



DECLARATION OF GORDON MACPHERSON

I, Gordon MacPherson, am over twenty-one (21) years of age. I have never been convicted of a felony, and I am fully competent to make this declaration. I declare the following to be true to the best of my knowledge, information and belief:

1. I am Director Board Governance & IP Operations of The Institute of Electrical and Electronics Engineers, Incorporated (“IEEE”).
2. IEEE is a neutral third party in this dispute.
3. I am not being compensated for this declaration and IEEE is only being reimbursed for the cost of the article I am certifying.
4. Among my responsibilities as Director Board Governance & IP Operations, I act as a custodian of certain records for IEEE.
5. I make this declaration based on my personal knowledge and information contained in the business records of IEEE.
6. As part of its ordinary course of business, IEEE publishes and makes available technical articles and standards. These publications are made available for public download through the IEEE digital library, IEEE Xplore.
7. It is the regular practice of IEEE to publish articles and other writings including article abstracts and make them available to the public through IEEE Xplore. IEEE maintains copies of publications in the ordinary course of its regularly conducted activities.
8. The article below has been attached as Exhibit A to this declaration:

A.	Y. Mendelson, R. J. Duckworth, and G. Comtois, “A Wearable Reflectance Pulse Oximeter for Remote Physiological Monitoring”, 2006 International Conference of the IEEE Engineering in Medicine and Biology Society, August 30, 2006 - September 3, 2006.
----	---

9. I obtained a copy of Exhibit A through IEEE Xplore, where it is maintained in the ordinary course of IEEE’s business. Exhibit A is a true and correct copy of the Exhibit, as it existed on or about April 30, 2021.

10. The article and abstract from IEEE Xplore shows the date of publication. IEEE Xplore populates this information using the metadata associated with the publication.
11. Y. Mendelson, R. J. Duckworth, and G. Comtois, "A Wearable Reflectance Pulse Oximeter for Remote Physiological Monitoring" was published in the 2006 International Conference of the IEEE Engineering in Medicine and Biology Society. The 2006 International Conference of the IEEE Engineering in Medicine and Biology Society was held from August 30, 2006 - September 3, 2006. Copies of the conference proceedings were made available no later than the last day of the conference. The article is currently available for public download from the IEEE digital library, IEEE Xplore.
12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

I declare under penalty of perjury that the foregoing statements are true and correct.

Executed on: 5/3/2021

DocuSigned by:
Gordon Macpherson
E768DB210F4E4EF...

EXHIBIT A



All



ADVANCED SEARCH

Conferences > 2006 International Conference...

Back to Results

A Wearable Reflectance Pulse Oximeter for Remote Physiological Monitoring

Publisher: IEEE

Cite This



<< Results

Y. Mendelson ; R. J. Duckworth ; G. Comtois All Authors

52 Paper Citations

35 Patent Citations

1303 Full Text Views



Export to Collabratec

Alerts

Manage Content Alerts

Add to Citation Alerts

More Like This

Development of an Implantable Pulse Oximeter
IEEE Transactions on Biomedical Engineering
Published: 2008

Wearable System for Monitoring of Oxygen Concentration in Breath Based on Optical Sensor
IEEE Sensors Journal
Published: 2015

Show More

Abstract

Document Sections

- I. Introduction
- II. System Architecture
- III. In Vivo Evaluations
- IV. Discussion
- V. Conclusion

Authors

- Figures
- References
- Citations
- Keywords

Downl PDF

Abstract: To save life, casualty care requires that trauma injuries are accurately and expeditiously assessed in the field. This paper describes the initial bench testing of a wire... **View more**

Metadata

Abstract: To save life, casualty care requires that trauma injuries are accurately and expeditiously assessed in the field. This paper describes the initial bench testing of a wireless wearable pulse oximeter developed based on a small forehead mounted sensor. The battery operated device employs a lightweight optical reflectance sensor and incorporates an annular photodetector to reduce power consumption. The system also has short range wireless communication capabilities to transfer arterial oxygen saturation (SpO₂), heart rate (HR), body acceleration, and posture information to a PDA. It has the potential for use in combat casualty care, such as for remote triage, and by first responders, such as firefighters

Published in: 2006 International Conference of the IEEE Engineering in Medicine and Biology Society

Date of Conference: 20 Aug. - 2 Sept. 2006 INSPEC Accession Number: 0220060

Date Added to IEEE Xplore: 15 December 2016 **Publisher:** IEEE

Print ISBN: 1-4244-0032-5

Conference Location: New York, NY, USA

Print ISSN: 1557-170X

PubMed ID: 17946007
Y. Mendelson

Department of Biomedical Engineering, Worcester Polytechnic Institute, Worcester, MA, USA

R. J. Duckworth
Department of Electrical and Computer Engineering, Worcester Polytechnic Institute, Worcester, MA, USA

G. Comtois
Department of Biomedical Engineering, Worcester Polytechnic Institute, Worcester, MA, USA

Contents

I. Introduction

Steady advances in noninvasive physiological sensing, hardware miniaturization, and wireless communication are leading to the development of new wearable technologies that have broad and important implications for civilian and military applications [1]–[2]. For example, the emerging development of compact, low-power, small-size, light-weight, and unobtrusive wearable devices may facilitate remote noninvasive monitoring of vital signs from soldiers during training exercises and combat. Telemetry of physiological information via a short-range wirelessly-linked personal area network can also be useful for firefighters, hazardous material workers, mountain climbers, or emergency first-responders operating in harsh and hazardous environments. The primary goal of this research is to develop a mobile platform would be to keep track of an injured person's vital signs, thus readily allowing the telemetry of physiological information to medical providers, and support emergency responders in making critical and often life saving decisions in order to expedite rescue operations. Having wearable physiological monitoring could offer far-forward medics numerous advantages, including the ability to determine a casualty's condition remotely without exposing the first responders to increased risks, quickly identifying the severity of injuries especially when the injured are greatly dispersed over large geographical terrains and often out-of-site, and continuously tracking the injured condition until they arrive safely at a medical care facility.

Authors

Y. Mendelson
Department of Biomedical Engineering, Worcester Polytechnic Institute, Worcester, MA, USA

R. J. Duckworth
Department of Electrical and Computer Engineering, Worcester Polytechnic Institute, Worcester, MA, USA

G. Comtois

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.