VA336 interactive sound

Week 1

Introduction, Course Objectives, Students' Expectations

Instructor: Assist. Prof. Dr. Selcuk ARTUT

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VA336 interactive sound

This course focuses on the use of interactive sound for creative applications. Topics include applied programming for live sound analysis, synthesis and processing and the use of external devices to control live computer-based sound performances.

VA336 interactive sound

Interactive Sound Projects, Programming for Audio, Sound Sytnthesis projects will be the focus of this course. This course deals with learning how to use several programming environments including Max/MSP/Jitter by Cycling 74 to create interactive environments with MIDI (Max), real-time audio processing (MSP), and real-time graphics and video processing (Jitter). Students will create several projects in the class, occasional group critiques will be given.

Let’s follow the Syllabus

VA336 – Interactive Sound

Instructor: Selçuk ARTUT, PhD in Media Communications
Email: sartut@sabanciuniv.edu
Web: selcukartut.com/teaching
Class Hours: 15:40 pm - 18:30 pm // Thursdays FASS 1014

Course Description
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Textbook: Reference Books and supplementary notes will be provided

Topics included
Sound Sythesis
Sampling
AV programming
Live Coding for Music Performance
Every week another sound artist / project
Interfacing with MIDI

Sound equipment: Computer recording and editing software (DAWs), computers, headphones

Software Recommended (Not limited to): Reaper, Sony Acid Pro, Audacity, Ableton Live, Pro Tools, Cubase, Apple Logic, Soundforge, MaxMSP, PureData, p5, Sonic Pi, Tidal

Grading Policy: 40% Final Project + 50% Assignments & Quiz (will be held every each week till week 10) + 10% Attendance and Participation

Weekly Schedule Tentative

Important: Students are required to read the articles prior to the class attendance!!!

Week 1 : Introduction, Course Objectives, Students' Expectations [19.09.2019]

Course Objectives, Description, Introducing the Roadmap

Week 2 : Node Based Programming [26.09.2019]

Orienting the Development Platform MaxMSP/Jitter
Basics of synthesizers

Week 3 : Synthesizers [03.10.2019]

Synthesizers in the Movies (BBC)

Week 4 : Sound Synthesis Methods [10.10.2019]

Building a digital synthesizer

Week 5 : Sampling [17.10.2019]

Sampling / Looping / Buffer

Week 6 : Sequencing [24.10.2019]

Sequencing

Week 7 : MIDI [31.10.2019]

Performing with peripheral equipments

Week 8 : Audio/Visual Programming [07.11.2019]

Jitter Environment

Week 9 : Audio/Visual Programming [14.11.2019]

Jitter Environment

Week 10 : Network Programming [21.11.2019]

OSC – open sound protocol

Week 11 : Advanced Programming [28.11.2019]

Supercollider

Week 12: Advanced Programming [05.12.2019]

Supercollider

Week 12 : Live Coding [12.12.2019]

Sonic Pi

Week 13 : Final Projects [19.12.2019]

Week 14 : Final Projects Presentation [26.12.2019]

