

1106-VM-2678 **Dat P Nguyen*** (datnguyenp@gmail.com). *A simple proof of Bernstein theorem for de Sitter spaces.*

The classical Bernstein problem in differential geometry asks whether every complete hypersurface in Euclidean spaces that extremizes volume is a hyperplane. The answer is positive for dimensions less than 8 and negative for higher dimensions. However, in the setting of spacetime geometry, the result is drastically different. The Bernstein theorem for Minkowski spacetimes was proven in all dimensions by Calabi (1970) and Cheng-Yau (1976). Later, Nishikawa (1984) extended the result to all locally symmetric Lorentzian manifolds that satisfy some energy conditions. In this talk, we give a simple proof of Bernstein theorem for de Sitter spaces, which are the Lorentzian analogues of the round n -spheres. This work was done under the supervision of Professor Claude LeBrun. (Received September 16, 2014)