Maximal sections of the unit ball of $l_p^n(\mathbb{C})$ for $p > 2$

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Eskenazis, Nayar and Tkocz have shown recently some resilience of Ball's celebrated cube slicing theorem, namely its analogue in l_p^n for large p, see [1]. I will say a few words about the complex analogue, i.e. resilience of the polydisc slicing theorem proven by Oleszkiewicz and Pełczyński in [2]. It turns out that the analogue of Eskenazis', Nayar's and Tkocz's theorem holds for large p, but with additional assumption of low dimension, but it cannot hold for any $p > 2$ and sufficiently large dimension. During the talk I will focus mostly on the second of these results. The talk is based on joint work with Hermann König [3].

REFERENCES

[1] A. Eskenazis, P. Nayar, T. Tkocz, *Resilience of cube slicing in l_p*, preprint 2022, arXiv:2211.01986.

[2] K. Oleszkiewicz, A. Pełczyński, *Polydisc slicing in $\mathbb{C}^n$*, Studia Mathematica, **142**(2000), 281-294.

[3] J. Jakimiuk, H. König, *Maximal sections of the unit ball of $l_p^n(\mathbb{C})$ for $p > 2$*, preprint 2024, arXiv:2402.12552.