



PATENT ACADEMIC YEAR 2020 – 2023

S.No.	Name of the Author(s)	Title	Date	Patent No.	Year	Status (Filled/Publishe d/Granted)
1	DR.S.SARAVANA SUNDARAM	An Energy Storage System for Distributed Renewable Energy Source in Distribution Network	26/12/2020	201941035891 A	2022	Granted
2	GANGA M , AAKASH S, SRINITHI N, THILIPAN R, VIGNESH P	Rehabilitation Orthopedic Device	23/08/2023	202341056436 A	2023	Published
3	DR.S.SARAVANA SUNDARAM, MS. M. DEEPARANI, MS. S. SHOBHA CHRISTILA, AROMAL O V, EBIN MATHEW OOMMEN, JAMES SABU, SNEHA B NAIR	Smart Medicine Box Using IOT	29/04/2022	202241020847 A	2022	Published
4	DR.S.SARAVANA SUNDARAM , MS. M. DEEPARANI, MS. K. KIRUTHIKA, TOMIN VELLANAL,VIGNESH P S AJUMAL HASSAN.T.T	Lifi Based Health Monitoring System For Hospital Without Frequency Interference	29/04/2022	202241020852 A	2022	Published
5	DR.S.SARAVANA SUNDARAM , Ms. M. DEEPARANI, Ms. K. KIRUTHIKA,INBARASAN V KAREEMUL RAFIUDEEN M.R KAVIN BHARATHI R KAWASKAR.S	Structural health monitoring system with narrow band internet of Things	29/04/2022	202241020853 A	2022	Published
6	DR.S.SARAVANA SUNDARAM , Ms. M. DEEPARANI, Ms. S. SHOBHA CHRISTILA,	Nebulization And Oxygen Therapy Control System			2022	





PATENT ACADEMIC YEAR 2020 – 2023

		ACADEMIC IEAK 2020	- 2023			
	ABIN RAJ R G HELAN CHRISTY M	Using Respiration	29/04/2022	202241020854 A		Published
	MUTHU MEENAKSHI R					
	SANJAYKUMAR R.					
	DR.S.SARAVANA SUNDARAM .					
	Ms. M. DEEPARANI,					
7	Ms. RAJA RAJESWAR	E-Vaccine Integrated Chip For			2022	
/	CHANDNI,BHARATHI B	Covid 19			2022	
	DHARSAN K K		29/04/2022	202241020856 A		published
	DINESH BABU K,HARIHARAN R					•
	DR.S.SARAVANA SUNDARAM , Ms.					
	M. DEEPARANI, Mr. R.					
	ANANDHAKUMAR,KAMALESH	Post operation cardiovascular				
8	KUMAR.P.S	alerting system for cardiac			2022	
	PAVITHRA R	surgery	29/04/2022	202241020858 A		published
	SELVA SINDHUJA R					puolisiica
	THAMOTHARAN M					
	DR.S.SARAVANA SUNDARAM , Ms.					
	M. DEEPARANI, Mr. R.	Baby kick score monitoring				
9	ANANDHAKUMAR,CHARUSREE K	device using sensor for full	29/04/2022		2022	published
-	EZHILARASI S	term prognonov		202241020859 A		puolisiitu
	MOHAMED ASHIK U	term pregnancy				
	WASIM AKRAM M					
	DR.S.SARAVANA SUNDARAM, Ms.					
10	M. DEEPAKANI, MS. S. SHOBHA	Covid ICU patient tracking	20/04/2022	2022	muhlished	
10		system	29/04/2022	2022 202241020862 A	2022	published
1	οπορασμινί κ, ενακομινί Ε				1	





