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**Jonathan J Azose** and **Arthur T Benjamin\*** ([benjamin@hmc.edu](mailto:benjamin@hmc.edu)), Math Department, Harvey Mudd College, 301 Platt Blvd, Claremont, CA 91711. *A Tiling Interpretation of  $q$ -Binomial Coefficients.*

We provide a combinatorial interpretation of the  $q$ -binomial coefficients as counting weighted collections of tiled boards. Using this interpretation, we prove a new  $q$ -analogue to Lucas' Theorem and new  $q$ -analogues to identities on the sums of integer squares and cubes. (Received September 24, 2018)