Mathematics > Dynamical Systems

A nilpotent IP polynomial multiple recurrence theorem

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We generalize the IP-polynomial Szemer\'edi theorem due to Bergelson and McCutcheon and the nilpotent Szemer\'edi theorem due to Leibman. Important tools in our proof include a generalization of Leibman's result that polynomial mappings into a nilpotent group form a group and a multiparameter nilpotent Hales-Jewett theorem.

Comments:	28 pages, v2: definition of polynomial and proof of Theorem 2.5 changed, minor corrections
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