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Exact L_2 Marcinkiewicz-Zygmund inequalities

L_2 Marcinkiewicz-Zygmund (MZ) inequalities form a connection between discrete function evaluations and continuous norms and have proven to be an invaluable tool in sampling problems. The existence of good L_2 MZ inequalities in the sense of a low number of points and good constants is an important question of current research. In this talk we show the existence of exact L_2 MZ inequalities with at most quadratic oversampling for compact domains. Further, we also comment on an implementation and demonstrate numerical results.

This is joint work with Lutz Kämmerer, Kateryna Pozharska, Martin Schäfer and Tino Ullrich.