

## Modal Harmonics and the Coding Patterns of Nature

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### Structure of Article

Part 0: Abstract & Introduction

Part 1 :  $e$

Part 2: The Euler Equation

Part 3:  $\pi$

Part 4:  $\pi$  Squared

Part 5: Conclusion

Part 6: Application-The Fibonacci Numbers

### Abstract

We know the fundamental constants  $e$  and  $\pi$  can be utilized to generate solutions explaining real world phenomena but the constants themselves have previously defied attempts at their derivation or explanation as to their origin. We pose that  $e$  and  $\pi$  are generated by waves harmonically ordered which cannot be observed because they occur in an alternate space. We call this alternate space Harmonic Space. We have discovered an equivalence relation which we term the General Transform Equation that allows us to mathematically transform wave combinations in Harmonic Space to real world phenomena in observable space. The combination is a recipe of which base waves to use and how much of each in order to equate to a specific phenomena such as the measurement of a fundamental constant. The coefficients applied to the base waves necessary for equivalence are in fact a coding pattern which determines the value of these fundamental constants.