

The Office of Technology Management

UNIVERSITY OF TEXAS  ARLINGTON

Tech ID: UTA 13-27

Bubble Actuated Padding for use in Prosthetics

INVENTOR: Muthu Wijesundara, PhD.

TECHNOLOGY NEED

Over 1.7 million people suffer from limb loss in the US, and this number increases by 185,000 each year. One method of attaching prosthetic limbs to the user is by a suction socket. But since the volume of the residual limb changes over time, even during the day, the socket begins to cause discomfort and pain. Some techniques to overcome these drawbacks involve the use of foam or gel liners, lotion on skin before donning the socket, or cotton/nylon socks. None of these methods are able to prevent the ulcers and blisters that form.

INVENTION DESCRIPTION/SOLUTION

Researchers at UTA have developed a bubble actuated padding system that uses sensors to manage pressure and shape of the surface that would interact with the residual limb. The system works automatically and while in use. The dynamic surface is made up of a series of fluid filled bubbles whose pressure is individually monitored and controlled. The technology can also be used in hospital beds and wheel chairs to prevent pressure sores.

APPLICATIONS

- Prosthetics and Orthotics
- Hospital, Elderly Care Industry
- Medical Device Industry

KEY BENEFITS

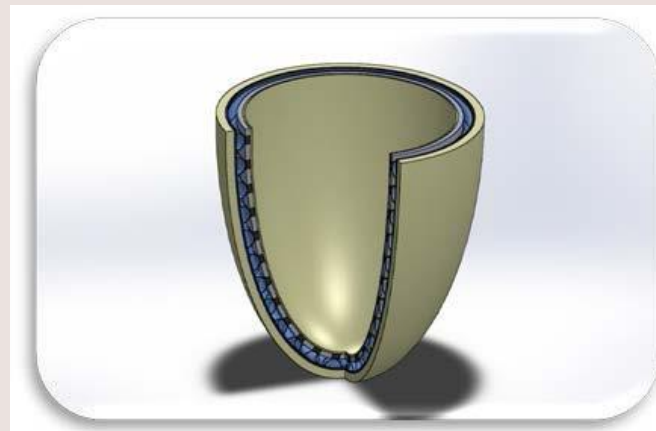
- Active/Responsive prosthetic socket liner system
- Simpler fit decreases time spent on socket fabrication
- Prevents ulcer and blister formation on residual limb

STAGE OF DEVELOPMENT

- Prototyped and Tested

INTELLECTUAL PROPERTY STATUS

- US patent Application [US20160331556A1](#)



More about the Inventor:
[Muthu Wijesundara, PhD.](#)

Contact information

For licensing, please contact

Sharon Ngwenya, Ph.D.

(Licensing Associate)

sngwenya@uta.edu

otm@uta.edu

P: 817.272.1130

Our mailing Address:

The Office of Technology
Management

701 S Nedderman drive,
Suite 350, Arlington, TX
76019

Connect with us:

