1107-37-255 **Vitaly Bergelson** and **Donald Robertson*** (`robertson@math.osu.edu`), Department of Mathematics, 231 West 18th Avenue, Columbus, OH 43210. *Polynomial multiple recurrence over rings of integers.*

It is an open problem to determine those families of polynomials for which the multidimensional polynomial Szemeredi theorem holds. In this talk I will describe joint work with Vitaly Bergelson that makes partial progress on this problem by considering polynomials over rings of integers of algebraic number fields. (Received January 16, 2015)