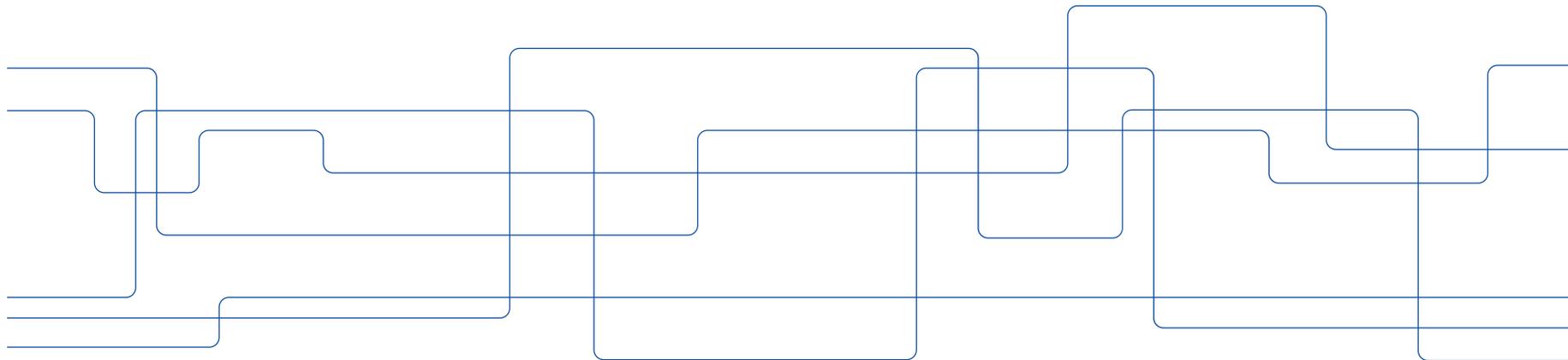




While you're waiting, please answer the questions at Menti

<https://www.menti.com/ivh8ys5xu4>



Source discernment – the root of all information literacy?

Dr. Maria Unger, Magdalena Svanberg & Miritt Zisser

Round table discussion - Creating Knowledge 2021



Background

- Examples of common questions:
 - How do I write a reference to a pdf file?
 - How do you know that it is a scientific article?
How can you see that?
- We assumed that students already knew how to recognize and discern between different kind of sources
- How is a first year student with no previous academic experience really supposed to discern between a scholarly article, a book chapter, a conference article, a white paper, a popular science article, a scientific report and a doctoral thesis?
- The ability to do so is fundamental for the information evaluation process. If you are not sure what you are reading, how can you evaluate the quality of the information?





Source discernment with first-year students

- What kind of publications are these?
- Order them from the most to the least scientific publication.
- Use the links below and be prepared to present your reflections when we meet up in the main room again.

- <https://kth.diva-portal.org/smash/get/diva2:1249266/FULLTEXT01.pdf>
- <https://ieeexplore-ieee-org.focus.lib.kth.se/document/8857261>
- <https://doi-org.focus.lib.kth.se/10.1177/1932296818798347>
- <https://kth.diva-portal.org/smash/get/diva2:1388031/FULLTEXT01.pdf>
- <https://worldwide.espacenet.com/patent/search?q=pn%3DWO2007046099A1>
- https://link-springer-com.focus.lib.kth.se/chapter/10.1007%2F0-387-33015-1_7



Information overload by
Lewislbondard (CC BY-SA 4.0)



Non-Invasive Blood Glucose Sensor: A Feasibility Study

Publisher: IEEE [Cite This](#) [PDF](#)

Authors: Amaro Lopez-Alabar, Maria Regina Banz Alaman, Maria Cristina Dupaz Del, Antonio Martinez-Milana, Vicente Tovar Salgado, All Authors

Abstract: Diabetes is a chronic disease characterized by abnormal blood glucose levels which has short and long term complications. Management of diabetes relies on a regular control of blood glucose levels, commonly measured with invasive sensors, which are painful and cause patient discomfort. Scientific community is trying to develop non-invasive monitoring sensors to measure blood glucose continuously (whereas previous work are focused on single methods and techniques, we present hereby a feasibility study of a non-invasive sensor integrating three different types of techniques: electrochromic, acoustic, speed and near infra-red spectroscopy. Our prototype is subject to different sources of bias, however, the cross-compensation of these three techniques can minimize the low performance of single technique approaches. The results are promising and show the potential of using combined techniques for non-invasive blood glucose measurement.

