1096-35-208 **Xiangwen Zhang*** (xzhang@math.columbia.edu), Department of Mathematics, Columbia University, MC 4421, 2990 Broadway, New York, NY 10027. *A proof of the Alexanderov's uniqueness theorem for convex surfaces in* $\mathbb{R}^3$.

A classical uniqueness theorem of Alexandrov says that: if M and M' are two closed strictly convex C^2 surface in $\mathbb{R}^3$ and satisfy $f(\kappa_1, \kappa_2) = f(\kappa_1', \kappa_2')$, at points of M, M' with parallel normals, for some C^1 function $f(y_1, y_2)$ with $\frac{\partial f}{\partial y_1}\frac{\partial f}{\partial y_2} > 0$, then M is equal to M' up to a translation. We will talk about a new PDE proof for this thorem by using the maximal principle. More generally, we prove a version of this theorem with the minimal regularity assumption: the spherical hessians of the supporting functions for the corresponding convex bodies as Radon measures are nonsingular. This is a joint work with P. Guan and Z. Wang. (Received August 19, 2013)