# Decay estimates for the solutions of the system of crystal elasticity for tetragonal crystals

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We study algebraic and geometric properties of the slowness surface of the system of crystal elasticity for tetragonal crystals in the nearly cubic case. A first group of results refers to the location and nature of the singular points of the surfaces under consideration, whereas other results relate to curvature properties of these surfaces. We will also mention results about the long time behaviour of the solutions of the system. These results are based on estimates for Fourier transforms of densities which live on surfaces with isolated singular points, respectively for situations where the surface may have poins at which the Gaussian curvature vanishes, but the mean curvature does not.

We also study the general form of quartic and sextic surfaces of "slowness type" which are quadratic in their variables.

The talk is based on joint work with C. Melotti.