Introduction to Musical Corpus Studies

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Fabian C. Moss

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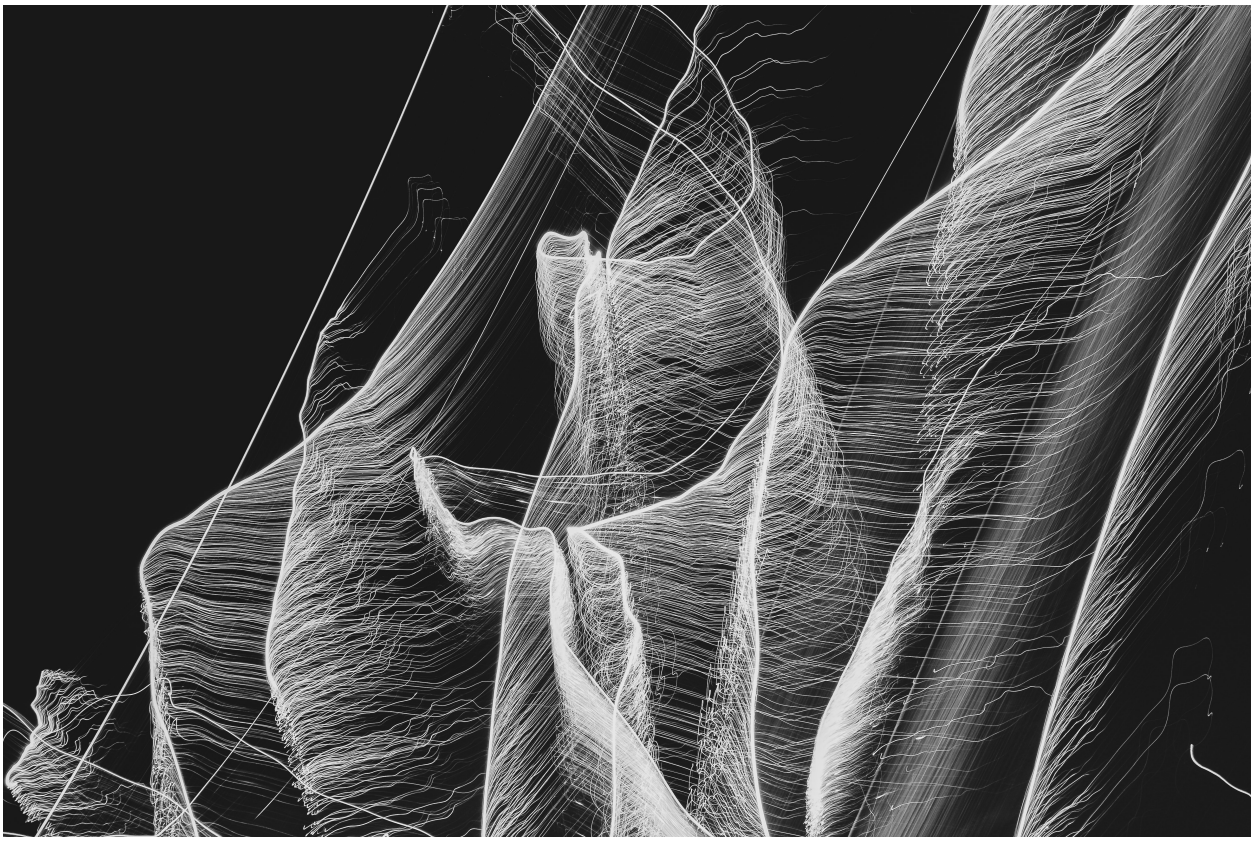
CONTENT



Warning: This material is still (heavily) under construction and might change throughout the course!

You can help improving the course and let me know about any errors and inconsistencies that you find or suggest other ways of improving the course.

Welcome!

These pages present the content of the course "Introduction to Musical Corpus Studies" at the Institute of Musicology, given at University of Cologne in Fall 2020.

In the last two decades *Musical Corpus Studies* evolved from a niche discipline into a veritable research area. The growing availability of digital and digitized musical data as well as the application and development of modern methodologies from computer science, machine learning, and data science cast new light on old musicological questions and generate entirely novel approaches to empirical music research.

Moreover, the general methodological and epistemological approach of Musical Corpus Studies allows to transcend traditional intra-musicological boundaries between its sub-disciplintes (historical/systematic/ethnological/...) without sacrificing the respective specific viewpoints and perspectives.

This course offers a fundamental and practical introduction into these topics. It demonstrates, explores, and critically reflects central thematic areas and methods by means of a number of case studies. In the engagement with these topics the course also introduces elementary methods from natural language and music processing, as well as statistics, data analysis and visualization.

The course is aimed at students at the undergraduate level who have little or no empirical background and are curious about quantitative approaches to musicology.

