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Daniel Litt* (dalitt@stanford.edu). *Motivic Analytic Number Theory*.

There are beautiful and unexpected connections between algebraic topology, number theory, and algebraic geometry, arising from the study of the configuration space of (not necessarily distinct) points on a variety. In particular, there is a relationship between the Dold-Thom theorem, the analytic class number formula, and the "motivic stabilization of symmetric powers" conjecture of Ravi Vakil and Melanie Matchett Wood. I'll discuss several ideas and open conjectures surrounding these connections, and describe the proof of one of these conjectures—a Hodge-theoretic obstruction to the stabilization of symmetric powers—in the case of curves and algebraic surfaces. Everything in the talk will be defined from scratch, and should be quite accessible. (Received January 08, 2013)