

Sound Studies and Sonic Arts

Summer Semester 2022

Phase Focus

Module Practice, Listening

Course Title Immersion / Interaction | Seminar

Course Times and Location Tuesday, 10:00 a.m. – 14:00 p.m. | LIE314/LIE318/WFS EIN103

Instructors [Thomas Koch](#), [Dr. Johannes Regnier](#)

Email thomas.koch@udk-berlin.de, johannes.regnier@gmail.com

Office Hours and Location upon request after class

Course Description

The seminar **Immersion / Interaction** aims to explore the artistic potential and the challenges in the use of real-time object-based audio techniques. Object-based audio not only allows the rendering of complex format agnostic audio scenes, but it also opens up new opportunities for immersive, user-controllable and interactive listening experiences. With this paradigm shift, from traditional channel-based to object-based audio, come new prospects and challenges, in particular in artistic contexts. In this seminar, the goal is to explore creative and technical approaches for interactive performances or installations that have space, interaction and real-time as central elements.

- Course format is a seminar with a practical part
- There are three project assignments, of increasing complexity. Each project will be presented to class.
- Target audience are students with a practical or theoretical interest in sound & space, auditory perception, immersive A/V environments and audio technology
- After this class you will be able to assess and use different SOTA audio technologies as part of your artistic process.

Requirements for attending

Class is limited to 12 students.

Basic competences in MAX or Pd are required. Please bring your laptop with the following software installed: Reaper (available here: <http://reaper.fm/>) or Ableton Live (available here: <https://www.ableton.com/en/>), MAX (available here: <https://cycling74.com/>) or Pure Data (available here: <http://msp.ucsd.edu/software.html>), Ircam SPAT (if you use MAX, available here <https://forum.ircam.fr/projects/detail/spat/>).

Exam / Credit Points

4CP (mandatory, graded: Practice, Listening): Regular attendance and 3 project presentations. Participation in the project presentations is mandatory for taking this seminar.

No 2CP option is available.

Sound Studies and Sonic Arts

Schedule

Session	Topic	
26 April	Auditory Localization and Room Acoustics, Primary Localization Cues (ITD, IID). Channel-based audio, 2D panning, stereophony	LIE314
3 May	Project #1 Presentation (1- or 2-ch work). Depth, sense of distance, reverberation. Surround sound.	LIE314
17 May	Ambisonics and Object-Based Audio. Examples and Basic Workflows (Reaper Ambisonics, Ircam Spat, Spat for Ableton Live).	LIE318
31 May	Guest Lecturer: Gerriet Sharma	LIE318
21 June	Project #2 Presentation (4-, 8- or 12-ch work).	LIE318
28 June	Interactions, Integration of Controls, Real-time, Motions.	LIE318
12 July	Guest Lecturer #2	WFS EIN 103
19 July	Project #3 Presentation (own choice, e.g. Multichannel / WFS)	LIE318/WFS EIN 103