1116-35-1739 **Ru-Yu Lai*** (rylai@umn.edu), 127 Vincent Hall, 206 Church St. SE, Minneapolis, MN 55455.

Increasing stability in inverse problems.

The problem of recovering the conductivity from boundary measurements has been studied since the 1980s. It is well known that a logarithmic stability estimate holds and is optimal. However, the logarithmic stability makes it difficult to design reliable reconstruction algorithms in practice since small errors in the data of the inverse problem result in large error in numerical reconstruction of physical properties of the medium. It has been observed numerically that the stability improves if one increases the frequency in some cases. The main purpose of this talk is to discuss several results which rigorously demonstrate the increasing stability behavior in different settings. (Received September 21, 2015)