

A wearable fall-detection system based on Body Area Networks for smart cities

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Abstract

This template helps you to create a properly formatted L^AT_EX manuscript.

Keywords: `elsarticle.cls`, L^AT_EX, Elsevier, template

2010 MSC: 00-01, 99-00

1. Introduction

Installation. If the document class *elsarticle* is not available on your computer, you can download and install the system package *texlive-publishers* (Linux) or install the L^AT_EX package *elsarticle* using the package manager of your T_EX
5 installation, which is typically T_EX Live or MikT_EX.

Usage. Once the package is properly installed, you can use the document class *elsarticle* to create a manuscript. Please make sure that your manuscript follows the guidelines in the Guide for Authors of the relevant journal. It is not necessary to typeset your manuscript in exactly the same way as an article, unless
10 you are submitting to a camera-ready copy (CRC) journal.

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Functionality. The Elsevier article class is based on the standard article class and supports almost all of the functionality of that class. In addition, it features commands and options to format the

- document style
- 15 • baselineskip
- front matter
- keywords and MSC codes
- theorems, definitions and proofs
- lables of enumerations
- 20 • citation style and labeling.

2. Related Work

The author names and affiliations could be formatted in two ways:

- (1) Group the authors per affiliation.
- (2) Use footnotes to indicate the affiliations.

25 See the front matter of this document for examples. You are recommended to conform your choice to the journal you are submitting to.

3. Background

4. Fall-detection system prototype

4.1. Architecture

30 4.2. Sensor fusion

ECG

4.3. Generation of test-events

Lorena's part

4.4. *Detected problems*

35 **5. Example application of STAMP as hazard analysis method**

5.1. *Introducing STAMP*

5.2. *STAMP - Hazard analysis*

6. Conclusion & Future work

7. Bibliography styles

40 There are various bibliography styles available. You can select the style of your choice in the preamble of this document. These styles are Elsevier styles based on standard styles like Harvard and Vancouver. Please use BibTeX to generate your bibliography and include DOIs whenever available.

Here are two sample references: [1, 2].

45 **References**

[1] R. Feynman, F. Vernon Jr., The theory of a general quantum system interacting with a linear dissipative system, *Annals of Physics* 24 (1963) 118–173. doi:10.1016/0003-4916(63)90068-X.

[2] P. Dirac, The lorentz transformation and absolute time, *Physica* 19 (1–12) (1953) 888–896. doi:10.1016/S0031-8914(53)80099-6.

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