SPARSE TRIGONOMETRIC APPROXIMATION OF PERIODIC FUNCTIONS FROM BESOV CLASSES WITH MIXED SMOOTHNESS

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Our main interest in this talk is to study sparse trigonometric approximation for periodic multivariate functions from Besov classes with mixed smoothness. We use techniques connected with hyperbolic cross approximation. Motivated by recent results on the connection to nonlinear sampling recovery, we obtain order bounds and tractable bounds for the best m-term trigonometric approximation of the mentioned classes.

This is based joint work with Moritz Moeller and Tino Ullrich.

References

[1] M. Moeller, S. Stasyuk, and T. Ullrich, *High-dimensional sparse trigonometric approximation in the uniform norm and consequences for sampling recovery.* arXiv:2407.15965, [math.NA] 22 Jul 2024.

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