

# Boğaziçi MATH COLLOQUIUM

## Countable Rank Maps

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**Abstract:**

Let  $f : X \rightarrow Y$  be a function and let  $m$  be an infinite cardinal. Then we say that the rank  $r(f)$  of  $f$  is  $\leq m$  if

$$|\{y \in Y : |f^{-1}(y)| > 1\}| \leq m.$$

If  $m = \aleph_0$  then  $f$  is of countable rank. A motivation for this study comes from numerous topological constructions where countable rank maps are used. In this talk, we will present some interesting results concerning such maps and their projective classes. For instance: for nice spaces, they behave like monotone maps. This is a joint work with Paweł Krupski (Wrocław University of Science and Technology, Poland).

**Date :** Wednesday, October 30, 2019

**Time:** 15:30

**Place:** TB 130, Boğaziçi University