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**UNIVERSITÄT
BERN**

Philosophisch-
naturwissenschaftliche Fakultät

Departement Mathematik und Statistik

Mathematisches Institut

Mathematical Colloquia

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Monday, 17. September 2018

17:15 h, Lecture Room B 78

Prof. Dr. Pablo Shmerkin, Universidad Torcuato di Tella

Multiplying by 2 and by 3: old conjectures and new results

Abstract:

In the 1960s, H. Furstenberg proposed a series of conjectures which, in different ways, aim to capture the heuristic principle that "expansions in different bases have no common structure". I will discuss a sample of these conjectures, some which remain open and some which have been established in recent years. These problems lie at the intersection of Ergodic Theory and Fractal Geometry, but no previous background on either area will be assumed.