

1116-VC-1033 **Lluís Antoni Jimenez Rugama*** (ljimene1@hawk.iit.edu), E1, Office 120, 10 W 32 St,
Chicago, IL 6061. *Applications of Adaptive Guaranteed Cubatures.*

In recent years we have developed adaptive quasi-Monte Carlo (qMC) cubature algorithms that meet the error tolerance prescribed by the user. These algorithms have been implemented in MATLAB http://gailgithub.github.io/GAIL_Dev/, and they are guaranteed for integrands whose behavior is not too erratic.

This talk presents several applications of these adaptive qMC algorithms, including option pricing, multivariate normal probability, and Sobol indices. These examples illustrate how our algorithms need little a priori information, and we also discuss how they can work with other efficiency enhancing methods such as control variates. (Received September 16, 2015)