

UNIVERSITY OF SOUTH FLORIDA

Defense of a Doctoral Dissertation

Automated Wound Segmentation and Dimension Measurement Using Depth Camera

by

Chih-Yun Pai

For the Ph.D degree in Computer Science and Engineering

Accurate pressure ulcer (PrU) measurement is critical in assessing the effectiveness of PrU treatment. The traditional process is manual, subjective, and requires frequent contact with the wound. Manual measurement relies on human observation which makes the measurement inconsistent, and the frequent contact with the wound increases risk of contamination or infection. The purpose of this research is to develop an automatic Pressure Ulcer Monitoring System (PrUMS) using a depth camera to provide automated length and width measurements from PrUMS and the manual measurement was statistically different to the manual measurement due to limitations of the