# **BioSensor Music**

# Music Beyond Motor Limitations



Sala Polivalent Universitat Pompeu Fabra 26.5.2017

Music performance and learning to play a musical instrument have been showed to provide several benefits for acquiring a number of non-musical skills, e.g. social and cognitive skills. Due to lack of fine motor skills, some people are often incapable of learning to play a musical instrument and thus, the benefits of music learning are inaccessible to them. In this concert we introduce several adaptive digital musical interfaces which allow everyone to play and compose music. The concert includes several pieces written or arranged for these interfaces and performed by people with motor disabilities.

This concert is part of the 2nd International Workshop on Quantitative and Qualitative Music Therapy Research.

## Program:

Cant del Barça (Manuel Valls i Gorina)

EyeHarp: Joel Bueno

Accordion: Zacharias Vamvakousis

3 mins

Eyenoten (Gil Dori) EyeHarp: Alper Kaya

Accordion: Zacharias Vamvakousis

6 mins

The piece was written for the Turkish EyeHarp player Alper Kaya. It is based on a Jewish prayer, Anoten (the

giver), which was originated in Spain during the middle ages. Today, it is practiced mostly in Turkey.

Tenir el cap ple de... (Gil Dori)

Guitar: Sergio Giraldo Violin: Rafael Ramirez

10 mins

The work originated with Sergio Giraldo's idea of creating an EEG-driven modular music composition. In this piece, the modular sections of the score are Barcelona metro lines. They are controlled by the EEG conductor and interpreted as melodic contours by the performers. The pitches are derived from an analysis of field recordings taken in various metro stations and train rides all around Barcelona.

Ederlezi (Gypsy traditional)

Oud (accessible Midi interface): Kostas Manikis

Guitar: Areti Touser

Accordion: Zacharias Vamvakousis

2.5 min

L'estaca-Tora, tora (Lluis Llach)

Piano (accessible Midi interface): Kostas Manikis

Guitar: Areti Touser

Accordion and voice: Zacharias Vamvakousis

3 min

Magkiko (Kostas Karipis)

Oud (accessible Midi interface): Kostas Manikis

Guitar: Areti Touser

Accordion and voice: Zacharias Vamvakousis

3 min

Toumpeleki (Kostis A.)

Oud (accessible Midi interface): Kostas Manikis

Guitar: Areti Touser

Accordion and voice: Zacharias Vamvakousis

3 min

Vals d'Amelie (Yann Tiersen)

Piano (accessible Midi interface): Kostas Manikis

Guitar: Areti Touser

Accordion: Zacharias Vamvakousis

2 min

Hava Nagila (Klezmer traditional)

Oud (accessible Midi interface): Kostas Manikis

Guitar: Areti Touser

Accordion: Zacharias Vamvakousis

3 min

#### Joel Bueno

10 years old boy from Santa Perpetua de Mogoda, Barcelona. He has cerebral palsy, which prevents him to play traditional music instruments. He recently has started music classes using the Eyeharp gaze-controlled music interface at the Escola Municipal de Musica y Danza of Santa Perpetua de Mogoda, where a program for music education has opened using the EyeHarp.

#### Gil Dori

Interested in interactive electronic music, graphic notation, proportional procedures, and Jewish music. Currently, Gil is a Guest Composer in Residence at the Technology Music Group, Pompeu University, where he works with assistive technology for playing music. His music has been featured on international festivals and conferences such as Sound and Music Computing, SEAMUS National Conference, MUSLAB, New York City Electroacoustic Music Festival, Balance-Unbalance, and Explore! Gil also participated in masterclasses and workshops given by Georg Friedrich Haas, Philippe Leroux, and Jean-Francois Charles. Gil graduated with a Doctor of Musical Arts degree from Arizona State University, where he taught a Jewish music class, served as president of the Society of Composers, Inc. student chapter, and co-directed the Laptop Orchestra of Arizona State.

## Manikis Kostas

Studied Music Technology and Acoustics in Rethymno Crete, and played acoustic guitar in various projects from 2000 to 2010. Between 2008-2010 he was dedicated professionally to traditional Greek music. In December 2010 Kostas had a car accident that left me quadriplegic with very limited hand movement. After the accident, he spent almost a year in Switzerland where he received music therapy sessions. In 2014, he collaborated with Zacharias Vamvakousis to create a custom made accessible MIDI interface. Since then he has devoted himself to composing music using virtual instruments. He currently is a member of group of composers called Between2notes.

#### Alper Kaya

Born in 1961 in Izmir, Turkey. He graduated from Dokuz Eylul University, Faculty of Medicine and worked for 4 years as a medical doctor and general practitioner in various cities in Turkey. He specialized in ophthalmology in the Faculty of Medicine, Cukurova University, and worked as a specialist in ophthalmology in Urla, Izmir State Hospital. In 1990, he was

diagnosed with motor neuron disease. Alper has been living with ALS for over 20 years. Alper was an accomplished guitarist before his diagnosis. He has played in music bands, such as the Dream Explorer and Group Alloy.

#### Zacharias Vamvakousis

Currently a postdoctoral fellow at the Music and Machine Learning Lab, in the Music Technology Group, Universitat Pompeu Fabra. Zacharias developed the EyeHarp during his Master and PhD degree in Computer Science. He studied accordion and currently performs traditional Greek music with several bands in Barcelona.

Technical production:

Pablo Fredes / José Lozano / Felipe Loáiciga

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