

SIERPIŃSKI–ZYGmund FUNCTIONS: HISTORICAL OVERVIEW AND RECENT FINDINGS

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ABSTRACT. In this work we shall focus on the restriction of arbitrary functions to certain special sets and their continuity via the classical result by Blumberg (1922) and the later introduction of the class of functions known as Sierpiński–Zygmund functions (1923).

In addition, we will also study the structure of the set of all Sierpiński–Zygmund functions and we will see several interesting properties related to this set, which at times are undecidable within Zermelo–Fraenkel’s axiomatic set theoretical model. A thorough analysis of this class, its relations with other classical families of functions, and the current state of the art of this topic of study shall also be provided.

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