

**An Inverse Boundary Value Problem for a Nonlinear Elastic Wave Equation**

**Jian ZHAI**

**School of Mathematical Sciences, Fudan University, P. R. China**

**Email: [jianzhai@fudan.edu.cn](mailto:jianzhai@fudan.edu.cn)**

We consider an inverse boundary value problem for a nonlinear elastic wave equation. We show that all the parameters appearing in the equation can be uniquely determined from boundary measurements under certain geometric assumptions. The proof is based on second order linearization and Gaussian beams.