

**ACOUSTICS2008/1638**  
**Mechanisms of acoustic absorption in weakly wet granular media**

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Multiply scattered elastic waves provide a sensitive probe for studying the viscoelastic properties of a granular medium at the length scale of grains. Based on a diffusion model, we can infer the structural and viscoelastic properties of the material from the fitting parameters such as the diffusion constant  $D$  and quality factor  $Q$ . In this work, we characterize quantitatively the acoustic dissipation occurring at the grain contacts by measuring the  $Q$  factor in different granular samples. We focus a particular attention on the effects of on the internal loss by adding a small amount of liquid in the granular medium ( $\sim 0.05\%$ ). Using the Hertz-Mindlin contact theory we have identified two different mechanisms of acoustic absorption: frictional and viscous dissipations.