

# COMPUTER VISION BASED SRI LANKAN SIGN LANGUAGE RECOGNITION

**S.C. Wickramasuriya**

Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka

This research thesis addresses the problem of automatic recognition of, and eventually translation of Sri Lankan Sign Language (SLSL). To accomplish the goals, several areas of basic research are uniquely integrated into this research. Hand shape recognition, movement tracking, Keypoint extraction and matching were integrated to propose a successful procedure. Since this is a novel research area this thesis provides a good foundation for future researches. This research facilitates the communication between hearing impaired population and bridge the gap in access to next generation Human Computer Interface. While voice recognition is playing important character in HCI, the need for more effective, reliable and inexpensive HCI becomes more important than ever.

According to WHO, over 5% of world population, 360 million people has disabling hearing loss. Approximately one third of people over 65 years are affected by hearing disability. According to extrapolated statistics over 200,000 people with hearing impair was estimated in Sri Lanka. This research attempts in convincing that the deaf person is also a part of the society and improving their computer interaction.