<u>PATENT</u> ACADEMIC YEAR 2020 – 2023

11	DR.S.SARAVANA SUNDARAM , Ms. S. SHOBHA CHRISTILA MS.D.MONISHA,AMAL STEFY ROSE R,JANANI V KEERTHANA L, MANO RANJITHAM R	Respiratory Monitoring System For Asthma Patients Based On IOT	29/04/2022	202241020863 A	2022	published
12	DR.S.SARAVANA SUNDARAM , Ms. S. SHOBHA CHRISTILA Ms. D.MONISHA, AKHIL P,AKSHARA R ATHIRA RAJU,SUGINA SUDHAKARAN	Low Cost Artificial Breathing Support System In Healthcare	29/04/2022	202241020867 A	2022	published
13	DR.S.SARAVANA SUNDARAM , MS. M. DEEPARANI, MS. S. SHOBHA CHRISTILA,KRISHNAVENI R NANDHINI S POVESH M PRABHAKARAN V	Covid safety entrance with mask detection	29/04/2022	202241020868 A	2022	published
14	DR.S.SARAVANA SUNDARAM , Ms. S. SHOBHA CHRISTILA, DEEPIKA K MANO ALAGAMMAI S P NANDHINI S SHIROSHINI M	3D Printing For Surgical Instruments	29/04/2022	202241020864 A	2022	published
15	DR.S.SARAVANA SUNDARAM , Ms. M. DEEPARANI, Ms. RAJA RAJESWARi CHANDNI DEEPIKA D, GOWRI B, KEERTHANA B PANKAJ V,	Non invasive glucometer using IR module	29/04/2022	202241020871 A	2022	published





<u>PATENT</u> ACADEMIC YEAR 2020 – 2023

16	DR.S.SARAVANA SUNDARAM ,MS. M. DEEPARANI, MS.D.MONISHA MR.ANANDHAKUMAR	Public vehicle access system for visually impaired using NFC	20/052022	202241026648 A	2022	published
17	DR.S.SARAVANA SUNDARA M , MS. M. DEEPARANI, MOHAMAD ANSIL MOHAMED FAWAZ SURYA R	IOT based portable patient monitoring Kit	22/07/2022	202241039621 A	2022	published
18	Ms. S. SHOBHA CHRISTILA , Ms. RAJA RAJESWAR CHANDNI, Ms. K. KIRUTHIKA	Deep vein thrombosis assistive bot for elderly people	13/05/22	202241024252 A	2022	published
19	Ms. S. SHOBHA CHRISTILA , Ms. RAJA RAJESWAR CHANDNI, Ms. K. KIRUTHIKA	Early Brain Diagnosis assistive device for brain disease detection system	13/0005/22	202241024254 A	2022	published

Coordinator

HOD



IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2020104350

The Commissioner of Patents has granted the above patent on 3 March 2021, and certifies that the below particulars have been registered in the Register of Patents.

Name and address of patentee(s):

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A. Anand of Professor, Department of Electronics, and Communication Engineering, St.Martin's Engineering College Secunderabad-500100, Telangana India

Title of invention:

AN ENERGY STORAGE SYSTEM FOR DISTRIBUTED RENEWABLE ENERGY SOURCE IN DISTRIBUTION NETWORK

Name of inventor(s):

Selvaperumal, S.; Sundari, M. S. Sivagama; Sundaram, S.Saravana and Anand, A.

Term of Patent:

Eight years from 26 December 2020

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.



