

1024-05-23

Sinai Robins* (srobins@temple.edu), Philadelphia, PA 19128. *Polyhedral theta functions and an extension of solid angles using Polyhedral Gauss sums.*

Using polyhedral theta functions and their asymptotics, we discover extensions of the famous Gram relations for solid angles of convex rational polytopes. The extensions involve functions we call Polyhedral Gauss sums. (Received November 13, 2006)