

1089-37-206

Godofredo Iommi, Thomas Jordan and **Mike Todd*** (mjt20@st-andrews.ac.uk),
Mathematics Institute, North Haugh, St Andrews, Fife KY16 9SS, United Kingdom.

Thermodynamics of flows with cusps.

I'll consider the thermodynamic formalism for semi-flows $\Phi = (\varphi_t)_{t \geq 0}$ which can be viewed as a discrete dynamical system $f : X \rightarrow X$ with a roof function $\tau : X \rightarrow [0, \infty]$. This means that $\varphi_t(x, s) = (x, s + t)$ whenever $s + t \in [0, \tau(x))$, $\varphi_t(x, s) = (f(x), 0)$ when $s + t = \tau(x)$, and so on. The standard thermodynamic theory deals with the case where the roof function is uniformly bounded away from zero. I'll discuss our study of pressure and equilibrium states where the infimum of the roof function is 0: the cusp case. I'll give examples where the cusp improves the thermodynamics and where it does not. (Received February 15, 2013)