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“Transonic problems in multidimensional conservation laws”

Abstract:

In many applications of engineering and physics, the model problems obey the conservation laws and behave in a self-similar manner. A distinctive feature of multidimensional conservation laws in self-similar coordinates is that they change their type, meaning that they are hyperbolic (supersonic) far from the origin, and mixed (subsonic) near the origin. Hence the problem becomes transonic.

In this talk, we discuss existence and numerical results of a simplified model system of transonic problems for certain configurations.