



**UNSW**  
SYDNEY



## Smart Fall Detection and Smart Technology for older Australians

**Wearable technology for detecting falls in older people, reduces the likelihood of long lies and the associated physical and mental impacts. This wearable technology can be adapted into smart phones and watches, and forms part of a holistic approach to aged care.**

### Competitive advantage

- Wearable fall detector with 95% accuracy
- Lowest false alarm rate reported in literature
- Lightweight, comfortable and low cost
- Optimised battery life - 4 years with no charging or battery replacement

### Impact

- Approximately one-third of community dwelling residents aged over 65 experience at least one fall a year, with the chance of falling increasing with age
- About half of all elderly persons who fall without being seriously injured are unable to get up
- This leads to further limitation of functional activities and physical outcomes such as muscle damage, dehydration, hypothermia, pneumonia and increased mortality

### Successful outcomes

- Tested in the lab and in real life activities of daily living, with healthy volunteers

### Capabilities and facilities

- Developed prototype devices for trials with older Australians
- Ability to adapt the algorithms for integration with mobile phone technology
- Currently integrating the falls detector into a "smart-home" designed for older Australians

### Our partners

- Vitalcare Pty Ltd

### More Information

Dr Michael Stevens

Graduate School of Biomedical Engineering

T: +61 (0) 2 9385 3912

E: [michael.stevens@unsw.edu.au](mailto:michael.stevens@unsw.edu.au)

UNSW Knowledge Exchange

[knowledge.exchange@unsw.edu.au](mailto:knowledge.exchange@unsw.edu.au)

[www.capabilities.unsw.edu.au](http://www.capabilities.unsw.edu.au)

+61 (2) 9385 5008