



NovaUCD

Technology Transfer Opportunity

Wearable Posture Sensor

OPPORTUNITY:

Wearable posture sensor.

Description of Technology:

Neck and back pain associated with abnormal postures at VDU workstations is a major cause of work related disability. Existing methods for posture measurement are either too technical or involve deployment of cumbersome sensors at the workstation or on the body.

A truly novel wearable sensor has been developed that accurately measures spinal posture without affecting the user's work performance. It provides ongoing real time feedback via a wireless link with the user's PC. Feedback can be delivered in many forms depending on the wishes and needs of the user. The invention consists of a plastic optical fibre sewn into a vest. The sensor responds to alterations in spinal flexion (bending) and its output is classified for feedback using a single variable threshold model that can be simply calibrated for each user.

Value Proposition:

- Truly wearable and unobtrusive solution
- Accurate real-time feedback to user
- Strong correlation with laboratory based measures of spinal flexion
- Simple to use, no end user technical knowledge required.

Inventors:

Dr Brian Caulfield, UCD School of Physiotherapy and Performance Science, Professor Barry Smyth and Lucy Dunne, UCD School of Computer Science and Informatics.

Market:

- Can be used as part of return to work phase following neck/back injury or used as a preventative/educational ergonomic control intervention
- Neck and back pain account for over half of occupational illness
- Stand-alone solution.

Status:

- Patent application filed
- Currently undergoing long term user evaluation testing
- Validated against laboratory based 'gold standard' motion capture system.

Opportunity Sought:

The technology is available for licensing especially to the manufacturer of ergonomic equipment/clothing.

Contact:

Dr Ciaran O'Beirne, Manager, Technology Transfer, NovaUCD, Belfield Innovation Park, UCD, Belfield, Dublin 4.

t: +353 1 716 3713

e: ciaran.obeirne@ucd.ie

w: www.ucd.ie/nova