Dated this 3rd day of March 2021

Commissioner of Patents

Extracts from the Patents Act, 1990

Sect 120(1A)	Infringement proceedings in respect of an innovation patent cannot be started		
	unless the patent has been certified.		
Sec 128	Application for relief from unjustified threats		
(1)	Where a person, by means of circulars, advertisements or otherwise, threatens		
	a person with infringement proceedings or other similar proceedings a person		
	aggrieved may apply to a prescribed court, or to another court having		
	jurisdiction to hear and determine the application, for:		
(a)	a declaration that the threats are unjustifiable; and		
(b)	an injunction against the continuance of the threats; and		
(c)	the recovery of any damages sustained by the applicant as a result of the		
	threats.		
(2)	Subsection (1) applies whether or not the person who made the threats is		
	entitled to, or interested in, the patent or a patent application.		
Sec 129A	Threats related to an innovation patent application or innovation patent		
	and courts power to grant relief.		
Certain threats of infrir	ngement proceedings are always unjustifiable.		
(1)	lf:		
(a)	a person:		
	(i) has applied for an innovation patent, but the application has not been		
	determined; or		
	(ii) has an innovation patent that has not been certified; and		
(b)	the person, by means of circulars, advertisements or otherwise, threatens a		
	person with infringement proceedings or other similar proceedings in respect of		
	the patent applied for, or the patent, as the case may be;		
	then, for the purposes of an application for relief under section 128 by the		
	person threatened, the threats are unjustifiable.		
Courts power to grant	relief in respect of threats made by the applicant for an innovation patent or the		
patentee of an uncertin	fied innovation patent		
(2)	If an application under section 128 for relief relates to threats made in respect		
	of an innovation patent that has not been certified or an application for an		
	innovation patent, the court may grant the application the relief applied for.		
Courts power to grant	relief in respect of threats made by the patentee of certified innovation patent		
(3)	If an application under section 128 for relief relates to threats made in respect		
	of a certified innovation patent, the court may grant the applicant the relief		
	applied for unless the respondent satisfies the court that the acts about which		
	the threats were made infringed, or would infringe, a claim that is not shown by		
	the applicant to be invalid.		
Schedule 1	Dictionary		
	<i>certified</i> , in respect of an innovation patent other than in section 19, means a		
	certificate of examination issued by the Commissioner under paragraph		

101E(e) in respect of the patent

(21) Application No.202341056436 A

(19) INDIA

(22) Date of filing of Application :23/08/2023

(43) Publication Date : 06/10/2023

(54) Title of the invention : REHABILITATION ORTHOPEDIC DEVICE

		(71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant :VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU-641032, INDIA	
		Name of Applicant : NA	
		Address of Applicant : NA	
(51) International	A61F0005010000, A61H0001020000,	(72)Name of Inventor :	
classification	G16H0020300000. A61H0003000000,	1)M.GANGA	
(Ed) Interneticand	A61B0017740000	Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING	
(80) International	:NA	AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY,	
Filing Date	:NA	COIMBATORE, TAMILNADU-641032, INDIA	
(87) International Publication No	:NA	Address of Applicant HINDUSTHAN COLLEGE OF ENGINEERING	
(61) Patent of Addition	NIA	COMPATORE TAMENADU 641022 INDIA	
to Application Number	NA	3)Srinithi N	
Filing Date	1974	Address of Applicant HINDUSTHAN COLLECE OF ENGINEERING	
(62) Divisional to	NA	AND TECHNOLOGY, VALLEY CAMPLES POLLACHI HIGHWAY	
Application Number Filing Date	NA	COIMBATORE, TAMILNADU-641032, INDIA	
		Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING	
		AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY,	
		COIMBATORE, TAMILNADU-641032, INDIA	
		Address of Applicant HINDUSTHAN COLLEGE OF ENGINEERING	
		AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMII NADU-641032, INDIA	

(57) Abstract :

Sports and exercises plays a vital role in all stages of ages. By active participation in sports leads to healthy lifestyle. In the other hand people may also come across lots of injuries due to misguidance of playing sports, especially knee injuries. Knee Injury in sports person has become usual in all ages. And they feel very difficult to identify the type of injury sooner by their symptoms. Still now, in market, to f maintain and avoid the pain of knee injury, only knee braces and wearable sensors have been in practice. This can take longer time period. And the patient can know the type of Injury only by scanning. *This product work focused on to detect the type of Injury in knee in shorter time period. This will also' detect the types of' Injury painless. The main sensors used here IS accelerometer sensor and gyroscopic sensor respectively. This product will sense the injuries with the movement of limbs (leg) without giving severe pain to 'the patient. The main cause of the knee injuries are because of the tom in ligaments present in the limbs. The use of accelerometer sensor in' this product is that it will measure the 'acceleration, the seismic activity of the body. The use of 'gyroscope sensor Will sense the angular velocity of the limbs per rotation. By moving the limbs, we measure the axis of the leg, in the arrangement of x, y, z axis. Now we will fix a threshold value, by this if the patient is not able to move above the fixed value, then it is detected that the patient is undergoing some type of_knee injuries.

