



WELCOME TO INTERAKTIV MUSIKK

Spring 2022

WEEK 1

Who's teaching?



Çağrı Erdem

B.Mus in Jazz Comp. & Perf.
M.Sc. in Sonic Arts
Ph.D. candidate in Music Tech.

Specializes:
• “Air” instruments
• Musical AI/ML
• Interaction design

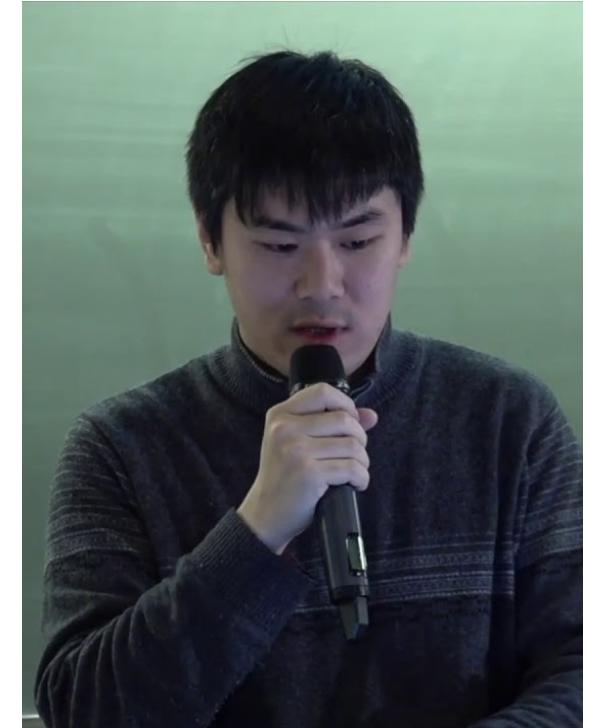
<http://cagrierdem.net/>

Qichao Lan

B.Sc in Comp. Linguistics
M.A. in Sonic Arts
Ph.D. candidate in Music Tech.

Specializes:
• Live Coding
• Musical AI/ML
• Audio programming

<https://glicol.org/>



UiO RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion
University of Oslo

Interactive Music

SYLLABUS

INSTRUCTORS: Çağrı Erdem, Qichao Lan

TIME: Tuesday 09:15–10:00 and Friday 12:15–14:00

LOCATION: ZEB, Seminarrom 2

WEEKLY SCHEDULE

WEEK 1 Introduction: Microphones, tools, effects, and noise

WEEK 2 Analogue Synthesis 1: Main concepts and parameters

WEEK 3 Analogue Synthesis 2: Sound sources and processors

WEEK 4 Collaborative performance and Live Coding

WEEK 5 Digital Synthesis 1: Introduction to Pure Data

WEEK 6 Digital Synthesis 2: Basics, oscillators, and filtering

WEEK 7 Digital Synthesis 3: Audio effects

WEEK 8 Digital Controllers 1: MIDI

WEEK 9 Digital Controllers 2: Sensors and mapping

WEEK 10 Ensemble 1: Composition and improvisation

WEEK 11 Ensemble 2: Final concert preparation

COURSE DESCRIPTION: This course provides students with knowledge and skills in designing, building, and performing with various musical instruments and interactive music systems. Students learn the basics of sound synthesis, gain hands-on experience on hardware synthesizers, digital controllers, and audio programming, explore new methods for musical expression and produce artistic works for electroacoustic music ensembles.

