Nuclear Fourier transforms

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joint work with Dorothee D. Haroske and Hans Triebel

We deal with the problem under which conditions for the parameters $s_1, s_2 \in$, $1 \leq p, q_1, q_2 \leq \infty$ the Fourier transform $\mathcal{F}$ is a nuclear mapping from $A^{s_1}_{p,q_1}(\mathbb{R}^n)$ into $A^{s_2}_{p,q_2}(\mathbb{R}^n)$, where $A \in \{B, F\}$ stands for a space of Besov or Triebel-Lizorkin type, and $n \in \mathbb{N}$. We extend the recent paper by H.Triebel where the compactness of $\mathcal{F}$ acting in the same type of spaces was studied.