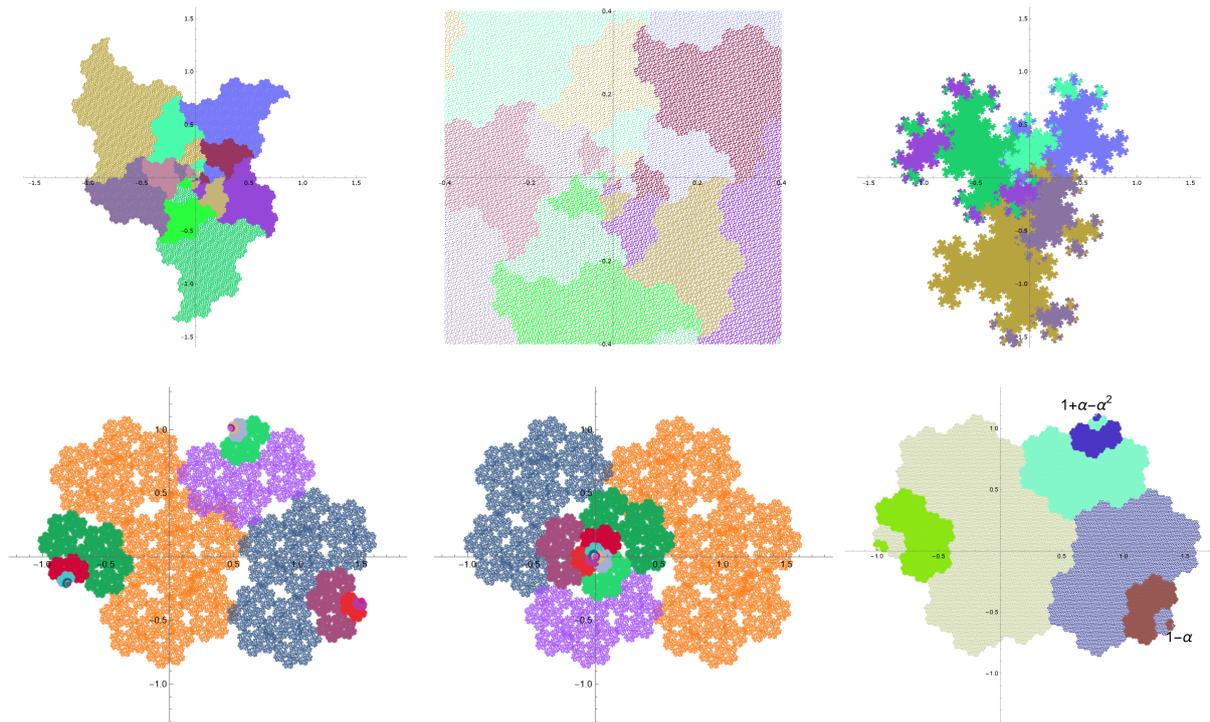


## Infinite Extensions of Substitutions and its Perturbations

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This talk is related to numeration systems with complex bases and complex digits. All of this is connected to the so-called Rauzy fractal of a substitution. We will define a class of substitutions, on infinite alphabets, which are natural extensions of the  $d$ -bonacci substitutions. We will show that the dynamics of this extension correspond to an exchange of infinitely many domains in the plane. The Rauzy fractal of this substitution generates a tiling of the plane. In this case, we obtain numeration systems in the complex plane with infinitely many digits.



Wednesday - February 11, 2026 - 14:00 - 15:00

253 - Thesis Defense Room - 2nd Floor IMECC