

## Accepted Manuscript

Title: Validation of an Accelerometer for Measurement of Activity in Frail Older People

Authors: Nethra Ganesh Chigateri, Ngaire Kerse, Laurian Wheeler, Bruce MacDonald, Jochen Klenk



PII: S0966-6362(18)31438-3  
DOI: <https://doi.org/10.1016/j.gaitpost.2018.08.024>  
Reference: GAIPOS 6480

To appear in: *Gait & Posture*

Received date: 14-2-2018  
Revised date: 30-7-2018  
Accepted date: 20-8-2018

Please cite this article as: Chigateri NG, Kerse N, Wheeler L, MacDonald B, Klenk J, Validation of an Accelerometer for Measurement of Activity in Frail Older People, *Gait and Posture* (2018), <https://doi.org/10.1016/j.gaitpost.2018.08.024>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Validation of an Accelerometer for Measurement of Activity in Frail Older People

Nethra Ganesh Chigateri, Ngaire Kerse, Laurian Wheeler, Bruce MacDonald, Jochen Klenk

## Authors:

Nethra Ganesh Chigateri  
Department of Electrical and Computer Engineering  
Faculty of Engineering  
The University of Auckland  
314-390 Khyber Pass Rd, Newmarket, Auckland 1023  
New Zealand

Dr. Ngaire Kerse  
Department of General Practice and Primary Healthcare  
School of Population Health  
The University of Auckland  
Auckland  
New Zealand

Laurian Wheeler  
Department of General Practice and Primary Healthcare  
School of Population Health  
The University of Auckland  
Auckland  
New Zealand

Dr. Bruce Macdonald  
Department of Electrical and Computer Engineering  
Faculty of Engineering  
The University of Auckland  
314-390 Khyber Pass Rd, Newmarket, Auckland 1023  
New Zealand

Dr. Jochen Klenk  
Institute of Epidemiology and Medical Biometry,  
Ulm University, Ulm  
Germany  
Department of Clinical Gerontology and Rehabilitation  
Robert-Bosch Hospital  
Stuttgart, Germany

## RESEARCH HIGHLIGHTS

- Accelerometer validation for activity & gait detection-frail older people(>75 years)
- Study carried out in Free-living/out-of-clinical lab conditions
- Data is inertial signals from a single waist-worn wearable device
- Method - Comparison between processed accelerometer data and annotated video
- 92.8% and 95.1% of walking episodes detected for unscripted and scripted activities

Download English Version:

<https://daneshyari.com/en/article/10129778>

Download Persian Version:

<https://daneshyari.com/article/10129778>

[Daneshyari.com](https://daneshyari.com)