

# Thesis Defense

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## DEVELOPMENT OF A WOUND ASSESSMENT SYSTEM FOR QUANTITATIVE CHRONIC WOUND MONITORING

### Abstract

Wound care technology is rapidly advancing, yet the treatment of wounds often remains as much art as science. Much of the data currently collected on healing wounds is qualitative—varying by assessor and not easily tracked over time. Developers and clinical users of both cutting-edge and traditional wound care treatments and protocols need a quantitative way of measuring healing progress. Such measurements are especially important in the case of chronic wounds, which can last from several weeks to years and can result in adverse clinical outcomes.

The purpose of this thesis research was to evaluate several methods for quantitative wound assessment—wound volume, wound area, and wound coloration. By comparing various assessment parameters for the same patient population, conclusions can be drawn about which information is most useful to the clinical community and which information can be collected in a reasonable amount of time in the busy health care environment.

The patient population investigated during this study were people experiencing chronic foot or lower leg ulcers. In general, such patients also have neuropathy and diabetes, and may have significant foot deformities. The study patients could be tracked continuously over a period of months, and the results from this study are believed to be relevant to other types of chronic wounds.

**Time & Venue:** Thursday, May 2, 2002  
10:00 AM  
University of Connecticut, Storrs Campus  
Department of Biomedical Engineering  
260 Glenbrook Road, Bronwell Building  
Conference Room ABB 224

