1056-83-1910 **Qian Wang*** (`qwang@math.sunysb.edu`). *Control of local null geometry by rough CMC initial data.*

I will provide an L^∞ type estimate for deformation tensor within certain timespan in terms of 0-order Bel-Robinson energy and volume radius of the initial slice in CMC spacetime, which gives us a lower bound of null radius of injectivity in terms of initial L^2 curvature and volume radius, and proves that harmonic radius is locally stable in certain timespan depending on the initial L^2 curvature. This result does not rely on any assumption on second fundamental form and lapse function. (Received September 22, 2009)