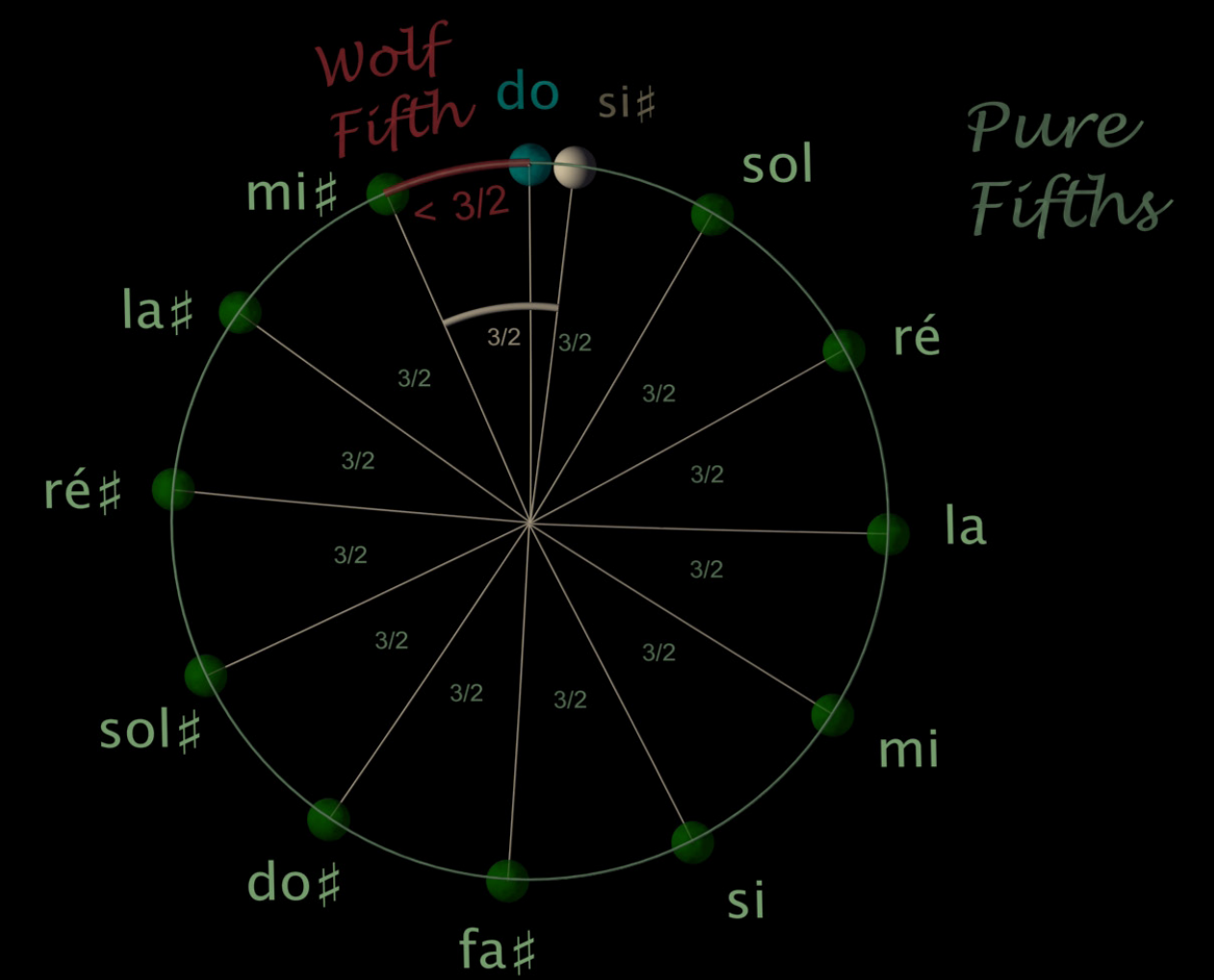
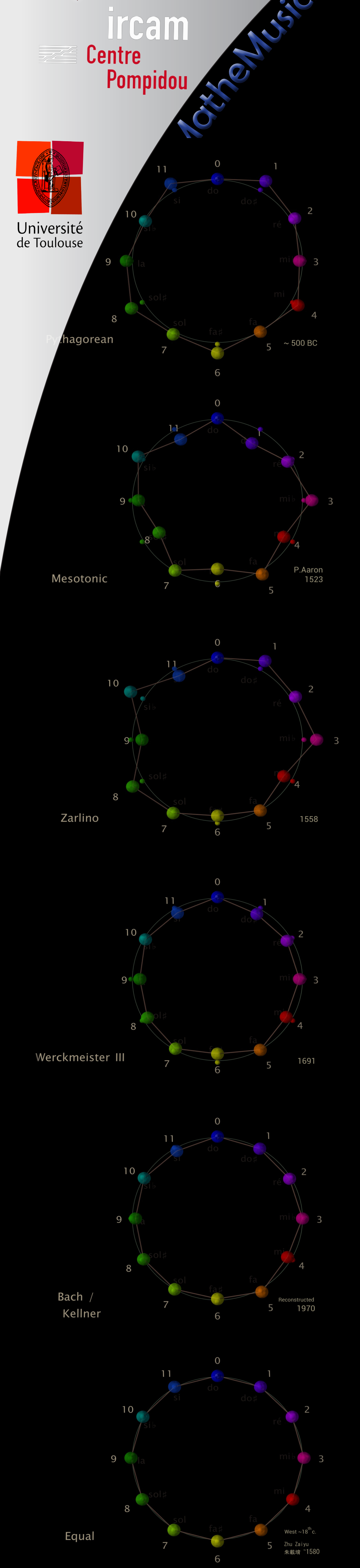