Course Policies

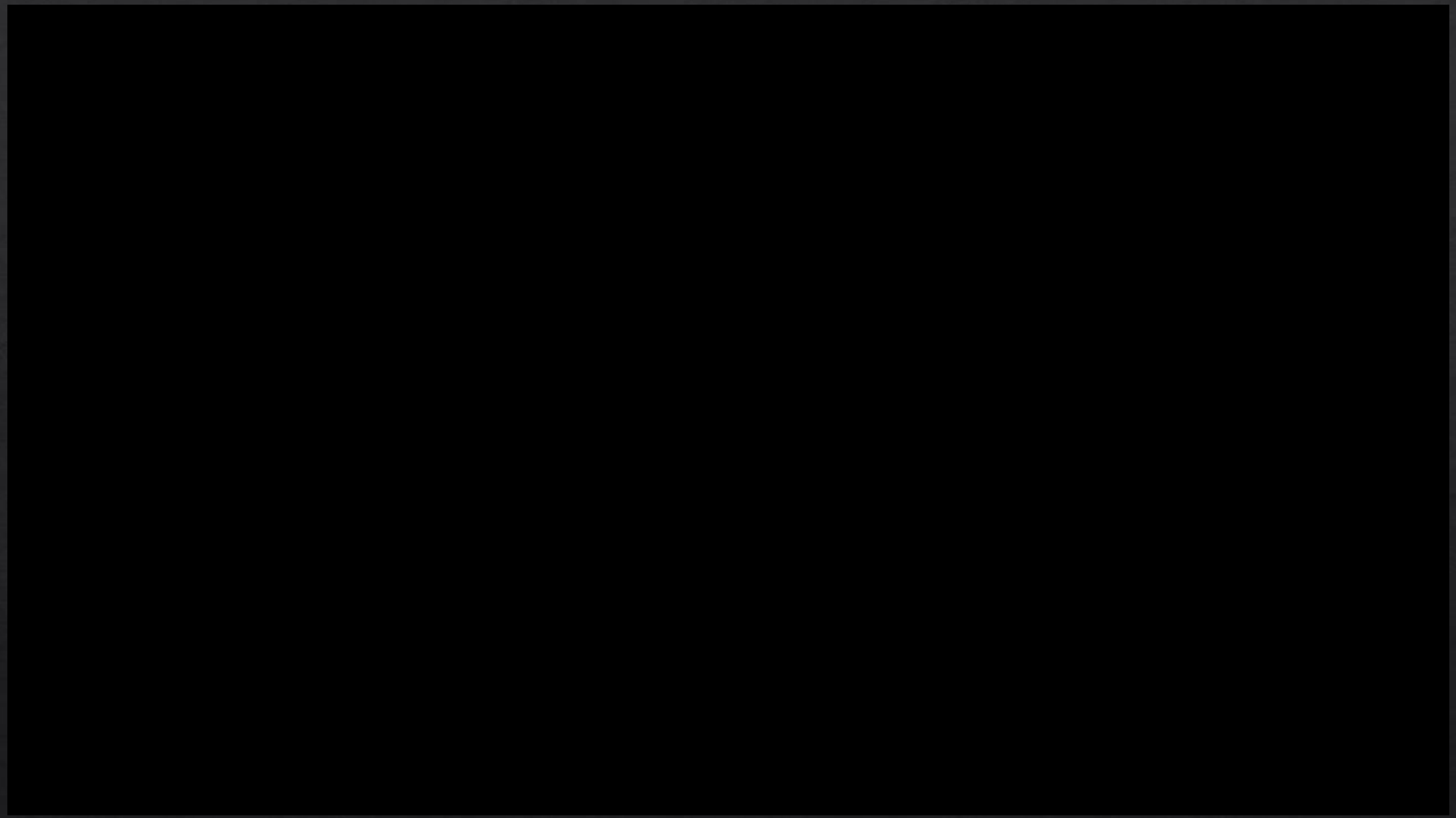
Students are expected to
- come to class on time.
- be attentive and engaged in class.
- spend an adequate amount of time on the homework each week, making an effort to solve and understand each problem.
- engage with both the abstract and computational sides of the material.
- seek help when appropriate.

Plagiarism means using words, ideas, or arguments from another person or source without citation. Cite all sources consulted to any extent (including material from the internet), whether or not assigned and whether or not quoted directly.
Any form of cheating will immediately earn you a failing grade for the entire course.

Sound Art/Project Examples

Carsten Nicolai - reflektor distortion

the installation reflektor distortion - conceived as a rotating, water-filled basin - is inspired by the shape of a parabolic mirror that 'rotates' water via centrifugal force. the work consists of the three main components mirror, reflection and distortion. both curve and distortion of the water surface is affected by speed and integrated resistors that generate a permanently new and re-organizing mirror reflection. the water surface will be supplementary distorted via speaker by resonating low sound frequencies. the function of the mirror is hereby eminent: the mirror surface is the medium that reveals reality as distorted reflection. rising the question of the observed and the real image the installation plays with the artist’s thesis that we all have a permanent distorted perception of reality.

