Einladung

zum Vortrag im Rahmen des **SFB Colloquiums** (Standort Linz), mit dem Titel

On topological and geometrical aspects of labyrinth fractals

VORTRAGENDE: **Ligia Loretta Cristea**, Universität Graz
DATUM: Donnerstag, 19. November 2015
ZEIT: 12:00 Uhr
ORT: Managementzentrum, MZ 005B, JKU Linz

Abstract: The results presented in this talk stem from joint work with Bertran Steinsky. Labyrinth fractals are a special case of Sierpinski carpets. They were introduced and studied in two papers by Cristea and Steinsky published a few years ago (1,2) and are self-similar dendrites in the unit square. These fractals are constructed iteratively by using a pattern (or labyrinth set) that is the generator of the fractal. Under certain conditions on the labyrinth pattern that generates the self-similar fractal, the length of the path in the fractal between any two points of the fractal is infinite. In recent work (3), we studied mixed labyrinth fractals, which are one possible generalisation of labyrinth fractals. In general, mixed labyrinth fractals are not self-similar. Among other, we have shown that they are dendrites, and we have studied properties of the paths. Moreover, further generalisations are considered.

References

[1] L.L. Cristea, B. Steinsky, Curves of Infinite Length in 4x4-Labyrinth Fractals, Geometriae Dedicata, Vol. 141, Issue 1 (2009), 1–17.
[2] L.L. Cristea, B. Steinsky, Curves of Infinite Length in Labyrinth-Fractals, Proceedings of the Edinburgh Mathematical Society Volume 54, Issue 02 (2011), 329–344.
[3] L.L. Cristea, B. Steinsky, Mixed labyrinth fractals, submitted for publication.