WEEK 1

INTRODUCTION

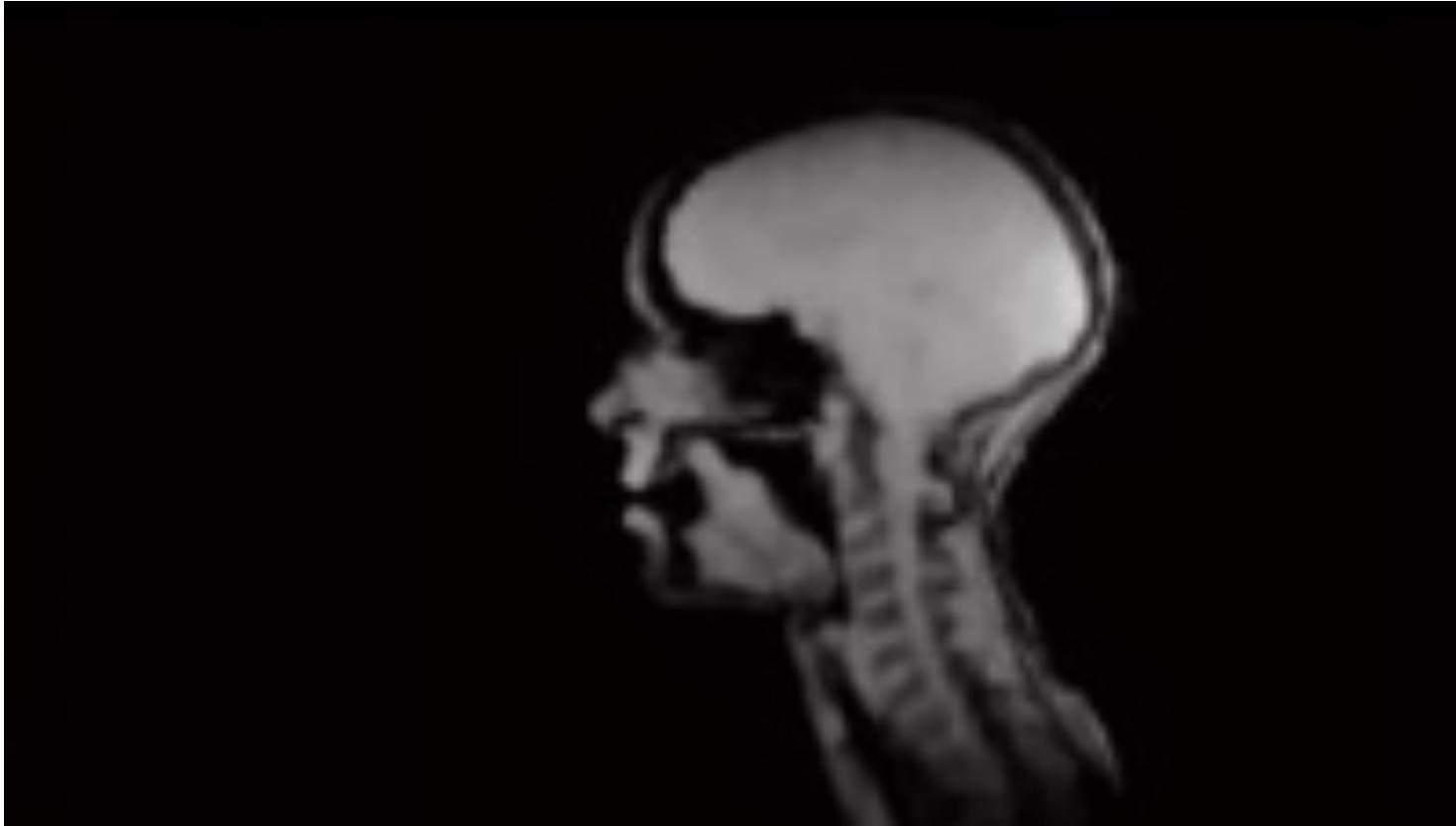
WEEK 1

What is interactive music?

Interactive [computer] music systems are those whose behavior changes in response to musical input. (Rowe, 1993)

WEEK 1

What is interactive music?



<https://youtu.be/YIUvX7hebBA>

WEEK 1

What is interactive music?



<https://youtu.be/GqD12bml3y8>

WEEK 1

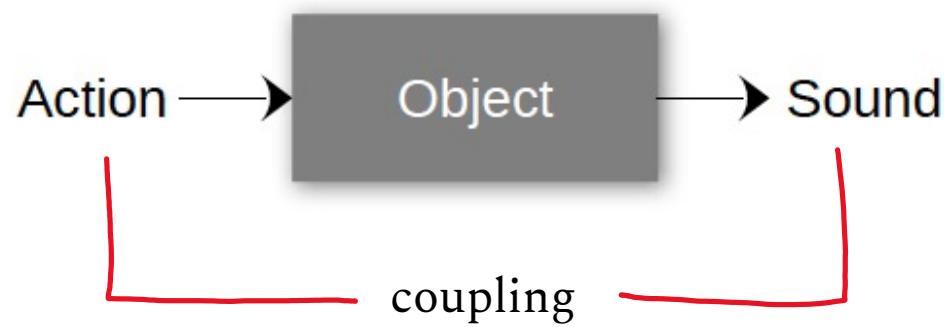
What is interactive music?



