# On a Sierpinski-Zygmund function

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Sierpinski and Zygmund constructed in their remarkable work a function $f : R \to R$ having the following property: for each subset $Y$ of $R$ with $card(Y) = c$, the restriction $f|Y$ is not continuous on Y. This classical result of Sierpiński and Zygmund was fundamentally motivated by Blumberg's theorem. The Sierpiriski-Zygmund construction yields an example of a function which simultaneously is not measurable in the Lebesgue sense and does not possess the Baire property.

In the presented talk we consider Sierpinski-Zygmund functions in the context of Mazurkiewicz set and in various set-theoretical models.