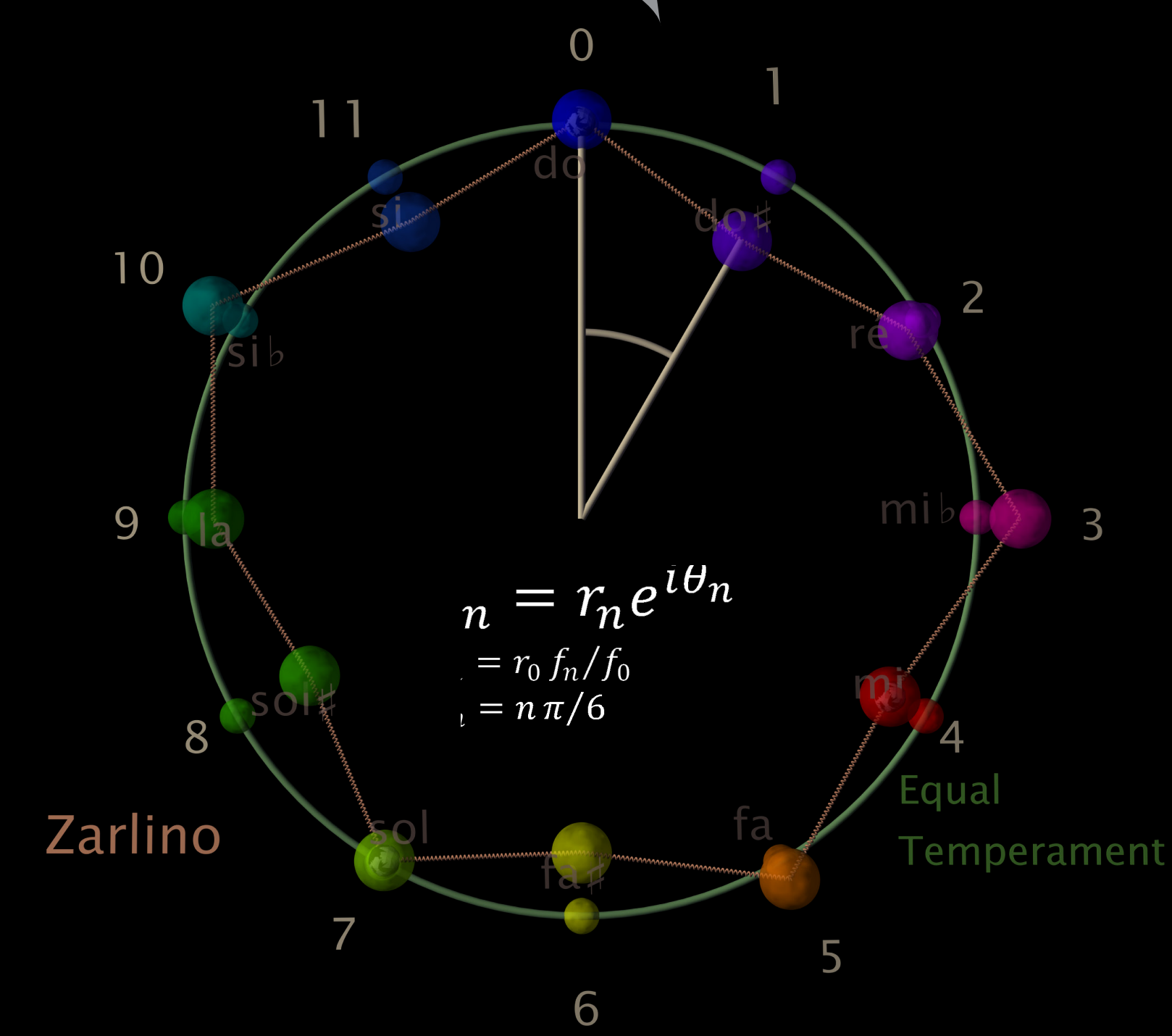