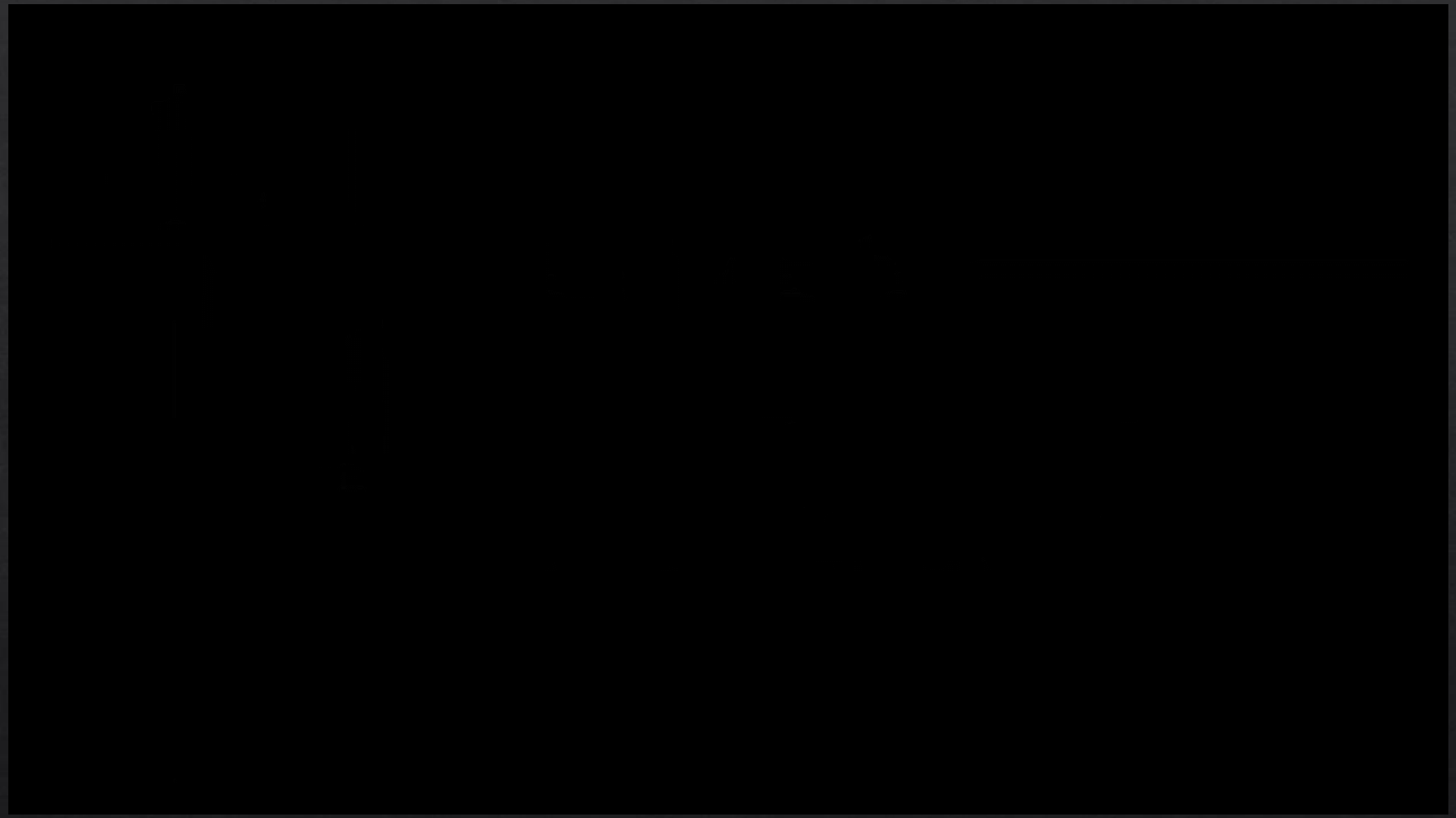


Ref: http://www.carstennicolai.de/?c=works&w=reflektor_distortion

Anders Lind

LINES is an interactive sound art exhibition created by Swedish composer Anders Lind in 2016. Lines attached to the wall, on the floor and hanging from the ceiling in combination with sensors and electronics are forming three novel music instruments. No musical experiences are required to perform, while the well-experienced musician or composer finds new musical challenges and opportunities with the instruments. The ambition with LINES is to enable: new forms of musical interaction, an exploration of new artistic expressions and to provide unique and inspiring musical experiences. The videoclip is taken from Västerbotttens Museum in Umeå 2016. www.soundslikelind.se

Max/MSP was used to program the musical behaviors of the instruments. Each of the three instruments consists of (5-15) analog distance sensors connected to an arduino board on a mac mini with additional multiple output soundcard. A Maxuino addon translates the sensor signals through the arduino into the Max/MSP program. LINES is a piece of participatory art, which is best explored in groups, but could also be experienced on your own. The ambition with LINES is to explore new forms of musical interaction, new artistic expressions and to provide unique and inspiring musical experiences.



Ref: https://www.youtube.com/watch?v=hP36xoPXDnM

Céleste Boursier-Mougenot at Barbican Centre, London

French artist Céleste Boursier-Mougenot creates works by drawing on the rhythms of daily life to produce sound in unexpected ways.

For his installation in The Curve, Boursier-Mougenot creates a walk-though aviary for a flock of zebra finches, furnished with electric guitars and other musical instruments. As the birds go about their routine activities, perching on or feeding from the various pieces of equipment, they create a captivating, live soundscape.

Ref: https://www.youtube.com/watch?v=8ZQ4VmicDeM