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Title of the paper

NAME(S) OF THE AUTHOR(S)

Dedication (if need be)

ABSTRACT. Text of the abstract (not exceeding 13 lines, references and big formulas in abstract should be avoided).

1. Introduction

Background of the paper. Motivation. Your contribution.

2. The first section

Let $\mathbb{N} = \{1, 2, \dots\}$ and let $\mathbb{K}$ be the field of real numbers $\mathbb{R}$ or complex numbers $\mathbb{C}$. We specify the domains of indices by the symbols inf, sup, lim and $\sum$ only if they are different from $\mathbb{N}$. We use also the notation $\mathbb{R}^+ = [0, \infty)$.

Definition 1. A function $\phi : \mathbb{R}^+ \to \mathbb{R}^+$ is called a *modulus function* (or, simply, a *modulus*), if

(M1) $\phi(t) = 0 \iff t = 0$,
(M2) $\phi(t + u) \le \phi(t) + \phi(u) \quad (t, u \in \mathbb{R}^+)$,
(M3) ϕ is non-decreasing,
(M4) ϕ is continuous from the right at 0.

3. The second section

3.1. The first subsection. The most common summability method is matrix method defined by an infinite scalar matrix $A = (a_{nk})$. A well-known

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example of a regular matrix method is Cesàro method C_1 defined by the matrix $C_1 = (c_{nk})$, where, for any $n \in \mathbb{N}$,

$$c_{nk} = \begin{cases} n^{-1} & \text{if } k \le n, \\ 0 & \text{otherwise.} \end{cases}$$

Theorem 1. *Let $p \ge 1$ and let $A = (a_{nk})$ be a non-negative infinite matrix. Suppose that $\lambda \subset s$ is a solid AK space with respect to absolutely monotone F-seminorm g_λ. If the matrix A is row-finite (i.e., for any $n \in \mathbb{N}$ there exists an index k_n with $a_{nk} = 0 \quad (k > k_n)$) and*

$$((a_{nk})^{1/p})_{n\in\mathbb{N}} \in \lambda \quad (k \in \mathbb{N}), \tag{1}$$

then $(U\lambda^p[A], g^p_{\lambda,\tilde{A}})$ is the AK space, where

$$g^p_{\lambda,\tilde{A}}(\mathbf{u}) = g_\lambda\left(\tilde{A}^{1/p}\left(|\mathbf{u}^2|^p\right)\right),$$
$$\tilde{A}^{1/p}\left(|\mathbf{u}^2|^p\right) = \left(\sup_i \left(\sum_k a_{nk}|u_{ki}|^p\right)^{1/p}\right)_{n\in\mathbb{N}}.$$

Proof. To prove the equality $\lim_m \mathbf{u}^{2[m]} = \mathbf{u}^2$ in $U\lambda^p[A]$, we use the inequality

$$\begin{aligned} & g^p_{\lambda,\tilde{A}}\left(\mathbf{u}^2 - \mathbf{u}^{2[m]}\right) \\ & \le \sum_{n=1}^{s} g_\lambda\left(\sup_i\left(\sum_{k=m+1}^{\infty} a_{nk}|u_{ki}|^p\right)^{1/p} e^n\right) \\ & \quad + g_\lambda\left(\left(\overbrace{0,\dots,0}^{s}, \sup_i\left(\sum_{k=m+1}^{\infty} a_{s+1,k}|u_{ki}|^p\right)^{1/p}, \dots\right)\right) \\ & = G^1_{sm} + G^2_{sm}. \end{aligned} \tag{2}$$

By (2), using also (1), we have .... □

Proposition 1. *Text of the proposition.*

Corollary 1. *Text of the corollary.*

Example 1. Text of the example.

Remark 1. Text of the remark.

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