https://youtu.be/6dM6tOuU_mE

WEEK 1

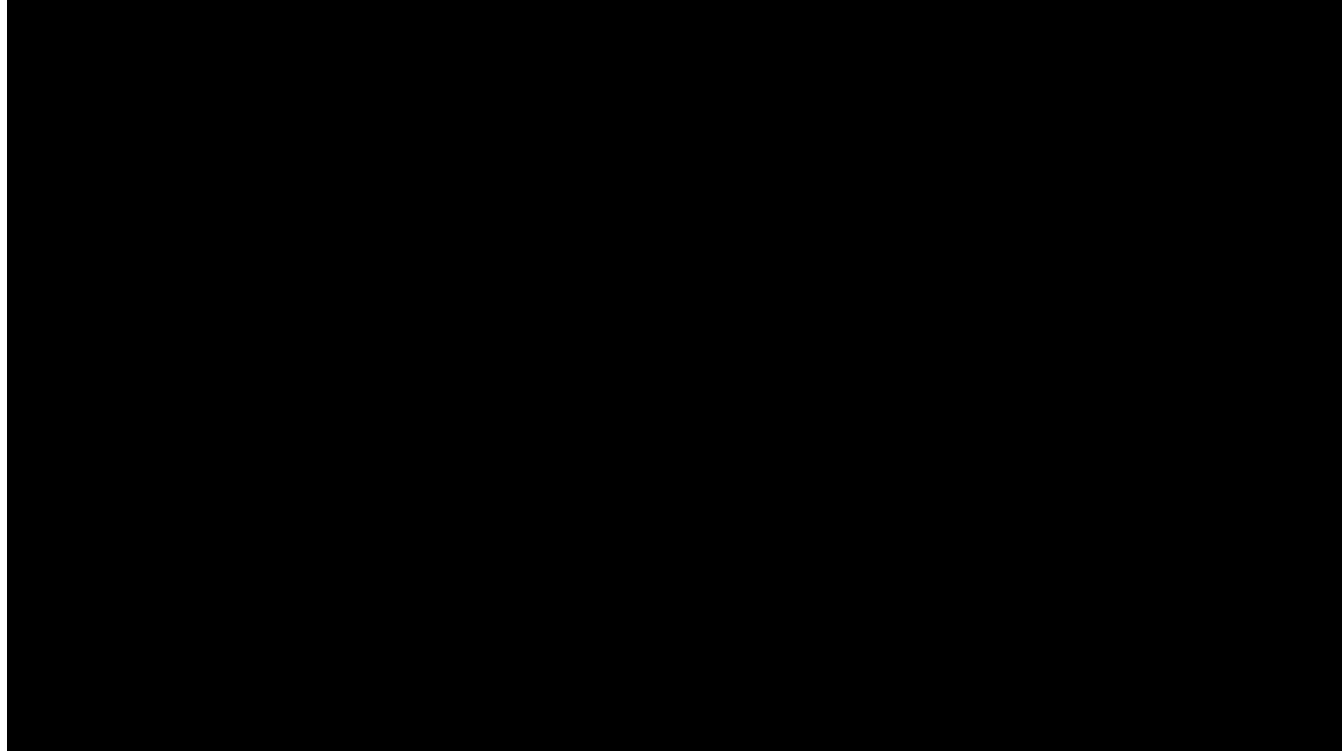
What is music interaction?



Our life-long experience with various objects makes us able to predict the sonic result of many actions on those objects. This means that we can predict the resulting sound of an interaction even before it is heard. (Jensenius, forthcoming)

WEEK 1

Action-sound couplings



(action-sound_silent.mp4)



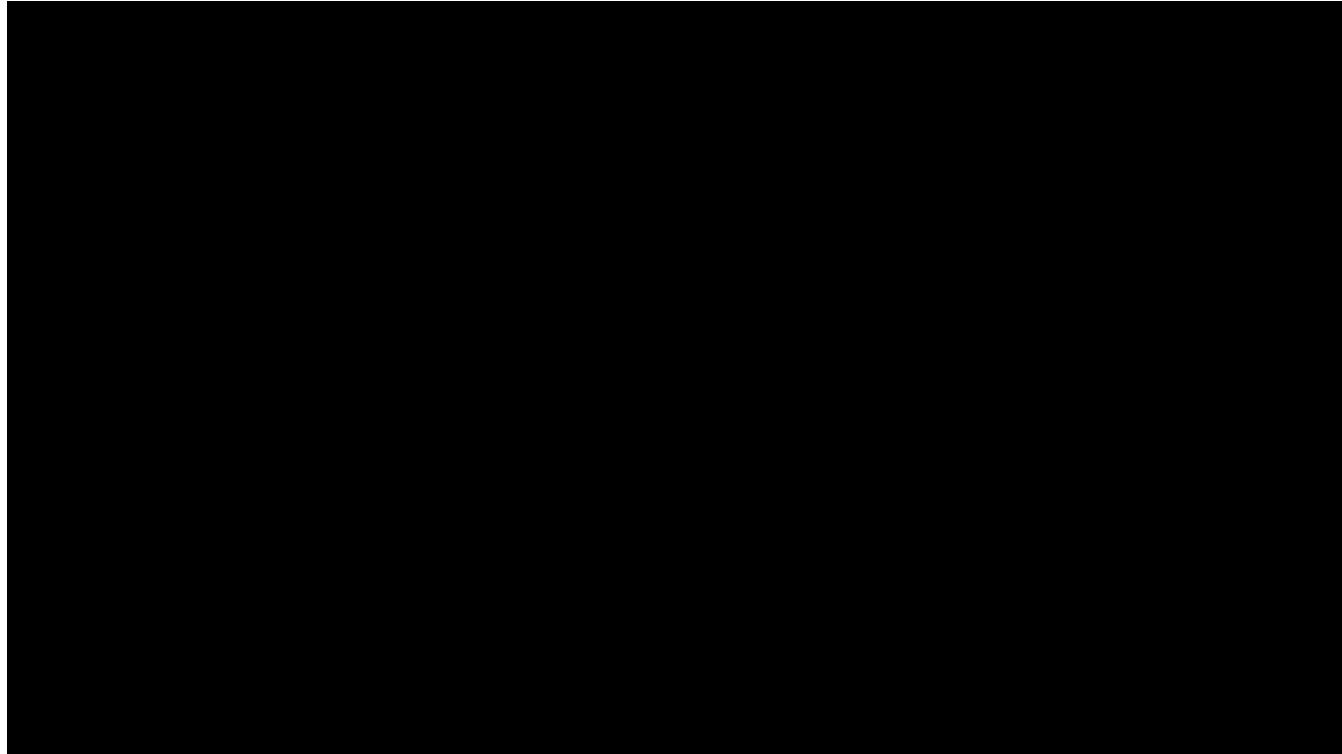
1) (action-sound_synth.wav)