Visualizing Temperaments

Original 2D, 3D, 4D Static and Dynamic Representations

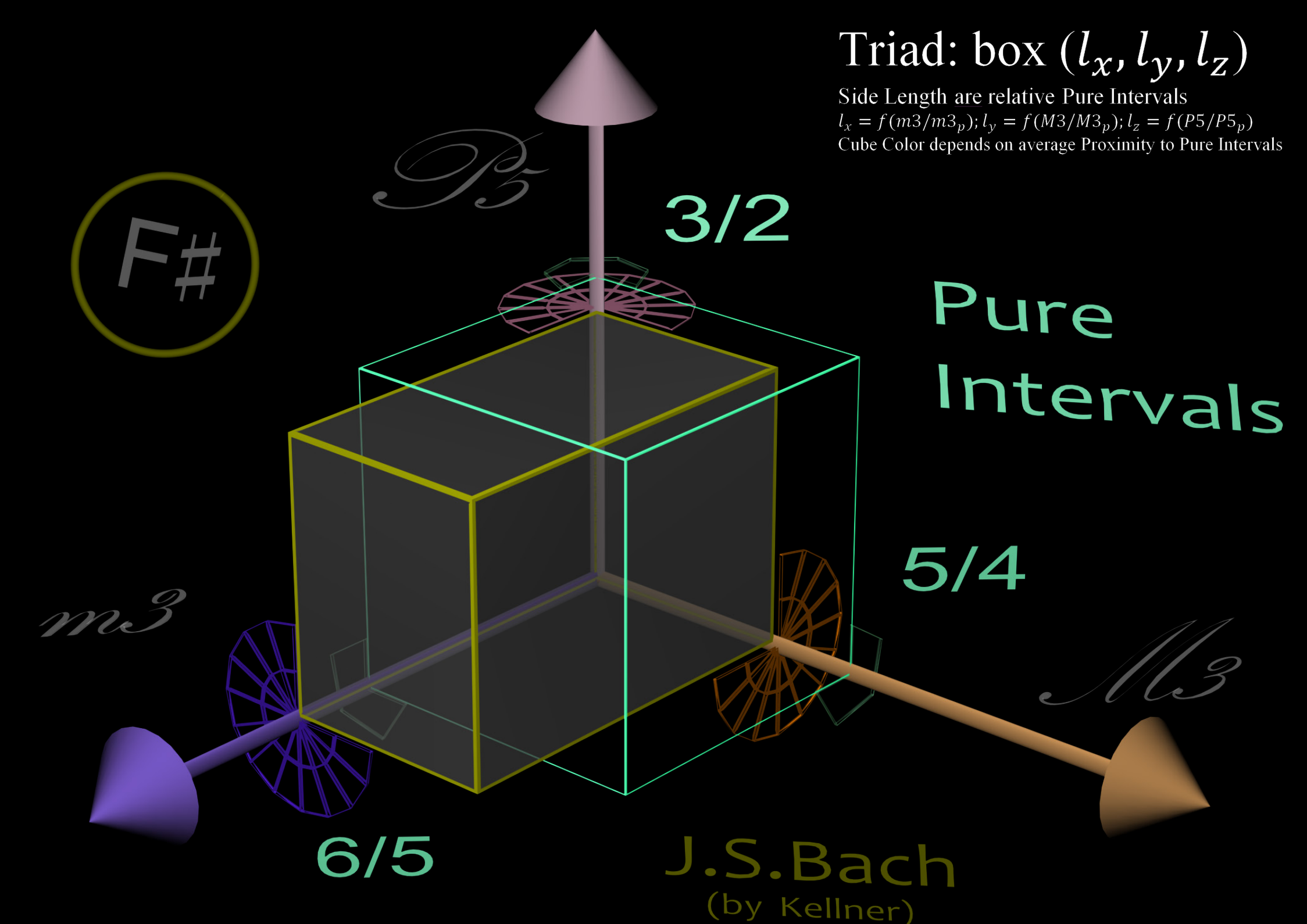


Example: Pythagorean Tuning System (1D)



