

DEPARTMENT OF MATHEMATICS



Departmental Seminar

MATHEMATICAL MUSIC THEORY

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4th Semester



INTRODUCTION

Mathematical Music Theory is an interdisciplinary field that studies the mathematical properties of music. This presentation analyzes **harmonic progressions, chord structures, and rhythms** using mathematical formulas and models.

Harmonic Progressions



In music theory, **harmonic progressions** refer to the movement of chords from one to another. This slide discusses how to analyze and describe harmonic progressions using mathematical models.

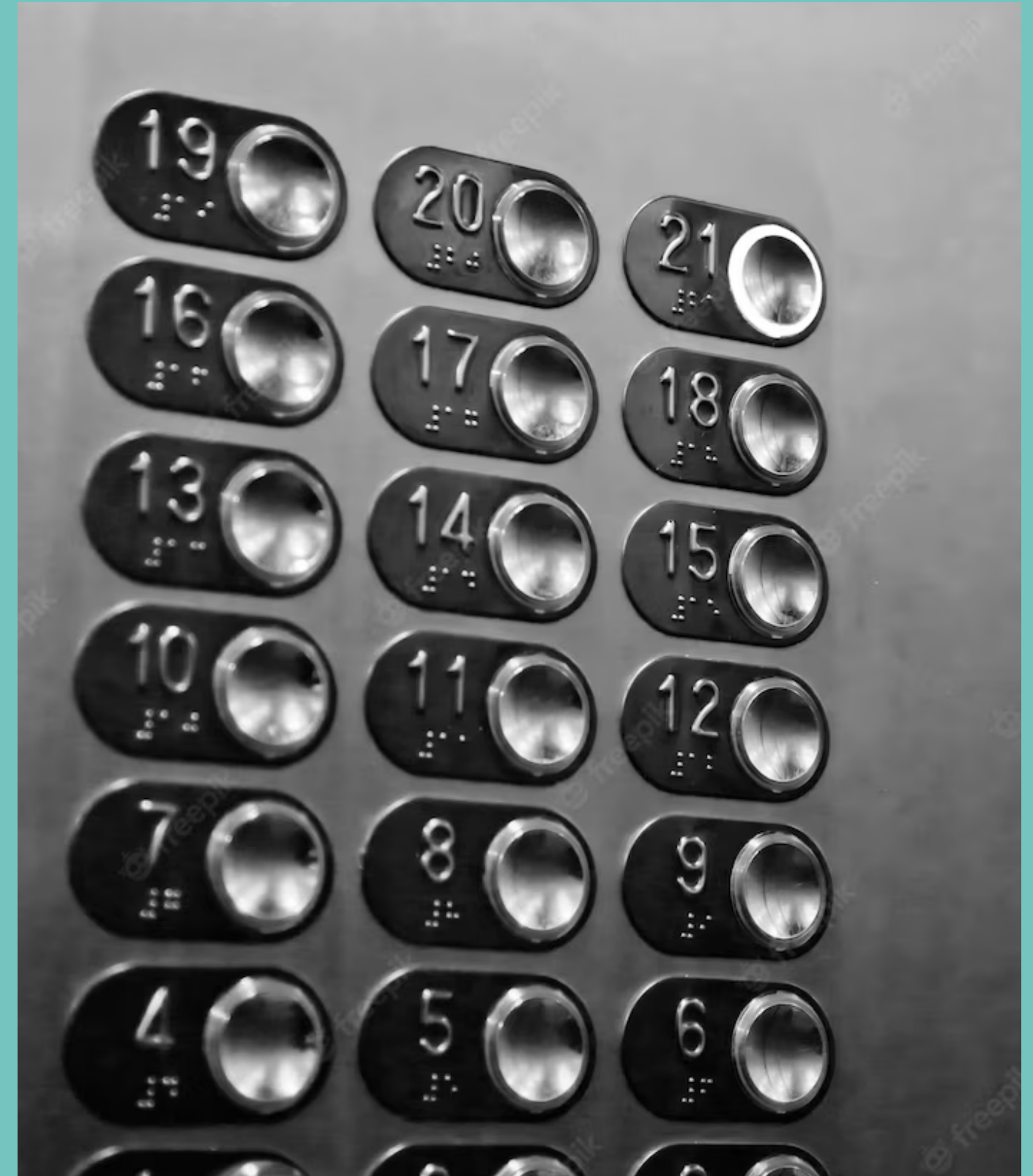
CHORD STRUCTURES

Understanding **chord structures** is important for analyzing music. This slide explains how to use mathematical models to analyze and identify chord structures in different genres of music.



RHYTHMS

Rhythm is an essential element of music. This slide discusses how to analyze and describe different **rhythmic patterns** using mathematical models. We will explore the mathematical relationship between rhythm and tempo.



APPLICATIONS

Mathematical music theory has practical applications in music composition, analysis, and education. This slide will showcase some examples of how mathematical models can be used to create and analyze music.



CONCLUSION

In conclusion, mathematical music theory provides a powerful tool for analyzing and understanding the complex structures of music. By applying mathematical models and formulas, we can gain new insights into the harmonic progressions, chord structures, and rhythms of different genres of music.

THANK YOU