2) (action-sound_original.wav)

WEEK 1

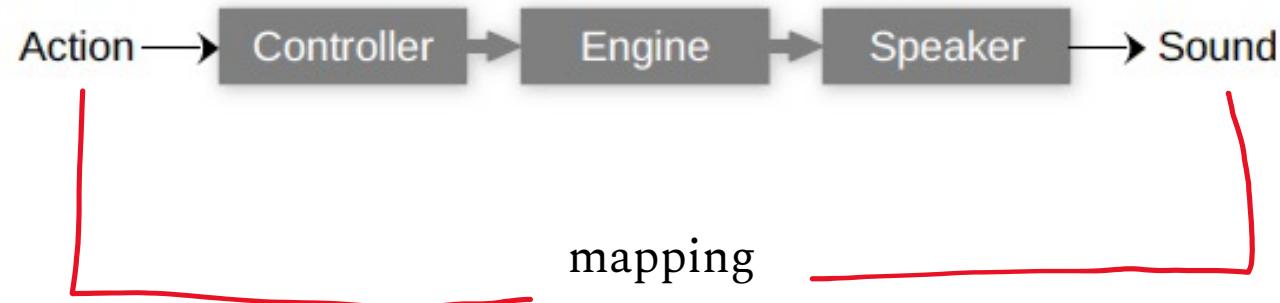
Action-sound mappings



(action-sound_modified.mp4)

