1099-42-240 **Gyorgy Gat*** (`gatgy@nyf.hu`), P.O.Box 166., Nyiregyhaza, H-4400, Hungary. *Almost everywhere summability of Walsh-Fourier series.*

Let x be an element of the unit interval $I := [0, 1)$. The $\mathbb{N} \ni n$th Walsh function is

$$\omega_n(x) := (-1)^{\sum_{k=0}^{\infty} n_k x_k} \quad (n = \sum_{k=0}^{\infty} k_i 2^i,\ x = \sum_{k=0}^{\infty} \frac{x_i}{2^{i+1}}).$$

The Walsh-Fourier coefficients, the n-th partial sum of the Fourier series, the n-th $(C, 1)$ mean of $f \in L^1(I)$:

$$\hat{f}(n) := \int_I f(x)\omega_n(x)dx, \quad S_n f := \sum_{k=0}^{n-1} \hat{f}(k)\omega_k, \quad \sigma_n f := \frac{1}{n}\sum_{k=0}^{n-1} S_k f.$$

It is of main interest that how to reconstruct a function from the partial sums of its Walsh-Fourier series. In 1955 Fine proved that for each integrable function we have the almost everywhere convergence of Fejér means $\sigma_n f \to f$. In the talk we give a brief résumé of the recent results with respect to summability of Walsh-Fourier series of one and two dimensional functions. Among others, we talk about the convergence properties of Marczinkiewicz means and its generalizations. The Marcinkiewicz means are defined as

$$t_n f(x) := \frac{1}{n}\sum_{k=0}^{n-1} S_{k,k} f(x).$$

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