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**Moa Apagodu\*** (mapagodu@vcu.edu), 1015 Floyd Av, Richmond, VA 23238, and **Doron Zeilberger**. *Using the “Freshman’s Dream” to Prove Combinatorial Congruences.*

Recently, William Y.C. Chen, Qing-Hu Hou, and Doron Zeilberger developed an algorithm for finding and proving congruence identities (modulo primes) of indefinite sums of many combinatorial sequences, namely those (like the Catalan and Motzkin sequences) that are expressible in terms of constant terms of powers of Laurent polynomials. We first give a leisurely exposition of their approach, and then extend it in two directions. The Laurent polynomials may be of several variables, and instead of single sums we have multiple sums. In fact we even combine these two generalizations. We conclude with some super-challenges. (Received September 08, 2016)