

Salah Mohammad Memorial COLLOQUIUM SERIES

Almost universal ternary sums of polygonal numbers



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Abstract: In 1796 Gauss showed that every natural number can be written as the sum of three triangular numbers. In 2009, Chan and Oh determined when a weighted sum of triangular numbers (i.e. triangular numbers with coefficients) represents all but finitely many natural numbers. We say such a sum is almost universal. In this talk we will determine when a sum of three generalized m -gonal numbers is almost universal. We will approach this question first from an algebraic, and then from analytic point of view, exploiting the capabilities of each method, and realizing new connections between the machinery.

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