Abstract

In this talk we discuss the Dirichlet problem of translating mean curvature equations in Riemannian manifolds with dimension n. Imitating an idea of Miranda-Giusti, we define a new conformal area functional and a generalized solution to this Dirichlet problem. The existence of generalized solutions to this problem on bounded Lipschitz domains is established. If the domain is mean convex and bounded with C^2 boundary, Its closure does not contain any closed minimal hyper surface except a singular set with its Haudorff dimension at most n-7 and the boundary data is continuous, the generalized solution is the desirable classical smooth solution. The non-minimal condition could not be removed in general.