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**Dmitry A Altshuller\*** ([altshuller@ieee.org](mailto:altshuller@ieee.org)), Crane Aerospace & Electronics, 3000 Winona Ave, Burbank, CA 91510. *Perturbation Solution of the Kuznetsov Equation.*

Kuznetsov equation describes, in the most general form, a nonlinear process in acoustics [1]. The highest-order term is a mixed third-order derivative of the velocity potential.

The equation can be decomposed in a linear and a nonlinear part. The latter is treated as a regular perturbation. A recursive formula is obtained for the correction terms, which relies on the Green's function of the linear part. This Green's function is computed using the three-dimensional Fourier transform.

[1]Enflo, B.O. and Hedberg, C.M. Theory of Nonlinear Acoustics in Fluids. Kluwer, 2002., p.23. (Received March 10, 2008)