Published in: 2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)

Date of Conference: 23-27 July 2019 **INSPEC Accession Number:** 19120778

Date Added to IEEE Xplore: 07 October 2019 **DOI:** 10.1109/EMBC47.2019.8817261

Keywords: **Publication:** IEEE

ISBN Information: **Conference Location:** Berlin, Germany, Germany

Published ID: 31940104

SECTION I. INTRODUCTION

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Content List

Abstract

Optical Signatures of Glucose
TensioPa Combo Glucometer Device Description and Discussion
Figures & Tables
Article Metrics

Noninvasive Monitoring of Blood Glucose Using Color-Coded Photoplethysmographic Images of the Illuminated Fingertip Within the Visible and Near-Infrared Range: Opportunities and Questions

Abstract

Noninvasive blood glucose assays have been promised for many years and various molecular spectroscopy-based methods of skin are candidates for achieving this goal. Due to the small spectral signatures of the glucose used for direct physical detection, moreover hidden among a largely variable background, broad spectral intervals are usually required to provide the mandatory analytical selectivity, but no such device has so far reached the accuracy that is required for self-monitoring of blood glucose (SMBG). A recently patented device as described in this journal, based on photoplethysmographic (PPG) images for measuring glucose in a noninvasive indirect manner, is especially evaluated for providing reliable blood glucose concentration predictions.

Keywords

color sensing, noninvasive glucose sensing, photoplethysmographic skin imaging, skin tissue spectroscopy, visible/near-infrared spectroscopy

Diabetes mellitus is a wide spread disease with significantly rising numbers so that health care budgets will see worldwide a greater part being spent for people with diabetes in the future. There is need for an early diagnosis of this disease as the risk exists for the development of macro- and microvascular complications with final appearance of blindness, kidney failure, heart disease, and nerve damage. Tight glycaemic control has been proved for reducing the risk of these complications in people with either type 1 or type 2 diabetes mellitus. One of the recommended practice to achieve this objective is by self-monitoring of blood glucose (SMBG) levels with skin puncture for blood sampling. Self-management plans for glycaemic control usually require a measurement of (finger) capillary blood, as performed by widely used blood glucose test systems. A new report on exemplary devices that were tested for their analytical performance. 2 alternate testing sites

KTH
KTH ROYAL INSTITUTE OF TECHNOLOGY

Integrated microsystems for continuous glucose monitoring, interstitial fluid sampling and digital microfluidics

FEDERICO RIBET

Doctoral Thesis
Stockholm, Sweden, 2020

EXAMENSARBETE INOM MEDICINSK TEKNIK
GRUNDNÄR, 15 HP
STOCKHOLM, SVERIGE 2018

Optisk metod för glukosmätning
En studie för framtidla icke-invasiva blodglukosmätningar

FATEMEH AMIRI
SARA NOUISER

KTH
SÖKANDE FÖR NEM, BILTEKNOLOGI OCH HÅL SA

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WO/2007046099A1

NON-INVASIVE GLUCOSE MONITORING

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Applicants BARKAN ALEXANDER [IL]; BIG GLUCOSE LTD [IL]; KAN-TOR TSVI [IL]; PELED EITAN [IL]; SHURABURA ALEX [IL] +

Inventors BARKAN ALEXANDER [IL]; KAN-TOR TSVI [IL]; PELED EITAN [IL]; SHURABURA ALEX [IL] +

Classifications

IPC A61B5/00;

CPC A61B5/053 (EP); A61B5/14532 (EP); A61B5/726 (EP);

Priorities IL17149105A 2005-10-20

Application IL2006001202W 2006-10-18

Publication WO2007046099A1 2007-04-26

Published as CA2622986A1; EP1937135A1; US2009240440A1; WO2007046099A1

Front page drawing from WO2007046099A1

Non-Invasive Monitoring of Diabetes

Abstract

Non-invasive (NI) monitoring of glucose has attracted tremendous attention in the past two decades, mainly because diabetes is expected to be a major epidemic due to the increased overall obesity of the population. Non-Invasive monitoring of glucose decreases the pain associated with skin lancing used to sample blood for home glucose monitors. Reduction in pain can encourage more frequent testing and lead to tighter control of glucose levels, improve patient care, and delay the onset of diabetes complications and their associated health care costs. Patient-care needs and the commercial significance of NI glucose monitoring has led to a flurry of patenting activity and research on NI glucose detection methods. Several recent reviews discuss the importance of non-invasive glucose testing and report on attempts at its measurement (1, 2, 3, 4).

Keywords

Optical Coherence Tomography Fluorescent Resonance Energy Transfer
Blood Glucose Concentration Phenyl Boronic Acid Meal Tolerance Test

These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves.