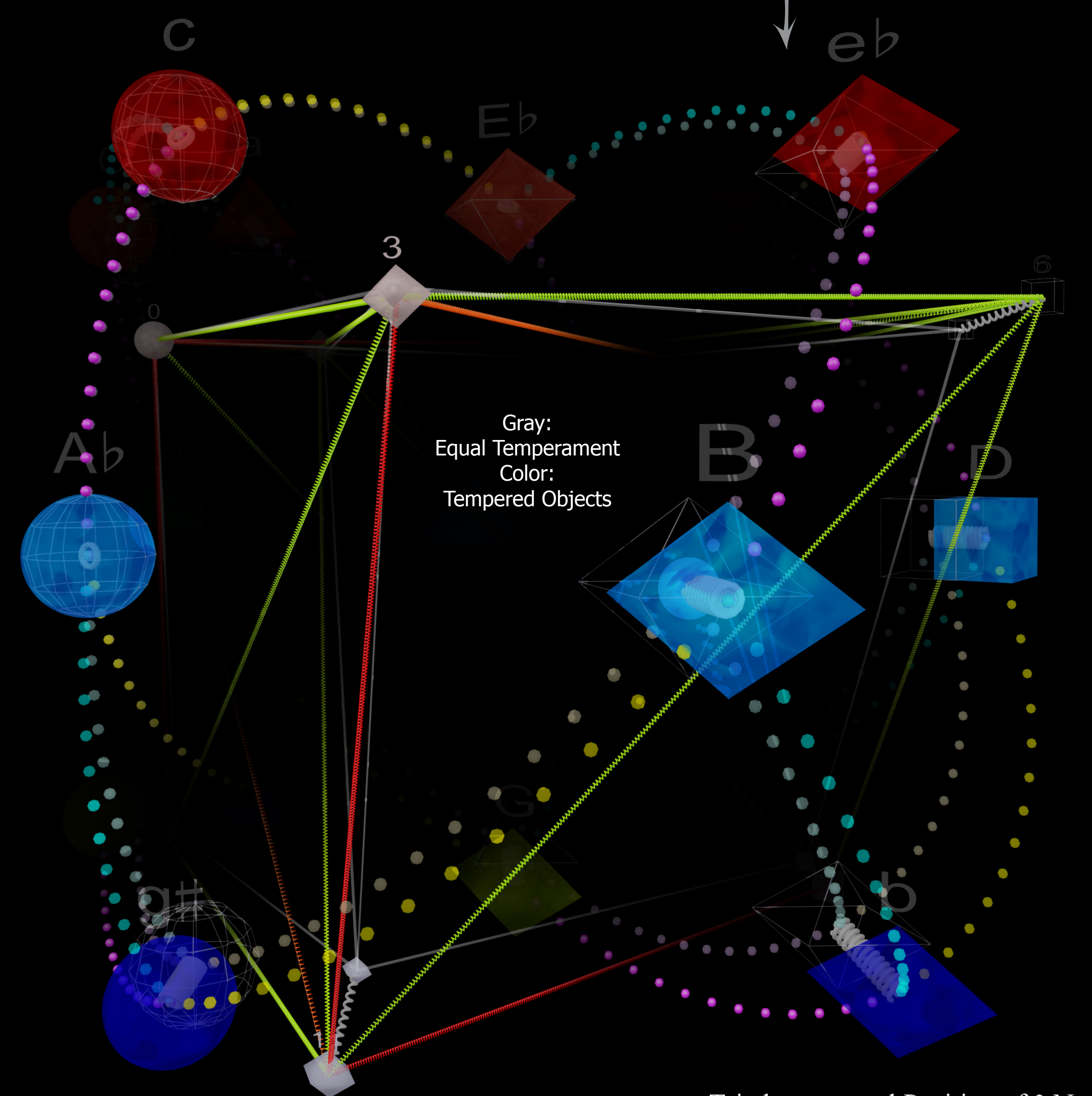
2D: Complex Numbers

Modelize Chords

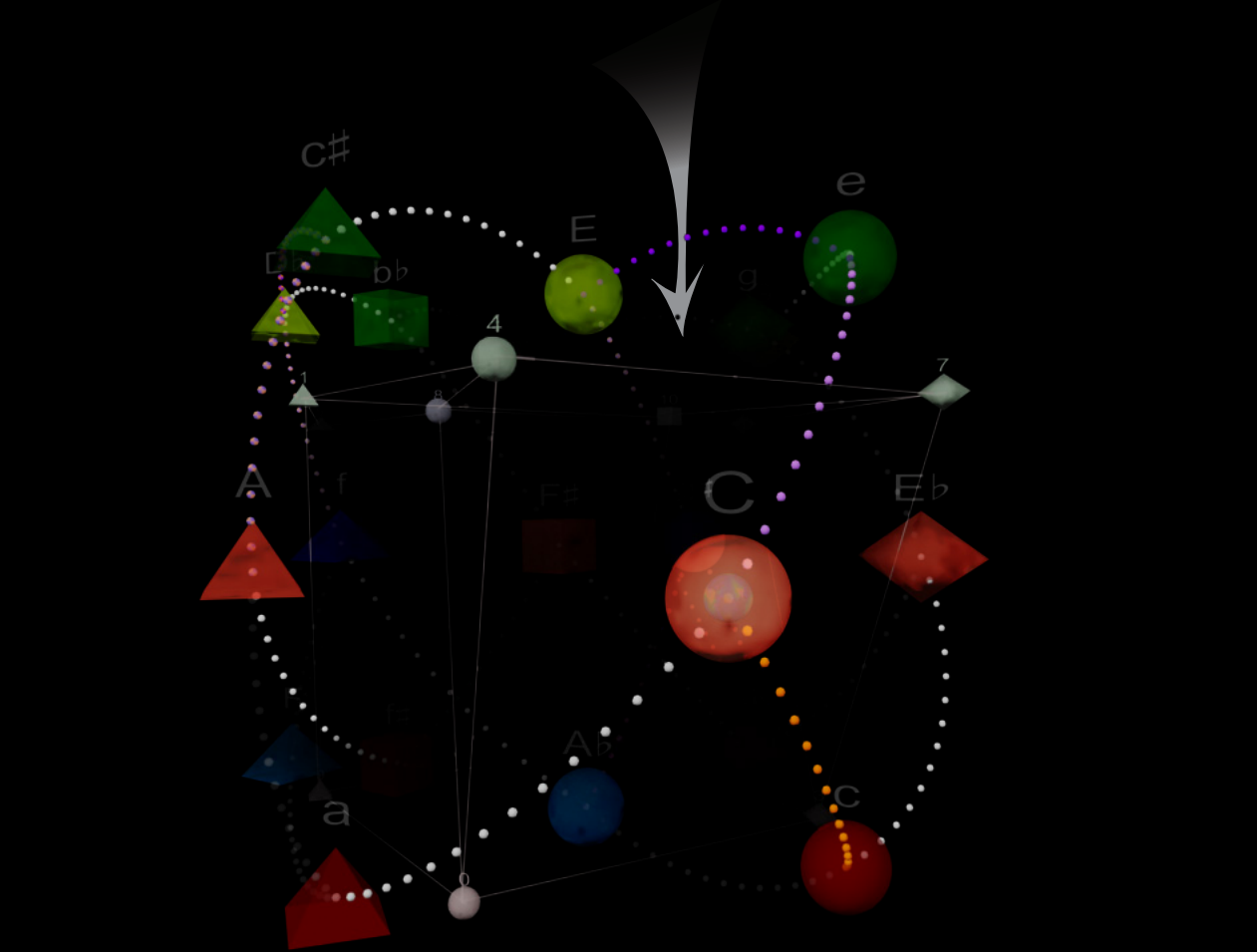
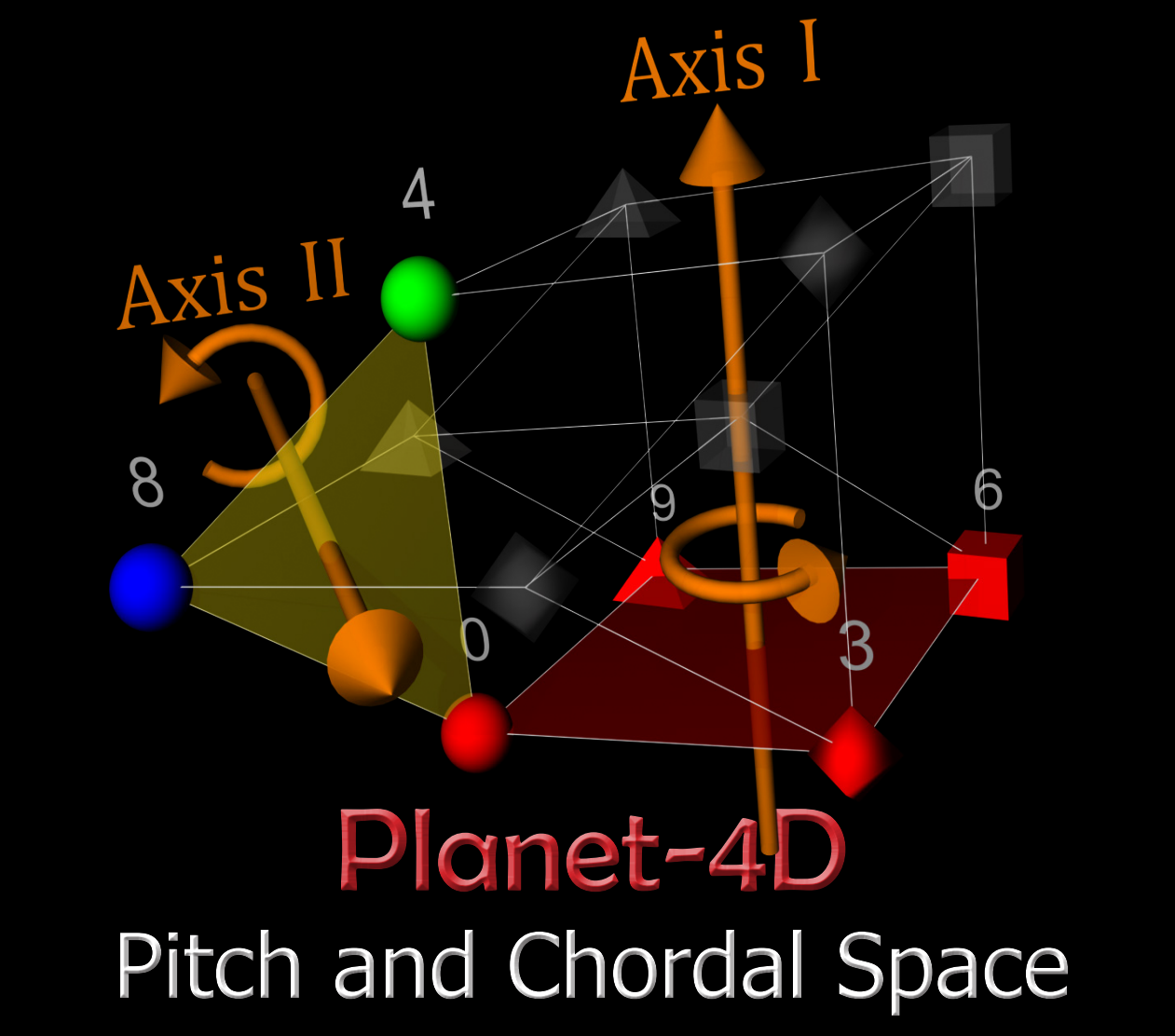


Tempered Harmonic Cube
Global Comparison to Pure (3D)
2016

Add Two Dimensions



Tempered Hypersphere
Non Equal-Tempered Space (4D)
2019



Polarized Hypersphere
Parcimony in Tonal Music
2012
Mix with Tempered Ob-

Triads: averaged Position of 3 Notes
Tempered Notes Positions:
Quaternion $Q_{nt} = Q_n f_n / f_0$ with $Q_n = \left(\frac{1}{\sqrt{3}} e^{i\frac{2n\pi}{3}}, \frac{1}{\sqrt{2}} e^{i\frac{2n\pi}{4}} \right)$