LINEABILITY OF DARBOUX-LIKE FUNCTIONS

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ABSTRACT. The class Ext of all extendable functions from $\mathbb{R}$ to $\mathbb{R}$ is the smallest among all Darboux-like classes of functions, which constitute different natural generalizations of the class of usual continuous functions. In 2013, T. Natkaniec asked whether or not Ext is maximal algebrable, that is, there is an algebra of functions contained in Ext such that the set of generators of such algebra has cardinality $2^{\mathfrak{c}}$ (where $\mathfrak{c}$ is the cardinality of the continuum). In this talk we present a positive answer in a recent published paper where the authors use a new technique in this field.

Joint work with Krzysztof C. Ciesielski and Juan B. Seoane-Sepúlveda.