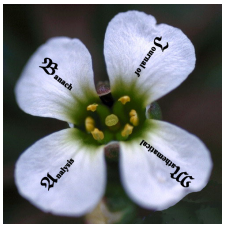

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A COMBINATORIAL APPROACH TO MUSIELAK–ORLICZ SPACES

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Abstract. In this paper we show that, using combinatorial inequalities and Matrix-Averages, we can generate Musielak–Orlicz spaces, *i.e.*, we prove that $\operatorname{Ave}_{\pi} \max_{1\le i\le n} |x_i y_{i\pi(i)}| \sim \|x\|_{\Sigma M_i}$, where the Orlicz functions $M_1, \dots, M_n$ depend on the matrix $(y_{ij})_{i,j=1}^n$. We also provide an approximation result for Musielak–Orlicz norms which already in the case of Orlicz spaces turned out to be very useful.

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