MU610A: ACOUSTICS & PSYCHOACOUSTICS

EDWARD COSTELLO

INTRODUCTION

- Two subjects: Acoustics, Psychoacoustics
- Importance of Acoustics and Psychoacoustics

ASSESSMENT

- Continuous assessment: 30%
- End of semester exam: 70%
- Presentations Friday 8th December

COURSE CONTENT

ACOUSTICS

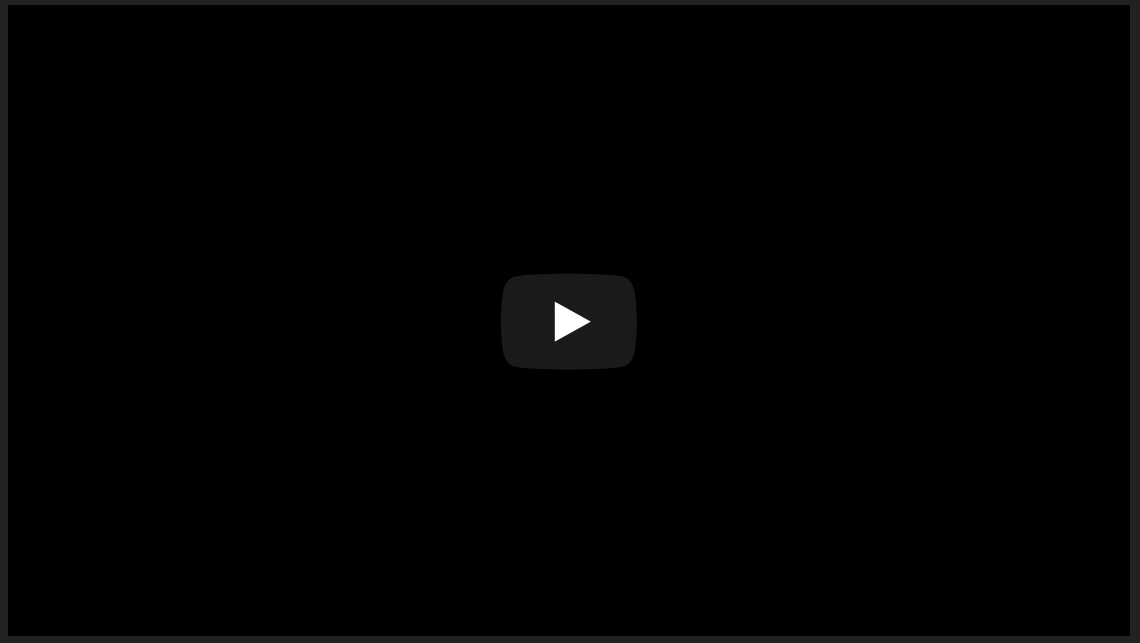
- The science of sound, branch of physics
- Various models/basic theories and concepts used to study sound
- Group presentation

COURSE CONTENT

PSYCHOACOUSTICS

- Human perception of sound
- Psychoacoustic phenomena, how sound is perceived / processed by our senses, auditory illusions
- Application of knowledge in composition/recording techniques
- The ear / auditory scene analysis / hearing damage

