Marek Balcerzak, Institute of Mathematics, Łódź University of Technology, Łódź, Poland. email: marek.balcerzak@p.lodz.pl

## IDEAL CONVERGENT SUBSEQUENCES AND REARRANGEMENTS

These are results obtained together with Sz. Głąb, M. Popławski and A. Wachowicz. Let  $\mathcal{I}$  be an ideal on  $\mathbb{N}$  which is either analytic or coanalytic. Assume that  $(f_n)$  is a sequence of functions with the Baire property from a Polish space X into a Polish space Z, which is divergent on a comeager set. We investigate the Baire category of  $\mathcal{I}$ -convergent subsequences and rearrangements of  $(f_n)$ . Our result generalizes a theorem of Kallman. A similar theorem for subsequences is obtained if  $(X, \mu)$  is a  $\sigma$ -finite complete measure space and a sequence  $(f_n)$  of measurable functions from X to Z is  $\mathcal{I}$ -divergent  $\mu$ -almost everywhere. Then the set of subsequences of  $(f_n)$ ,  $\mathcal{I}$ -divergent  $\mu$ -almost everywhere, is of full product measure on  $\{0,1\}^{\mathbb{N}}$ . Here we assume additionally that  $\mathcal{I}$  has property (G).

## 1

Mathematical Reviews subject classification: Primary: 40A35; Secondary: 40A05, 54E52 Key words: Ideal convergence, Baire category, subsequences, rearrangement