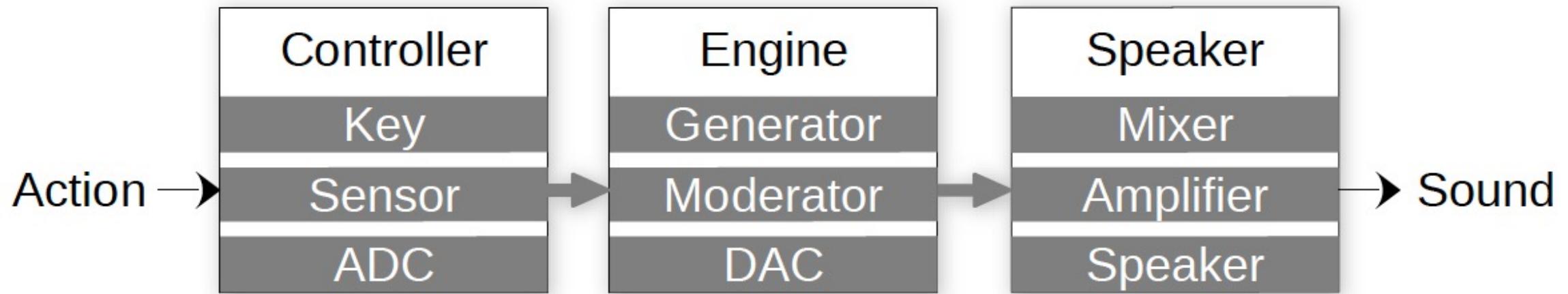
WEEK 1

Action-sound mappings



WEEK 1

Action-sound mappings



WEEK 1

Action-sound mappings



<https://youtu.be/ex57oiPSxKc>

WEEK 1

