

1118-53-47

Po-Ning Chen* (pnchen@math.columbia.edu), Room 505, MC 4404 2990 Broadway, New York, NY 10027. *Quasi-local energy for spacetimes with a cosmological constant.*

In this talk, we discuss the question of defining quasi-local energy and for surfaces in spacetimes with a cosmology constant. We follow the ideas and techniques developed in studying the Wang-Yau quasi-local energy. For spacetimes with a cosmological constant, we use the de Sitter or Anti de Sitter space with the corresponding cosmology constant as the reference space to define the quasi-local energy. We will discuss the properties of the newly defined quasi-local energy and show that many of the results about the Wang-Yau quasi-local energy can be generalized to the new setting. The talk is based on joint work with Mu-Tao Wang and Shing-Tung Yau. (Received January 17, 2016)