

Title (en)

CARDIOVASCULAR SIGNAL ACQUISITION, FUSION, AND NOISE MITIGATION

Title (de)

ERFASSUNG, FUSION UND RAUSCHMINDERUNG VON KARDIOVASKULÄREN SIGNALEN

Title (fr)

ACQUISITION, FUSION, ET ATTÉNUATION DE BRUIT DE SIGNAUX CARDIOVASCULAIRES

Publication

**EP 3866683 A4 20221207 (EN)**

Application

**EP 19873432 A 20191014**

Priority

- US 201816163343 A 20181017
- US 2019056160 W 20191014

Abstract (en)

[origin: WO2020081471A1] A device including an array of electrodes generates one or more electrical signals from a user, extracts one or more noise signals, and generates one or more de-noised electrical signals upon processing the electrical signal(s) with the noise signal(s). The array of electrodes is coupled to a surface of the device, where the device also includes force sensors in mechanical communication with the surface for detecting user weight and other forces. The device can be configured to generate electrical signals from different subportions of the array of electrodes and to extract noise signals from different subportions of the array of electrodes, where the subportion(s) for electrical signal generation may or may not overlap with the subportion(s) of electrodes for noise signal extraction.

IPC 8 full level

**A61B 5/0245** (2006.01); **A61B 5/00** (2006.01); **A61B 5/0537** (2021.01); **A61B 5/268** (2021.01); **A61B 5/28** (2021.01); **A61B 5/305** (2021.01); **A61B 5/308** (2021.01); **A61B 5/346** (2021.01); **G01G 19/44** (2006.01)

CPC (source: EP)

**A61B 5/0537** (2013.01); **A61B 5/268** (2021.01); **A61B 5/28** (2021.01); **A61B 5/305** (2021.01); **A61B 5/308** (2021.01); **A61B 5/346** (2021.01); **A61B 5/6829** (2013.01); **A61B 5/7203** (2013.01); **A61B 5/7221** (2013.01); **A61B 5/7225** (2013.01); **G01G 19/44** (2013.01); **A61B 5/6891** (2013.01); **A61B 2562/0209** (2013.01)

Citation (search report)

- [A] US 2016374618 A1 20161229 - GIOVANGRANDI LAURENT B [US]
- [X] JAE HYUK SHIN ET AL: "Non-constrained monitoring of systolic blood pressure on a weighing scale", PHYSIOLOGICAL MEASUREMENT, INSTITUTE OF PHYSICS PUBLISHING, BRISTOL, GB, vol. 30, no. 7, 1 July 2009 (2009-07-01), pages 679 - 693, XP020161095, ISSN: 0967-3334
- [X] JOAN GOMEZ-CLAPERS ET AL: "Multi-signal bathroom scale to assess long-term trends in cardiovascular parameters", ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY (EMBC), 2013 34TH ANNUAL INTERNATIONAL CONFERENCE OF THE IEEE, IEEE, 28 August 2012 (2012-08-28), pages 550 - 553, XP032462978, ISSN: 1557-170X, DOI: 10.1109/EMBC.2012.6345990
- See references of WO 2020081471A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2020081471 A1 20200423**; CA 3116846 A1 20200423; EP 3866683 A1 20210825; EP 3866683 A4 20221207; JP 2022508819 A 20220119; JP 7265022 B2 20230425

DOCDB simple family (application)

**US 2019056160 W 20191014**; CA 3116846 A 20191014; EP 19873432 A 20191014; JP 2021546193 A 20191014