

MMI504

Group Assignments

1. Synthesize from scratch the famous THX intro sound using additive synthesis.
2. Continue working on the Karplus Strong model by extending it to include body resonance of a real guitar. Find out the most prominent five modes of the body of an acoustic guitar, and implement them at the output of the plucked string using a bank of resonant filters.
3. Implement a mandolin using the KS model.
4. Synthesize the vowels /a/, /e/, /i/, /o/, and /u/ using FM synthesis. Look up the formant locations for these vowels on the Internet (the Peterson-Barney data set).
5. Implement a time-varying resonant filter that changes BW and center frequency freely.