



# Analysis Seminar

## Restriction spaces: basis, structure, isomorphic classification.

By

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**Abstract:** Suppose that a zero sequence  $(a_k)$  is given, satisfying certain mild regularity conditions. The corresponding restriction space  $X$  consists of functions on  $(a_k)$ , which can be extended to infinitely differentiable functions on the line. We consider the linear topological structure of such spaces. In particular, the basis in  $X$  is constructed and diametral dimension of  $X$  is calculated. This allows us to present families (of continuum cardinality) of pairwise non-isomorphic spaces. The isomorphic classification of restriction spaces is given. In addition, the criteria are given for the space to be a power series space and for the dominating property of the space.

**Date:** Monday, February 3, 2025

**Time:** 15:40-16:40

**Place:** SA141 - Mathematics Seminar Room