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**Maura Twillman\*** (mtwill12@students.towson.edu), MD , and **Diana Cheng** (dcheng@towson.edu). *Linear momentum in pairs figure skating: Mathematics behind the art of lifts.*

Lifts are an aesthetically pleasing and athletic part of a pairs skating program, and certain aspects of these lifts can be described mathematically. Pairs skaters' combined velocity in the lift is a function of their individual masses & initial velocities. We report on undergraduate mathematics education research analyzing how secondary students reasoned quantitatively about conservation of linear momentum in the context of pairs lifts. (Received August 11, 2016)