

Sierpiński-Zygmund (SZ) functions in the context of additional set-theoretic axioms

Mariam Meskhi

e-mail: mariam.meskhi769@ens.tsu.ge

Department of Mathematics, Faculty of Exact and Natural Sciences,
Ivane Javakhishvili Tbilisi State University, University Street No. 13, Tbilisi 1086, Georgia

The presented Master's thesis concerns Sierpiński-Zygmund (SZ) functions and their significance in modern mathematics. The Sierpiński-Zygmund (SZ) function was first defined in the classical paper by W. Sierpiński and A. Zygmund (1923), in which the authors constructed such a function $f: R \rightarrow R$ whose restriction to any subset Y of R of continuum cardinality c is discontinuous.

In the Master's thesis, we consider the Sierpiński-Zygmund function, its connection with point sets possessing various interesting properties, and the issue of its existence in certain set-theoretic models.