



ANALYSIS SEMINAR

WHAT CAN CHICKEN McNUGGETS TELL US ABOUT SYMMETRIC FUNCTIONS, POSITIVE POLYNOMIALS, RANDOM NORMS, AND AF ALGEBRAS?

by

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ABSTRACT

Numerical semigroups are combinatorial objects that lead to deep and subtle questions. With tools from complex, harmonic, and functional analysis, probability theory, algebraic combinatorics, and computer-aided design, we answer virtually all asymptotic questions about factorization lengths in numerical semigroups. Our results yield uncannily accurate predictions, along with unexpected results about symmetric functions, trace polynomials, and the statistical properties of certain AF C^* -algebras.

Work partially supported by NSF Grants DMS-1800123 and DMS-2054002. Joint work (in various combinations) with K. Aguilar, A. Böttcher, L. Bouthat, Á. Chávez, L. Fukshansky, M. Mitkovski, M. Omar, C. O'Neill, J. Volčič and students A. Chhabra, J. Hurley, G. Udell, T. Wesley, and S. Yih.

Thursday, October 3, 2024 at 4:30-5:30 pm

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