



universität  
wien

Fakultät für Mathematik

## EINLADUNG

zum

## HABILITATIONSVORTRAG

**Dr. Paul Surer**

(Institut für Mathematik, Universität für Bodenkultur Wien)

**“Rauzy fractals and their geometric and topological properties”**

## **“Rauzy fractals and their geometric and topological properties”**

### Abstract:

*Rauzy fractals, named after Gérard Rauzy, are geometric representations of symbolic dynamical systems induced by endomorphisms of the free monoid, so-called substitutions. They act as a mirror for the underlying dynamical system since several dynamical properties are reflected as geometric properties of the associated fractals.*

*At the beginning of the talk we introduce Rauzy fractals and give an overview of their basic properties. Afterwards we present results concerning the geometry and the topology of Rauzy fractals. We are interested in Rauzy fractals that differ only by an affine transformation and we discuss Rauzy fractals that are central symmetric with respect to a point. Finally, we concentrate on a certain class of substitutions and ask whether the associated Rauzy fractals are homeomorphic to a closed disc.*

**Mittwoch, 25. November 2020**

**13:00 Uhr – 13:45 Uhr**

<https://zoom.us/j/99409791560?pwd=QkFFUlfZb2I>

[xRnFYZlZ3MjF2N3BEZz09](https://zoom.us/j/99409791560?pwd=QkFFUlfZb2IxRnFYZlZ3MjF2N3BEZz09)

Meeting ID: 994 0979 1560

Passcode: ZDY2Fs

Henk Bruin  
Radu Ioan Bot