Objective
Create a digital model of the famous Hammond organ

Image source:
http://www.cameratim.com/reviews/audio/hammond-123j3-organ/images/hammond-123j3-organ.jpeg

Properties
- Tone wheel synthesizer
- Timbre control via drawbars
- Leslie cabinet (rotating speaker units), important part of the sound!
Implementation

Organ Model

- Additive synthesizer (a few components)
- Components that are not heard not generated
  ⇒ Computational savings

“Key click” effect:
Emulated with the sixth harmonic

Implementation

Leslie Cabinet Model

- Frequency and amplitude modulation

- Frequency modulation
  with short spectral delay filters (SDFs)

LIVE DEMO!