Modal Spring Reverb

Implementation of a *crappy* physical spring reverb model in Faust using modal synthesis.

> *Projekt in den Kursen Audiotechnik und Digitale Audiosignalverarbeitung im WS20/21 und SS21 an der BHT*
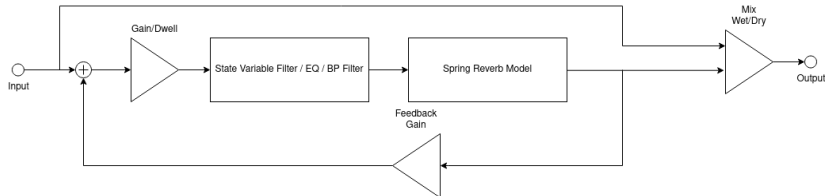
Figure 1: Blockdiagram

- ▶ Improvement of Model in Matlab
  - ▶ Modelling of frequency dependend damping
  - ▶ Modelling of Longitudinal/Torsional Waves
  - ▶ **How many Modes are Useful??**
  - ▶ Lookuptable for biquads Filter coefficients?
- ▶ Feedback Structure
- ▶ switchable Statevariable Filter before Spring for more musicality
  - ▶ like this: https://www.youtube.com/watch?v=89rPF9J5f3A
  - ▶ https://en.wikipedia.org/wiki/State_variable_filter
  - ▶ https://ccrma.stanford.edu/~jos/svf/svf.pdf
- ▶ Design UI
  - ▶ changeable Parameters
    - ▶ Input Gain