

Physical inactivity is an important contributor to non-communicable diseases in countries of high income, and increasingly so in those of low and middle income. Physical inactivity is the leading cause of many diseases. It has been estimated that as many as 250,000 deaths per year in the United States, approximately 12% of the total, are attributable to a lack of regular physical activity. Measuring physical activities and counting steps is an effective method to diagnose some diseases. It can also serve as an effective method to encourage people to increase their physical activity. Pedometers have been invented as a convenient way of counting steps. However most of them lack the functionality of differentiating activities. Pressure sensor pads can measure steps and gait, but as the pad has a limited size, it can not meet the need of anytime and anywhere usage. In this study, we made the Sensor Socks for measuring physical activities and counting steps. It is unobtrusive and convenient for everyday usage. Our experimental results show that the system has a high accuracy of the classification of physical activities and counting steps in a home or community environment.