Advanced Seminar (Hauptseminar)
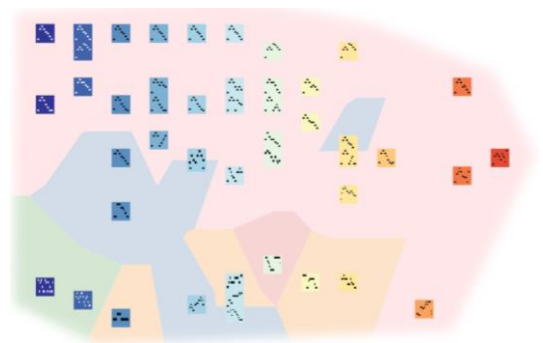
Music Visualization and New Musical Interfaces

Institute for Visualization and Interactive Systems

Most people enjoy listening to music and many create music in some form, through singing or playing an instrument, through composing or using digital music software, or nowadays even by live coding or prompting a generative AI. Technology played a part in music early on, from the design of new instruments such as the electric guitar and synthesizers, over learning tools like a simple metronome or smartphone app, to visualizations of your personal listening history. Especially in the last decades, the amount of musical data rapidly increased, requiring new techniques to analyze and use new possibilities in music creation.

In this advanced seminar, we will discuss various visualization techniques and interfaces to analyze musical data and/or create music using new interaction techniques. We will focus on current state-of-the-art research that works in several domains with musical data. This includes, for example, musical pieces, collections, and musicians, as well as novel interfaces for music creation, like generative AI, augmented instruments, and virtual/augmented reality. We will evaluate the current approaches and identify existing research gaps. Each student will select one of the provided topics from different domains to focus on.

The tasks of the seminar participants include researching relevant works on a given topic within the specified area, preparing a presentation on the respective subject, presenting it during the seminar, and writing a detailed report on the topic.

Target Group:
Master's students in the field of Computer Science

Language:
English

Room/Location:
The seminar takes place in Seminarraum 00.012 in Allmandring 19 (VISUS-Building). The topics will be assigned to the participants at the beginning of the seminar.

Contact Person:
Frank Heyen, Simeon Rau, Prof. Dr. Michael Sedlmair

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