1003-11-829 **Su-ion Ih*** (`ih@math.uga.edu`), Department of Mathematics, University of Georgia, Athens, GA 30602-7403, and **Matthew Baker** (`mbaker@math.gatech.edu`), School of Mathematics, Georgia Institute of Technology, 686 Cherry Street, Atlanta, GA 30332-0160. *Equidistribution of small subvarieties of an abelian variety.*

The origin of the equidistribution property in this field dates back to E. Ullmo's paper, where he used it to prove the Bogomolov conjecture. The equidistribution of small points on an abelian variety, generalized by L. Szpiro, E. Ullmo, and S. Zhang later, roughly says that the sequence of the average sum of the normalized Dirac measures attached to small points which are "random enough" approximates the normalized Haar measure on the abelian variety. Here "small points" mean points with small values with respect to some measurement (called a height) coming from an arithmetical dynamical system.

Recently, Baker and I generalized this equidistribution property to the case of small subvarieties of an abelian variety, i.e., showed that not only small points, but also small subvarieties have the same property. It should be noted that P. Autissier also recently proved the same result as ours independently. The equidistribution property is a very interesting topic not only in itself, but also from the arithmetic perspective like its applications to Diophantine geometry. In fact, nowadays there are a lot of results related to the equidistribution property in various aspects, e.g., in arithmetical dynamical systems. (Received September 30, 2004)