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Zonotopal algebra: approximation theory meets algebra and combinatorics

What do 1) integer points in polyhedra 2) hyperplane arrangements 3) parking functions on graphs 4) multivariate polynomial interpolation 5) kernels of differential operators have in common?

I will discuss recent mathematical developments motivated by the multivariate spline theory that demonstrate surprising connections between these (and some other) seemingly unrelated subjects in algebra, analysis and combinatorics.