

# On the spectral synthesis for the unit circle in $\mathcal{FL}_s^q(\mathbf{R}^2)$

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Let  $\mathcal{FL}_s^q(\mathbf{R}^2)$  denote the set of all tempered distributions  $f \in \mathcal{S}'(\mathbf{R}^2)$  such that the norm  $\|f\|_{\mathcal{FL}_s^q} = (\int_{\mathbf{R}^2} |\mathcal{F}[f](\xi)|(1 + |\xi|^s)^q d\xi)^{\frac{1}{q}}$  is finite, where  $\mathcal{F}[f]$  denotes the Fourier transform of  $f$ . We investigate the spectral synthesis for the unit circle  $S^1 \subset \mathbf{R}^2$  in  $\mathcal{FL}_s^q(\mathbf{R}^2)$ .

This is joint work with Prof. Sato (Yamagata University).