

Preface

This book describes the research and development of a fluid level measurement system for dynamic environments. The measurement system is based on a single ultrasonic sensor. A Support Vector Machines (SVM)-based signal characterization and processing system has been developed to compensate for the effects of slosh and temperature variation in fluid level measurement systems used in dynamic environments including automotive applications. It has been demonstrated that a simple ν -SVM model with Radial Basis Function (RBF) Kernel with the inclusion of a Moving Median filter could be used to achieve the high levels of accuracy required for fluid level measurement in dynamic environments.

Ultrasonic Fluid Quantity Measurement in Dynamic
Vehicular Applications

A Support Vector Machine Approach

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