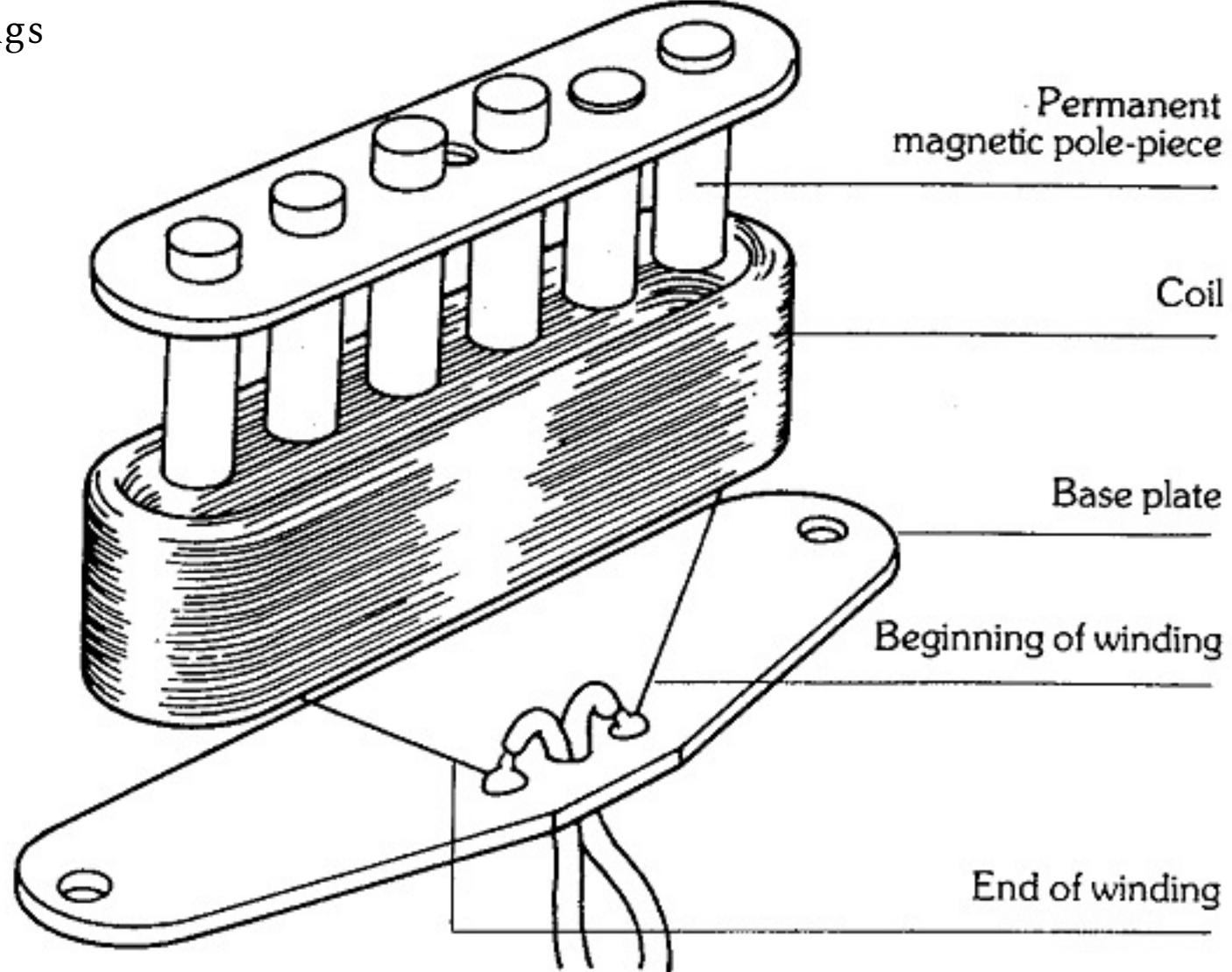
Action-sound mappings



https://youtu.be/WaT_mKiNNSI

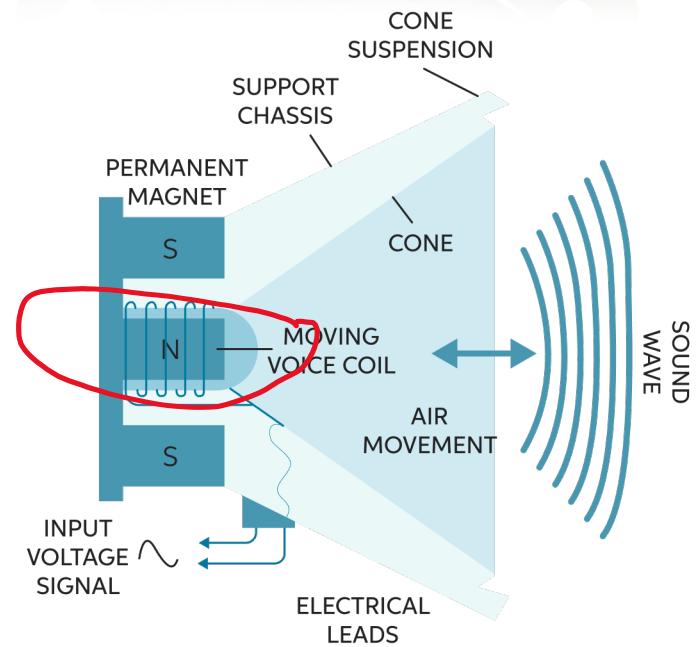
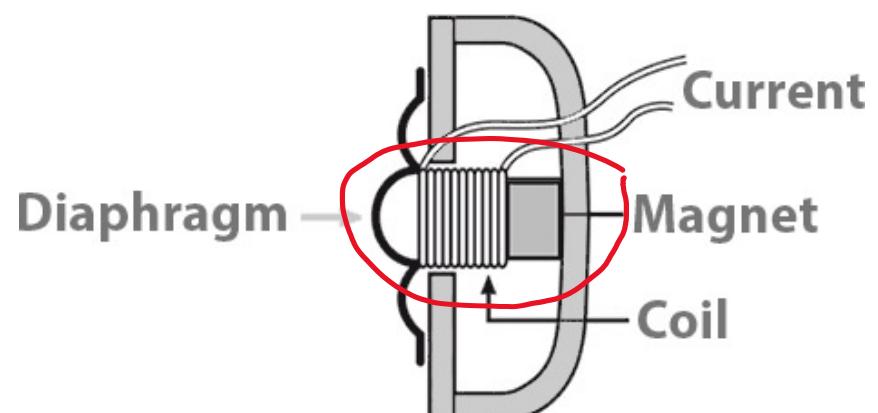
WEEK 1

