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Nedyu I Popivanov and **Barbara Lee Keyfitz***, 222 College Street, Toronto, Ontario M5T3J1, Canada. *Self-Similar Multidimensional Conservation Laws: An Excursion into Linear Equations.*

The approach to multidimensional conservation laws via self-similar (quasi-steady) solutions typically leads to equations and systems of equations that change type. The reduced equations are hyperbolic in the far field but elliptic or of mixed type near the origin. Change of type occurs either across a transonic shock or at a sonic line, where the equations are of degenerate type. Often the sonic line appears as a free boundary in the formulation of the problem. In this talk, we look at some problems arising from the study of linear Tricomi equations in three dimensions. The mixed-type systems are typically ill-posed. One approach, regularizing by a parameterized family of systems, leads to some partial answers. (Received September 02, 2008)