No. of Pages : 5 No. of Claims : 5

The Patent Office Journal No. 40/2023 Dated 06/10/2023

(19) INDIA

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : SMART MEDICINE BOX USING IOT					
 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition t Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61J0007040000, G05B0015020000, H04N0005500000, G06Q0050220000, G06Q0010000000 :NA :NA :NA :NA :NA :NA :NA	 (71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant : HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA - (641032			

(57) Abstract :

The approach to this idea involves the perfect solution to the issues and constraints that the old aged people face in case of taking their medication. This system can help the doctors monitor a large number of patient's health with great ease and also keep a track of their daily medical doses. This medicine box is an active assistive project which overcomes the passive techniques used to help a patient and keep track of his/her health. The project gives the assistive system for the people around us and helps them to follow medication on time. This system helps them to maintain a good healthy experience. The system is easy to use and accessible to individuals irrespective of their age and system helps people stop procrastinating and take their meds on time which is crucial in healing the human body.,

(19) INDIA

(22) Date of filing of Application :07/04/2022

(43) Publication Date : 29/04/2022

(54) Title of the invention : LIFI BASED HEALTH MONITORING SYSTEM FOR HOSPITAL WITHOUT FREQUENCY INTERFERENCE

		(71)Name of Applicant :
		1)HINDUSTHAN COLLEGE OF ENGINEERING AND
		TECHNOLOGY
		Address of Applicant :HINDUSTHAN COLLEGE OF
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		POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA-
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		Name of Applicant : NA
		Address of Applicant : NA
		(72)Name of Inventor :
		1)Dr. S. SARAVANASUNDARAM
	JI04D0010116000 A 61D0005000000	Address of Applicant : PROFESSOR & HEAD-BME, HINDUSTHAN
(51) International	:H04B0010116000, A61B0005000000,	COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY
classification	A01B0005020500, A01B0005110000,	CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU,
(0C) I (1)	A01B0005010000	INDIA -641032
(86) International	:NA	2)Ms. M. DEEPARANI
Application No	:NA	Address of Applicant :ASISTANT PROFESSOR/ BME, HINDUSTHAN
Filing Date		COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY
(87) International	: NA	CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU,
Publication No		INDIA -641032
(61) Patent of Addition	:NA	3)Ms. K. KIRUTHIKA
to Application Number	:NA	Address of Applicant :ASSISTANT PROFESSOR/ BME,
Filing Date		HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY,
(62) Divisional to	:NA	VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL
Application Number	:NA	NADU, INDIA -641032
Filing Date		4)TOMIN VELLANAL
		Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING
		AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY,
		COIMBATORE, TAMIL NADU, INDIA -641032
		5)P.S. VIGNESH
		Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING
		AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY,
		COIMBATORE, TAMIL NADU, INDIA -641032
		6)T.T. AJUMAL HASSAN
		Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING
		AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY,
		COIMBATORE, TAMIL NADU, INDIA -641032

(57) Abstract :

This project proposes an application of Li-Fi network in hospital for monitoring the infant health conditions such as temperature, heartbeat, glucose level wetness level and respiratory conditions by using respective sensors. Now a days, Wireless technologies used by different Infant Monitoring Systems utilizes the radiations that are highly harmful for the Infants. So, under these critical conditions, we have proposed an Automatic Wireless Li-Fi based Advanced Infant Monitoring System which continuously measures the intensive parameter of the child's health using wearable sensors, if any abnormal condition occurs, it will indicate a notification. The Li-Fi finds the places wherever Wi-Fi is applicable with additional features of highspeed data network. Apart from the speed factor, Li-Fi is more suitable in hospital application for monitoring the infant conditions without frequency interference with human body. Real-time remote monitoring of health parameters through visible light and its Improves healthcare management. Wet sensor used to help in the case of bleeding. The collected data from the sensors is transmitted and further these data are processed using microcontroller and sent to display unit. Based on the concept of visible light communication, a prototype model is built with themicrocontroller and thus application of Li-Fi as an infant health monitoring system demonstrated experimentally.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(43) Publication Date : 29/04/2022

(54) Title of the invention : STRUCTURAL HEALTH MONITORING SYSTEM WITH NARROW BAND INTERNET OF THINGS

