



## Technology Transfer Opportunity

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

### Opportunity Sought:

Licensee manufacturer of ergonomics equipment.

### Licensing Contact:

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