

Abstract Submitted
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Coefficient of restitution for wet impacts FRANK GOLLWITZER, KAI HUANG, Experimentalphysik V, Universitaet Bayreuth, 95440 Bayreuth, Germany, CHRISTOF A. KRÜLLE, Maschinenbau und Mechatronik, Hochschule Karlsruhe - Technik und Wirtschaft, D-76133 Karlsruhe, Germany, INGO REHBERG, Experimentalphysik V, Universitaet Bayreuth, 95440 Bayreuth, Germany — As the experience of playing football in the rain may tell, wetting could influence the coefficient of restitution (COR) dramatically. This is due to the extra energy dissipation from the wetting liquid, for instance viscous damping. To unveil the underlying mechanisms accounting for the influence, we study experimentally the COR by tracing free falling particles bouncing on a wet surface. The dependance of the COR on the impact velocity, various particle and liquid properties will be presented and discussed in terms of dimensionless Stokes' and capillary numbers.

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