

**DEVELOP AND DESIGN OF AN ULTRASONIC SYSTEM TO  
HELP BLIND PEOPLE NAVIGATE IN CLOSED SPACES**

**A THESIS SUBMITTED TO THE  
GRADUATE SCHOOL OF APPLIED SCIENCES  
OF  
NEAR EAST UNIVERSITY**

**By  
ALI MUSADAQ SAHANSHAL**

**In Partial Fulfillment Of The Requirements for The  
Degree of Master of Science  
In  
Biomedical Engineering**

**NICOSIA 2013**