

**Title:** On Daróczy's problem for additive functions

**Author(s):** Adrienn Varga and Csaba Vincze

In this paper we investigate the functional equation

$$\sum_{i=1}^n \alpha_i A(\beta_i x) = 0$$

which holds for all  $x \in \mathbb{R}$  with an unknown additive function  $A : \mathbb{R} \rightarrow \mathbb{R}$  and fixed real parameters  $\alpha_i, \beta_i$ , where  $i = 1, \dots, n$ . The case  $n = 2$  is discussed by Z. DARÓCZY [?]. Here we formulate sufficient conditions for the existence of nontrivial solutions in terms of the parameters  $\frac{\beta_1}{\beta_n}, \dots, \frac{\beta_{n-1}}{\beta_n}$  and  $\frac{\alpha_1}{\alpha_n}, \dots, \frac{\alpha_{n-1}}{\alpha_n}$ .

**Address:**

Adrienn Varga  
Institute of Mathematics  
University of Debrecen  
P.O. Box 12, Debrecen  
Hungary  
*E-mail:* vargaa@math.klte.hu

**Address:**

Csaba Vincze  
Institute of Mathematics  
University of Debrecen  
P.O. Box 12, Debrecen  
Hungary  
*E-mail:* csvincze@math.klte.hu