

Additive Combinatorics
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Gowers norms in ergodic theory and additive combinatorics

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Abstract

In his proof of Szemerédi's Theorem, Gowers introduced certain norms that have played an important role in additive combinatorics, including in the recent work of Green and Tao on arithmetic progressions in the primes. In our proof of convergence for multiple ergodic averages, Host and I introduced seminorms that are very closely related to the Gowers norms. I will discuss the relations between these norms and seminorms, and the general setting in which they can be defined.