

Bengt Lundberg: Selected Publications

Elastic and viscoelastic impact

Ödeen S. and Lundberg B. Prediction of impact force by impulse response method. *Int. J. Impact Engng* **11**, 149-158 (1991)

M.-N. Bussac, P. Collet, G. Gary, B. Lundberg and S. Mousavi. Viscoelastic impact between a cylindrical striker and a long cylindrical bar. *Int. J. Impact Engng* **35**, 226-239 (2007)

Transmission and reflection of waves

Andersson L.-E. and Lundberg B. Some fundamental transmission properties of impedance transitions. *Wave Motion* **6**, 389-406 (1984)

Wu C. M. and Lundberg B. Reflection and transmission of the energy of harmonic elastic waves in a bent bar. *Journal of Sound and Vibration* **190**(4), 645-659 (1996)

Nygren T., Andersson L.-E. and Lundberg B. Optimization of elastic junctions with regard to transmission of wave energy. *Wave Motion* **29**, 223-244 (1999)

Measurement and analysis of waves

Lundberg B. and Henchoz A. Analysis of elastic waves from two-point strain measurement. *Experimental Mechanics* **17**, 213-218 (1977)

Lundberg B., Carlsson J. and Sundin K. G. Analysis of elastic waves in non-uniform rods from two-point strain measurement. *Journal of Sound and Vibration* **137**, 483-493 (1990)

Carlsson J., Sundin K. G. and Lundberg B. A method for determination of in-hole dynamic force-penetration data from two-point strain measurement on a percussive drill rod. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* **27**, 553-558 (1990)

Identification of viscoelastic materials

Lundberg B. and Blanc R. H. Determination of mechanical material properties from the two-point response of an impacted linearly viscoelastic rod specimen. *Journal of Sound and Vibration* **126**, 97- 108 (1988)

Ödeen S. and Lundberg B. Determination of complex modulus from measured end-point accelerations of an impacted specimen. *Journal of Sound and Vibration* **165**, 1-8 (1993).

Hillström L., Mossberg M. and Lundberg B. Identification of complex modulus from measured strains on an impact-loaded bar using least squares. *Journal of Sound and Vibration* **230**(3), 689-707 (2000)

Split Hopkinson bar testing

Lundberg B. A split Hopkinson bar study of energy absorption in dynamic rock fragmentation. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* **13**, 187-197 (1976)

S. Mousavi, U. Valdek, K. Welch and B. Lundberg. Non-equilibrium Split Hopkinson pressure bar procedure for non-parametric identification of complex modulus. *Int. J. Impact Engng* **31**, 1133-1151 (2005)

D. Mohr, G. Gary and B. Lundberg. Evaluation of stress-strain curve estimates in dynamic experiments. *Int. J. Impact Engng* **37**, 161-169 (2010)

Mechanics of percussive drilling

Lundberg B. Energy transfer in percussive rock destruction - I Comparison of percussive methods. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* **10**, 381-399 (1973)

Beccu R. and Lundberg B. Transmission and dissipation of stress wave energy at a percussive drill rod joint. *Int. J. Impact Engng* **6**, 157-173 (1987)

Karlsson L. G., Lundberg B. and Sundin K. G. Experimental study of a percussive process for rock fragmentation. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* **26**, 45-50 (1989)

B. Lundberg and M. Okrouhlik. Efficiency of a percussive rock drilling process with consideration of wave energy radiation into the rock. *Int. J. Impact Engng* **32**, 1573-1583 (2006)

B. Lundberg and C. Collet. Optimal wave shape with respect to efficiency in percussive drilling with detachable drill bit. *Int. J. Impact Engng* **86**, 179-187 (2015)

Simulation of percussive drilling

Lundberg B. Microcomputer simulation of stress wave energy transfer to rock in percussive drilling. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* **19**, 229-239 (1982)

Lundberg B. Microcomputer simulation of percussive drilling. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* **22**, 237-249 (1985)

Lundberg B. Computer Modelling and Simulation of Percussive Drilling of Rock. In *Comprehensive Rock Engineering* **4**, Chapter 6 (Edited by J. A. Hudson). Pergamon Press (1993)

Projectiles and armor

Lundberg P., Rehnström R. and Lundberg B. Impact of metallic projectiles on ceramic targets: transition between interface defeat and penetration. *Int. J. Impact Engng* **24**, 259-275 (2000)

Westerling L., Lundberg P. and Lundberg B. Tungsten long rod penetration into confined cylinders of boron carbide at and above ordnance velocities. *Int. J. Impact Engng* **25**, 703-714 (2001)

P. Lundberg and B. Lundberg. Transition between interface defeat and penetration for tungsten projectiles and four silicon carbide materials. *Int. J. Impact Engng* **31**, 781-792 (2005))

E. Lidén, B. Johansson and B. Lundberg. Effect of thin oblique moving plates on long rod projectiles: a reverse impact study. *Int. J. Impact Engng.* **32**, 1696-1720 (2006)

Miscellaneous

Ekevad M. and Lundberg B. Simulation of “smart” pole vaulting. *J. Biomechanics* **28**, 1079-1090 (1995)

P. Naucrér, B. Lundberg and T. Söderström. A mechanical wave diode: Using feedforward control for one-way transmission of elastic extensional waves. *IEEE Transactions on Control Systems Technology* **15**(3), 715-724 (2007)

A. Jansson U. Valdek and B. Lundberg. Generation of prescribed strain waves in an elastic bar by use of piezoelectric actuators driven by a linear power amplifier. *Journal of Sound and Vibration* **306**, 751-765 (2007)

L. Westerling and B. Lundberg. Stresses in a long cylindrical conductor moving axially through a pair of electrode plates under stationary conditions. *Journal of Applied Mechanics*. doi:10.1115/1.4007221 (2012)