★ Bäst
 ♥ ★ Näst bäst
 ✗ Sämst

Non-invasive Blood Glucose Sensor: A Feasibility Study

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SECTION 1. INTRODUCTION

Mer specifikt författarna
 meritering konferensbidrag
 inte lika rigorös review, olik
 ka vetenskaplig nivå beroen
 de på ämnesområde

Non-Invasive Monitoring of Blood Glucose Using Color-Coded Photoplethysmographic Images of the Illuminated Fingertip Within the Visible and Near-Infrared Range: Opportunities and Challenges

Abstract

Keywords

Related Articles

specifik titel, meriterade för
 fattare, vetenskaplig artikel,
 peer-review

Integrated microsystems for non-invasive blood glucose monitoring and digital therapeutics

Doctoral Thesis
 Stockholm, Sweden, 2020

FEDRICO RIBET

Doktorsavhandling, g
 ranskad inför att den
 försvaras, väl genom
 arbetad

Optisk metod för glukosmätning

FATEMeh AMIRI
 SARA NOUSER

Examensarbete, kandidat

WO2007046095A1 NON-INVASIVE GLUCOSE MONITORING

Biographic data

Applicants

Inventors

Classifications

Priorities

Publication

Published as

Input unit 22, processing unit 24, non-invasive measuring device 26, 28, 30, 32, 34, 36, 38

Patent, genomtänkt, ide, ann
 at syfte än vetenskapliga pu
 blikationer

Non-Invasive Monitoring of Diabetes

Abstract

Non-invasive (NI) monitoring of glucose has attracted tremendous attention in the past few

Bok, många referenser,
 hög trovärdighet, inte nya
 resultat, sammanfattar
 befintlig kunskap



Less specific, the merits of, the authors, Conference proceedings not as rigorous review process, Different scientific level depending on subject area

Non-Invasive Blood Glucose Sensor: A Feasibility Study

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Abstract

Diabetes mellitus is a widespread disease with significantly rising numbers so that health care budgets will see worldwide a greater part being spent for people with diabetes in the future. There is need for an early diagnosis of the disease as the risk needs for the development of macro- and microvascular complications with final appearance of blindness, kidney failure, heart disease, and nerve damage. Tight glycemic control has been proved for reducing the risk of these complications in people with other type 1 or type 2 diabetes mellitus. One of the recommended practices to achieve this objective is by self-monitoring of blood glucose (SMBG) levels with skin puncture for blood sampling. Self-management plans for glycemic control usually require a measurement of (finger) capillary blood, as performed by widely used blood glucose test systems. A new report on exemplary devices that were tested for their analytical performance. 2 alternate testing sites

Integrated microsystems for continuous glucose monitoring, interstitial fluid sampling and digital microfluidics

Doctoral thesis, reviewed before thesis defense, well elaborated

Doctoral Thesis Stockholm, Sweden, 2020

Optisk metod för glukosmätning

En studie för framtidssäkra icke-invasiva blodglukosmätningar

FATEMEH AMIRI

SARA NOUISER

Degree project (Bachelor thesis)

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NON-INVASIVE GLUCOSE MONITORING

Register Global Dossier

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Priorities IL17149105A 2005-10-20

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Publication WO2007046099A1 2007-04-26

Published as CA2629286A1; EP1937135A1; US2009240440A1; WO2007046099A1

Patent, well-reasoned idea, different purpose than research publications

Non-Invasive Monitoring of Diabetes

Specificity, compartmentalization, and calibration issues

Abstract

Non-invasive (NI) monitoring of glucose has attracted tremendous attention in the past two decades, mainly because diabetes is expected to be a major epidemic due to the increased overall obesity of the population. Non-invasive monitoring of glucose decreases the pain associated with skin puncture and is suitable for home glucose monitors. The demand for patient-centric and easy-to-use sensors or diagnostic complications and their associated health care costs. Patient-care needs and the commercial significance of NI glucose monitoring has led to a variety of approaches. This review summarizes the state-of-the-art of NI glucose monitoring. I recent work will discuss the importance of non-invasive glucose testing and report on insights at its measurement (1, 2, 3, 4).

Optical Coherence Tomography Fluorescent Resonance Energy Transfer Blood Glucose Concentration Phenyl Boronic Acid Meal Tolerance Test

These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves.

Book, many references. High credibility, no new results summarizes existing knowledge



Discussion questions

- Do you agree that it is an important and basic skill to be able to discern/differentiate between different sources?
- How can we as library instructors help our students with discerning different types of sources?
- What are your experiences and do you have any good examples of strategies or exercises?
- How has the situation during the last year affected your teaching of this subject?
- Write down a take-home message in the jamboard: https://jamboard.google.com/d/1i7_AiPPMmMZV6l7464liuehkaNXVSJ5cXeRpk3-pRn0/edit?usp=sharing