

# **A Comparison of Recent Kalman Filtering Algorithms for Speech Enhancement**

ECE Scholarly Paper  
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Date: April 28<sup>th</sup>, 2009  
Time: 2 pm  
Location: Engineering Building  
Room #: 3202

***Abstract-*** Since its discovery in the 1960s, the Kalman filter has been used in a number of applications such as economics, radar tracking, satellite navigation systems, and weather forecasting. This presentation concentrates on its applications to speech processing. The main objectives of speech enhancement are to either improve on the perceptual aspects of speech (quality) or to decrease the amount of noise to improve the speech recognition rate. This presentation gives an overview of the equations used for the Kalman filter, discusses recent algorithms that have been developed, using the Kalman filter or alterations on the Kalman filter, to solve speech enhancement problems, and compares and gives conclusion about these recent developments.