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## **Surface reconstruction via mean curvature flow**

We study properties of mean curvature flow in subriemannian setting in view of its applications to image reconstruction problem. In particular we exploit a Citti-Sarti model of the architecture of the visual cortex, which describes the completion process as sub-Riemannian mean curvature flow. In the first part of the talk, we provide uniqueness of vanishing viscosity solutions of the problem, which was known only far from characteristic points, or under special symmetry condition. We face the problem via vanishing viscosity approach, and search solutions as limit of solutions of approximating flow, well defined also at characteristic points, and carefully estimate the rate of convergence of the approximating solutions. In the second part, we prove the convergence a new diffusion driven motion, which is modification of the Citti and Sarti completion algorithm, and can be applied both in Euclidean and sub-Riemannian setting.