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The Role of Friction in the Segregation of Particles in a Chute Flow FEDERICO HERNANDEZ-SANCHEZ, ROBERTO ZENIT, Universidad Nacional Autonoma de Mexico — When a granular media, compound of particles with different properties, flows de-mixing of the constituent components may occur. This phenomenon, known as segregation, has been observed in particles with different sizes (the Brazil nut effect). In spite of being a well studied process, there is not a general understanding of the mechanisms that dominate this process. It is our interest to study the conditions that determine particle segregation in avalanches. Using a two-dimensional, discrete-element simulation, we study a bidisperse flow of particles over an inclined plane with periodic boundaries. We vary the roughness of the wall by attaching fixed particles on it. A wide range of parameters were varied (slope, number of particles, size ratio, density ratio). Both ordinary and reverse segregation patterns were observed. In this talk some preliminary results and their interpretation will be presented.

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