CHAPTER

ONE

ORGANIZATION

1.1 Overview

No.	Date	Time	Room	Topics
1	Fr., 13.11.2020	16:00-17:20 Uhr	Neuer Seminarraum 1.315	Introduction / Background
2		17:40-19:00 Uhr		Folk Songs, Melodies, Pitches and Intervals frequencies, mean, variance
3	Sa., 14.11.2020	09:00-10:20 Uhr	Neuer Seminarraum 1.315	Jazz Solos, Melodies, Regular Expressions
4		10:40-12:00 Uhr		Beethoven's string quartets, harmony, n-grams, Markov models
		12:00-13:00 Uhr		Lunch Break
5		13:00-14:20 Uhr		Pop Charts Billboard 100, harmony, Clustering, k-means, [Hidden Markov Models]
6		14:40-16:00 Uhr		Group work
7	Fr., 11.12.2020	10:00-11:20 Uhr	Alter Seminarraum 1.408	Cadences in Renaissance Polyphony with guest researcher Richard Freedman
8		11:40-13:00 Uhr		Brazilian Choro, harmony, form, context-Free Grammars
9	Sa., 12.12.2020	09:00-10:20 Uhr	Neuer Seminarraum 1.315	Malian Percussion Music, rhythm, meter
10		10:40-12:00 Uhr		Electronic Music 1950-1990
		12:00-13:00 Uhr		Lunch Break
11		13:00-14:20 Uhr		Group work
12		14:40-16:00 Uhr		Recapitulation and conclusion

1.2 Credits

Active participation in this course is compensated with 3 credit points (CPs), equivalent to a work load of 90 hours. These are distributed as follows: 24 SWS (90 minutes) are allocated to presence in the block seminar. Additionally, 36 SWS are dedicated to the preparation and follow-up of the material. The remainder of 30 SWS goes to the reading of the relevant literature.

1.3 Deliverables and Learning objectives

Course work consists of three parts: preparing the relevant literature (reading), completing the relevant exercises (group work), and critically engaging with the course materials in the form of a report written together with your group.

- work load management
- organization

Reading

For each session, the relevant literature is cited in the text. Careful preparation is required in order to be able to follow the content of the course. Because the course will mainly talk about methods and general points of musical corpus research, the content (and musical topic) will mainly be introduced by the literature.

I am aware that the reading workload is relatively high since the course will be taught as a block seminar and doesn't spread out over the entire semester. I hope that the fact that the course is finished before the end of the year compensates for this.

- critical reading of scientific literature

Group work

At the beginning of the course, you will be randomly assigned to a group. Together with your group, you will work on a number of exercises during the course, e.g. in Zoom breakout rooms.

- content of the course units
- specific musicological and/or methodological questions

Review

After the course has ended, your group will be randomly assigned a course topic. It is your task to write a review/report on this topic. What did you learn? Which concepts are not clear? Which methods did you (not) understand? What is missing? How can the textual descriptions be improved? Who in your group did what? Write about the organization of your group, challenges and benefits.

- create issues on GitHub
- writing academic reviews

Recommended structure:

1. Introduction: general description and summary of the course and your session in particular.
2. ...

Important: Submit your report by **31 January 2021** to fabian.moss@epfl.ch.

CHAPTER

TWO

INTRODUCTION

2.1 About this course

2.1.1 About me

- Music and Mathematics education (Uni & HfMT Köln)
- MA Musicolgy (HfMT Köln)
- PhD Digital Humanities (EPFL)

2.1.2 Focus of this course

Programing introductions often boring. A lot of time lost in introducing basic concepts and techniques (important!) but quite remote from actual (!) applications. Examples are usually "toy examples" that work well, but the transition to real-world applications is difficult. Of course, the example studies discussed in this course work well, too. However, they are without exception taken from peer-reviewed, published, open access articles. They thus reflect actual, recent research questions that reflect current research.

This course takes thus the opposite approach to "toy examples". We will not introduce many specific programing concepts. The course rather showcases what is possible with musical corpus studies. If this sparks your interest, it will be much easier to pick up the basics for yourself, knowing what they are *for* and being motivated intrinsically. If you are not particularly interested in doing this kind of work yourself, you will still see a broad range of applications that are much more useful to you than learning (or not learning) Python basics.

2.2 What are Musical Corpus Studies?

tbc... (text from diss?)

2.3 Epistemological goals

tbc...

2.4 Issues

tbc [Coo06][Hon06][Hur13][NR16][Pug15][Sch16][TV13][VWvK11]

2.5 MCS and traditional musicology

tbc

2.6 Basic representations

- tones, notes
- (tonal/neutral) pitch classes
- meter (hierarchy)

CHAPTER

THREE

BIBLIOGRAPHY

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