Overview of Photoplethysmography (PPG) related papers produced by TU/e-SPS' chair on Ambulatory Monitoring

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Abstract

An inverse chronological list of all Photoplethysmography (PPG) related papers produced by TU/e-SPS' chair on Ambulatory Monitoring spanning the period 2020–2010 is given. The topics are mainly on sleep monitoring, atrial fibrilation detection, epilepsy detection, blood pressure measurement, cardiopulmonary resuscitation (CPR), and PPG artefact reduction.

1   Introduction

Most, if not all, mentioned papers below are available at:
https://www.sps.tue.nl/rmaarts/

In biomedical engineering Photoplethysmography (PPG) is an important topic. It is a simple and low-cost optical technique that can be used to detect blood volume changes in the microvascular bed of tissue. PPG is ubiquitous in clinical setting, but fast growing outside the clinic where it used by athletes to measure heart rate, since the PPG-sensor is build into smart watches. Further it is in use for sleep monitoring [6, 10, 18, 22, 23], atrial fibrilation detection [2, 1, 3, 4, 8, 9, 11, 12, 14, 15, 20, 21, 24, 28], epilepsy detection [31], blood pressure measurement [7, 13, 17, 26, 27], and cardiopulmonary resuscitation (CPR) [29, 32, 33, 34, 36, 37]. PPG signals are sensitive to movement artefacts. Algorithms to reduce those artefacts are discussed in [16, 25, 39, 40, 41, 42, 43, 44], We present the following inverse chronological list of all Photoplethysmography (PPG) related papers produced by TU/e-SPS' chair on Ambulatory Monitoring spanning the period 2020–2010.

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