Action-sound mappings



WEEK 1

Action-sound mappings



WEEK 1

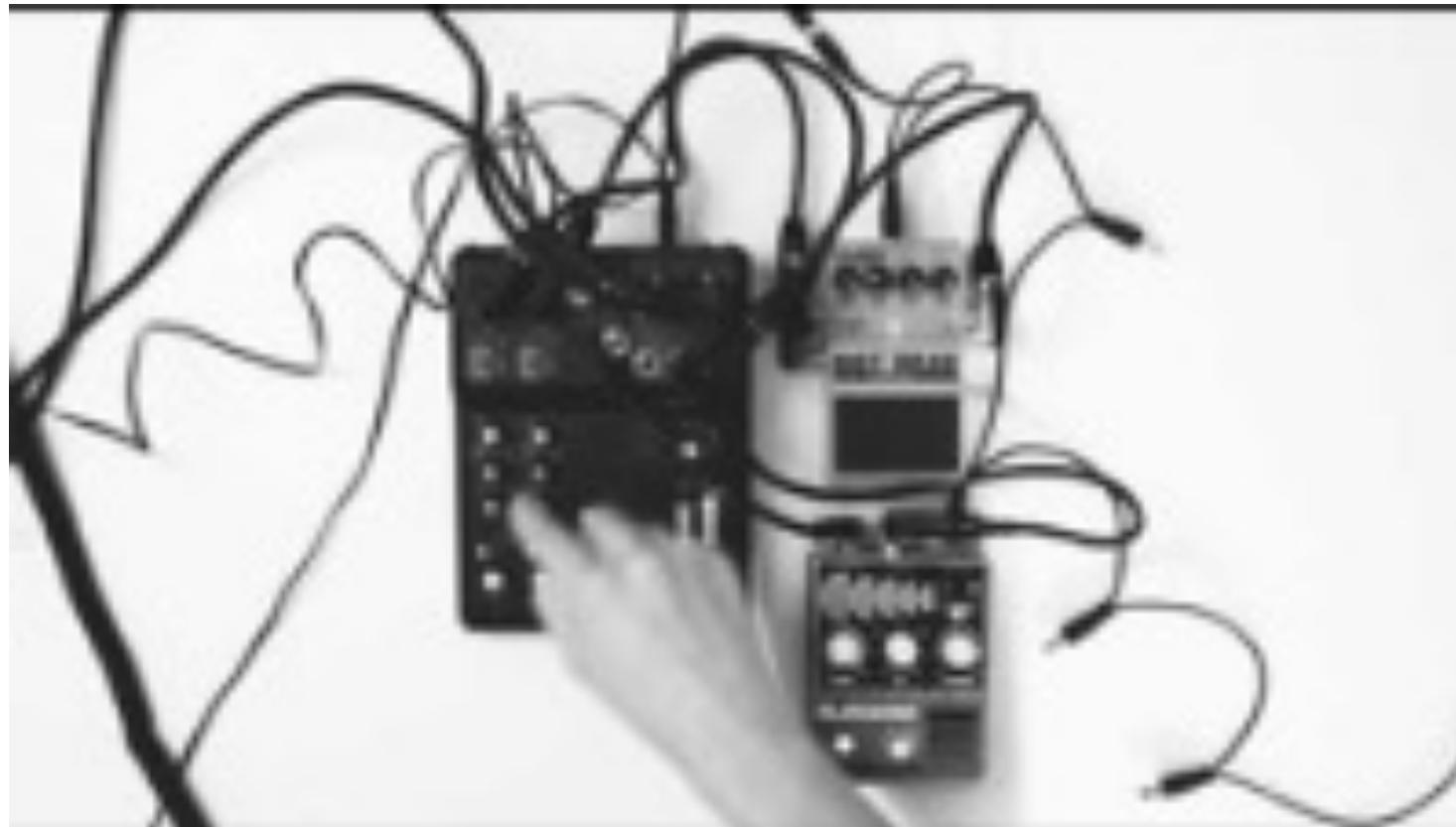
Action-sound mappings



<https://youtu.be/1bMBJD7knzw>

WEEK 1

Action-sound mappings



WEEK 1

Action-sound mappings



<https://youtu.be/AsHRAdizRQM>

WEEK 1

Action-sound mappings



<https://youtu.be/EO96IK0Fvx4>

WEEK 1

Action-sound mappings



https://youtu.be/y_3FIXEutHI?t=579

WEEK 1

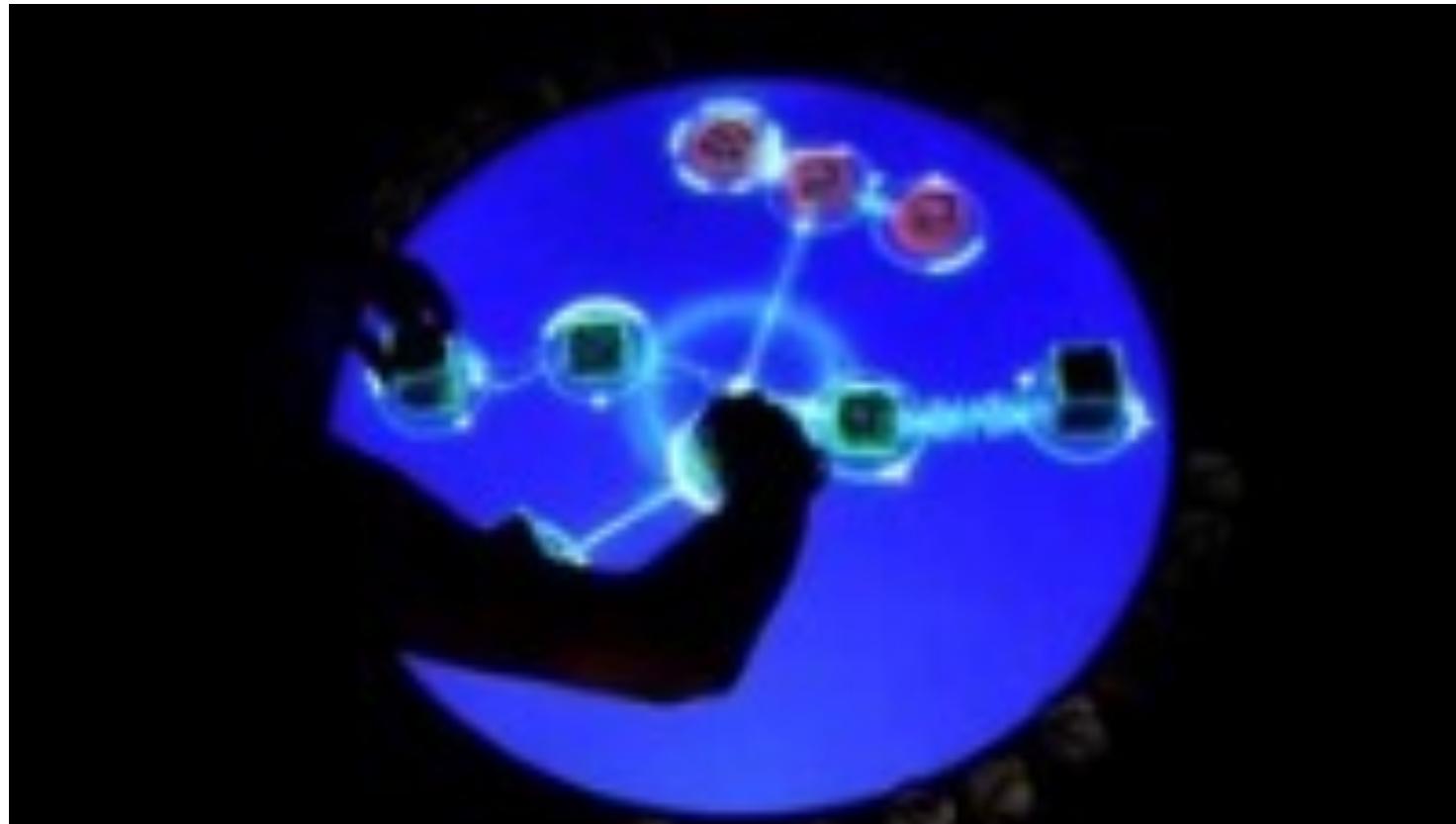
Action-sound mappings



<https://youtu.be/U1L-mVGqug4?t=217>

WEEK 1

Action-sound mappings



WEEK 1

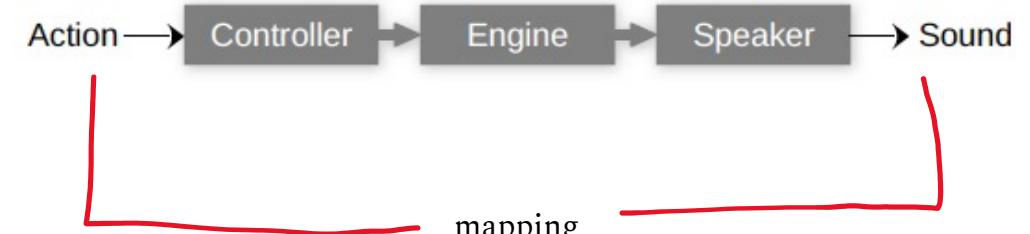
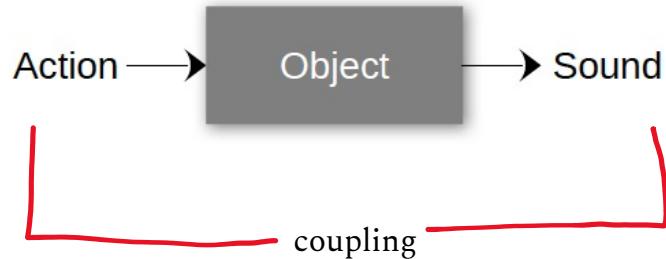
Action–sound mappings



<https://youtu.be/fXuLsLV20bw>

WEEK 1

What is interaction?



The design and construction of both acoustic
and electroacoustic instruments.

WEEK 1

What is this course about?

- Explore sonic and musical materials outside of traditional Western notation and instruments.
- Define the key terms associated with standard tools and methods of interactive music.
- Describe fundamental synthesis methods.
- Identify the essential equipment and supplies required for musical human-computer interaction.
- Demonstrate a basic understanding of audio programming on Pure Data.
- Identify the specific design strategies that address their interactive and musical needs.
