1099-53-376 **Jie Qing*** (qing@ucsc.edu), **Changping Wang** (cpwang@fjnu.edu.cn) and **Jingyang Zhong** (jzhong2@ucsc.edu). *Conformal geometry of surfaces in 3-sphere via Minkowski spacetime.* Preliminary report.

This is a preliminary report for my joint work with Changping Wang and Jingyang Zhong. We are interested in establishing a fundamental theorem for surfaces in conformal 3-sphere and conformal 3-manifolds in general. To do so we regard 3-sphere is the projectivized positive light cone in Minkowski space-time of 5 dimension and, in the same spirit, as the conformal infinity of hyperbolic 4-space. We construct associated surfaces in Minkowski space-time as well as in hyperbolic 4-space and apply fundamental theorem for surfaces in (pseudo)-Riemannian geometry. We are looking to extend the use of ambient spaces of Fefferman and Graham to study the conformal geometry of submanifolds. (Received February 11, 2014)