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Fachgebiet Optimierung  
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Fachgebiet Optimale Steuerung  
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## Forschungsseminar Analysis und Optimierung Sommersemester 2026

Im Rahmen des Forschungsseminars spricht am **Freitag, den 12. Juni 2026**

**Prof. Petr Gurka**

Life Science University of Prague

**Titel:** Quantitative Non-Compactness Properties of the Fourier Transform on Optimal Spaces

**Inhalt:** We establish that the Fourier transform  $\mathcal{F} : L^p(\mathbb{R}^d) \rightarrow L^{p',p}(\mathbb{R}^d)$ , for  $d \in \mathbb{N}$  and  $1 < p < 2$ , is not strictly singular, thereby confirming the optimality of the source and target spaces. A similar result is obtained for Fourier series on  $L^p(\mathbb{T}^n)$ , with sequence Lorentz spaces as the target. These findings complement known results, which state that  $\mathcal{F} : L^p(\mathbb{R}^d) \rightarrow L^{p'}(\mathbb{R}^d)$  is finitely strictly singular and then also strictly singular, and provide further insight into the degrees of non-compactness of  $\mathcal{F}$ .

**Weitere Details zum Seminar:** Der Vortrag findet in Raum HG 3.35 des Zentralcampus Cottbus der BTU statt.