2015 CAP Congress / Congrès de l'ACP 2015



Contribution ID: 804

Type: Oral (Non-Student) / orale (non-étudiant)

The coefficient of restitution of inflatable balls

Monday 15 June 2015 14:30 (15 minutes)

The bouncing of sports balls is often characterized in terms of the coefficient of restitution, which represents the ratio of the after-impact velocity to the before-impact velocity. While the behaviour of the coefficient of restitution as a function of the internal pressure of the ball has been studied, no theoretical justification has been given for any parametric curve fitted to the data. In this talk, we present a mechanistic model of the ball, leading to a simple two-parameter fit. The model will be compared to several commonly available sports balls.

Authors: Dr GEORGALLAS, Alex (Dalhousie University); Mr LANDRY, Gaëtan (Dalhousie University)

Presenter: Mr LANDRY, Gaëtan (Dalhousie University)

Session Classification: M1-7 Advances in Nuclear Physics and Particle Physics Theory (DNP-PPD-DTP) / Progrès en physique nucléaire et en physique des particules théoriques (DPN-PPD-DPT)

Track Classification: Industrial and Applied Physics / Physique industrielle et appliquée (DIAP-DPIA)