction

Sub-axis 5:   Model development (MPM, acoustical models), impact of room acoustics on
performance and ensemble communication, directivity of musician and instr.

Sub-axis 6:   Integration of machine-readable scores and images (Vertaktoid),
link to audio clips (ScoreTube)

Sub-axis 7:   Performance rendering and orchestral simulation (MPM, meico)

Sub-axes 8-11: Artistic and pedagogical perspective, functional orchestration (Fabien)