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## N-FUNCTIONS: A QUERY

### Abstract

A question concerning N-functions is posed.

**Definition.** By an N-function on  $\mathbb{R}$  we mean a function that maps sets of measure zero to sets of measure zero.

**Question.** Given a non-constant, continuous N-function  $f$  is there a continuous N-function  $g$ , depending on  $f$ , such that the sum  $f + g$  is not an N-function?

**Remark.** We deduce from the Mazurkiewicz example (see [M]) that any non-constant linear function enjoys this property.

### References

- [M] S. Mazurkiewicz, *Sur les fonctions qui satisfont à la condition (N)*, Fund. Math., **16**, (1930), 348–352.

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