

Christophe Berthon - Artificial numerical viscosity to get discrete entropy inequalities

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When considering the numerical approximation of weak solutions of systems of conservation laws, the satisfaction of discrete entropy inequalities is, in general, very difficult to be obtained. In the present talk, we present a suitable control of the artificial numerical viscosity in order to recover the expected discrete entropy inequalities. Moreover, the artificial viscosity control turns out to be very easy and it can be applied to any first-order finite volume scheme in a very convenient way.