

Title: Distribution functions of ratio sequences, III

Author(s): Vladimír Baláž, Ladislav Mišík, Oto Strauch and János T. Tóth

In this paper we study the distribution functions $g(x)$ of the sequence of blocks $X_n = (\frac{x_1}{x_n}, \frac{x_2}{x_n}, \dots, \frac{x_n}{x_n})$, $n = 1, 2, \dots$, where x_n is an increasing sequence of positive integers. Assuming that the lower asymptotic density $\underline{d}$ of x_n is positive, we find the optimal lower and upper bounds of $g(x)$. As an application, we also get the optimal bounds of limit points of $\frac{1}{n} \sum_{i=1}^n \frac{x_i}{x_n}$, $n = 1, 2, \dots$

Address:

Vladimír Baláž
Institute of Information, Engineering
Automation and Mathematics
Faculty of Chemical
and Food Technology
Slovak University of Technology
in Bratislava
SK-812 37 Bratislava
Slovakia

Address:

Oto Strauch
Mathematical Institute
Slovak Academy of Sciences
Štefánikova 49
SK-814 73 Bratislava
Slovakia

Address:

Ladislav Mišík
Department of Mathematics and
Centre of Excellence IT4Innovations
Division UO - IRAFM
University of Ostrava
30. dubna 22
701 03 Ostrava 1
Czech Republic

Address:

János T. Tóth
Department of Mathematics
University of J. Selye
Bratislavská 3322 SK-945 01 Komárno
Slovakia