- Start composing and improvising electroacoustic music.
- Have fun ☺

Interactive Music

SYLLABUS

INSTRUCTORS: Çağrı Erdem, Qichao Lan

TIME: Tuesday 09:15–10:00 and Friday 12:15–14:00

LOCATION: ZEB, Seminarrom 2

WEEKLY SCHEDULE

- ~~WEEK 1~~ Introduction: Microphones, tools, effects, and noise
- WEEK 2 Analogue Synthesis 1: Main concepts and parameters
- WEEK 3 Analogue Synthesis 2: Sound sources and processors
- WEEK 4 Collaborative performance and Live Coding
- WEEK 5 Digital Synthesis 1: Introduction to Pure Data
- WEEK 6 Digital Synthesis 2: Basics, oscillators, and filtering
- WEEK 7 Digital Synthesis 3: Audio effects
- WEEK 8 Digital Controllers 1: MIDI
- WEEK 9 Digital Controllers 2: Sensors and mapping
- WEEK 10 Ensemble 1: Composition and improvisation
- WEEK 11 Ensemble 2: Final concert preparation

COURSE DESCRIPTION: This course provides students with knowledge and skills in designing, building, and performing with various musical instruments and interactive music systems. Students learn the basics of sound synthesis, gain hands-on experience on hardware synthesizers, digital controllers, and audio programming, explore new methods for musical expression and produce artistic works for electroacoustic music ensembles.



That's all, folks ☺