ASIDE: AUDITORY ILLUSION, SHEPHARD / RISSET GLISSANDO



RESOURCES

BOOKS

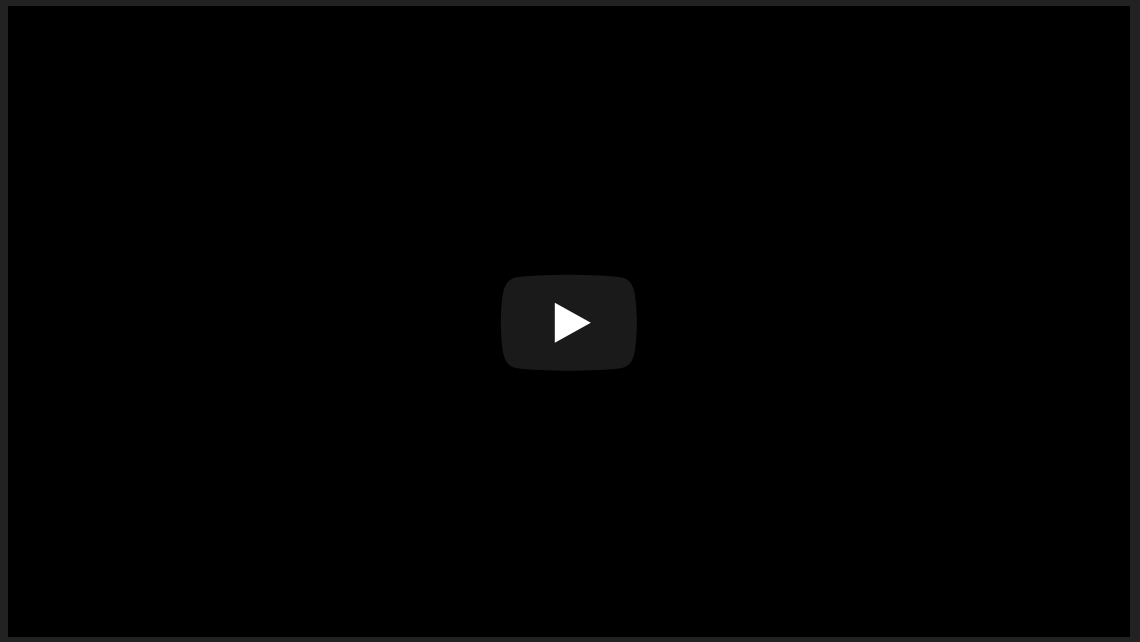
- Albert S. Bregman, Auditory Scene Analysis (1st and last chapters)
- David M. Howard & James Angus, Acoustics & Psychoacoustics (Many of these notes are from this book, this is a key text)
- Daniel Levitin, This is your Brain on Music, looks at the phenomenon of sound from a cognitive perspective.
- Perry Cook, Music, Cognition and Computerized Sound

MAGAZINE

- Sound on Sound

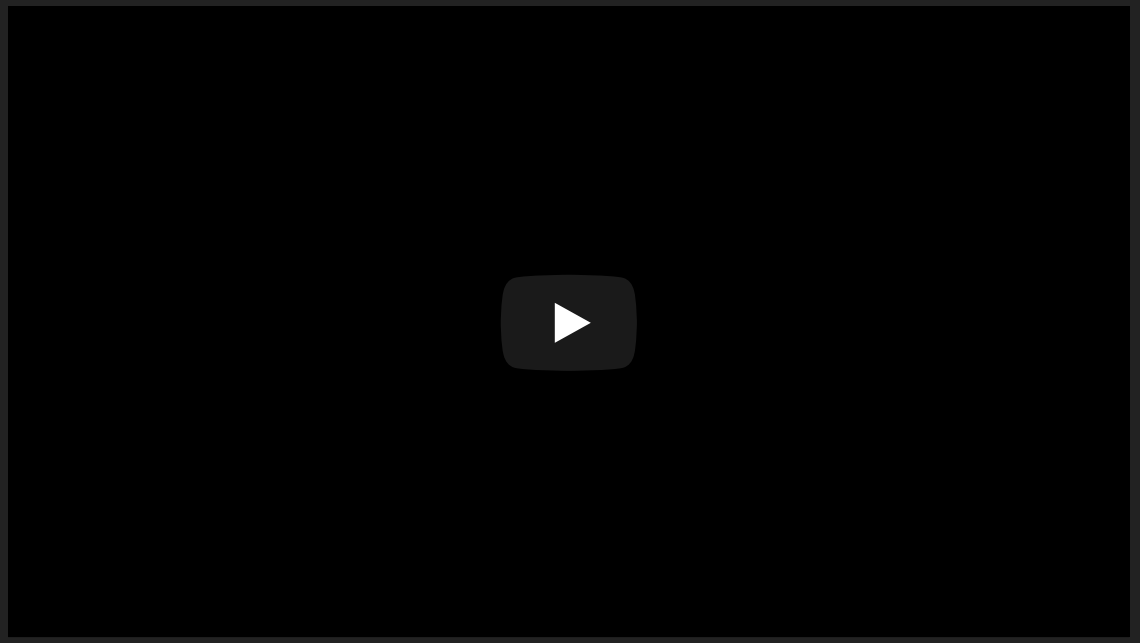
PODCAST

- The Infinite Monkey Cage - "The Science of Sound", Robin Ince and Brian Cox



VIDEO

- Max Matthews and John Chowning - Music Meets Computer (YouTube) - Broad look at things but fundamental for anyone interested in the area of computer music



ATTENDANCE

UPCOMING TOPICS / TERMS TO CLARIFY

- Sound
- Noise
- Music
- Acoustics
- Psychoacoustics
- Audition
- Auditory Scene Analysis