 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61B0005000000, A61B0005024000, A61B0005145000, A61B0008020000, H04W0004700000 :NA :NA :NA :NA :NA	 (71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. S. SARAVANASUNDARAM Address of Applicant :PROFESSOR & HEAD-BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 INDIA -641032 M. DEEPARANI Address of Applicant :ASISTANT PROFESSOR/ BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 INDIA -641032 M. DEEPARANI Address of Applicant :ASISTANT PROFESSOR/ BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 INDIA -641032 YALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 YALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 YALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 SM.R. KAREMUL RAFIUDEEN Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 SM.R. KAVIN BHARATHI Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 SM.R. KAVIN BHARATHI Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 SMAWASKAR
		AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 7)S. KAWASKAR Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE TAMIL NADU INDIA -641032

(57) Abstract :

In the forthcoming remote health care monitoring program, there is a necessity to constantly monitor patient's physiological parameters. For example, pregnant female parameters such as blood pressure and heart rate in woman and fetal heart rate and movement to control their state of health. Supporting high pressure and temporary needs of these emerging applications, Narrowband Internet of Things (NB-IoT) is promising technology that provides long-distance communication with a minimum amount of data for sensors reduces the complexity of processing the device and the long battery life time. This project aims to develop the realistic performance of NB- IoT in terms of effective throughput, patient served per cell and latency in healthcare monitoring system with both in-band and stand-alone deployment.

(22) Date of filing of Application :07/04/2022

(71)Name of Applicant : 1) HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant : HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1) Dr. S. SARAVANASUNDARAM Address of Applicant : PROFESSOR & HEAD-BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, :A61M0016060000, A61M0016000000, INDIA -641032 ------ --(51) International A61K000900000, A61M0016080000, classification 2)Ms. M. DEEPARANI C07D0403120000 Address of Applicant :ASISTANT PROFESSOR/ BME, HINDUSTHAN (86) International :NA COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY Application No CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, :NA Filing Date INDIA -641032 ------(87) International 3)Ms. S. SHOBHA CHRISTILA : NA Publication No Address of Applicant : ASSISTANT PROFESSOR/ BME, (61) Patent of Addition HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, :NA to Application Number VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL :NA Filing Date NADU, INDIA -641032 ------(62) Divisional to :NA 4)R.G.ABIN RAJ Application Number Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING :NA Filing Date AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 -----**5)M. HELEN CHRISTY** Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 ------------6)R. MUTHUMEENAKSHI Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 ------7)R. SANJAY KUMAR Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA -641032 ------

(54) Title of the invention : NEBULIZATION AND OXYGEN THERAPY CONTROL SYSTEM USING RESPIRATION

(57) Abstract :

The Smar lee pressure sensor senses the patient inhalation and exhalation according to that the solenoid value gets open and close with the help of relay. This process can be controlled by Arduino UNO R3. When the valve gets open the drug is delivered through the nebulizer mask for the patient in need of nebulization therapy and for the patient in need of oxygen, the oxygen can be delivered through nasal cannula. This technique is mainly based on the inhalation and exhalation of a patient. The nebulization therapy is effective for curing asthma and other respiratory disorders and oxygen supply is given for the, who is in need of oxygen. During the pandemic situation, there is a huge shortage of oxygen for COVID patients. By this method we can save 50% of oxygen and the shortage of oxygen can be rectified.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : E-VACCINE INTEGRATED CHIP FOR COVID 19

		 (71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant :VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. S. SARAVANASUNDARAM Address of Applicant :PROFESSOR & HEAD-BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032.
 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61K0039000000, C07K0014005000, H04L0029060000, G06Q0050260000, G04B0019220000 :NA :NA :NA :NA :NA :NA :NA	 2)Ms. M. DEEPARANI Address of Applicant :ASSISTANT PROFESSOR/BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032
		TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032

(57) Abstract :

Scientist and Researchers found Covid-19 becomes an endemic for the near decade each time different mutations of Corona Virus makes different variants, Medicines and vaccinations done for previous variants and mutations does not show much effect on the newly identified Variants of Corona Virus. So as a precautionary measure for not getting effected to Covid-19 each time different booster shots of Covid-19 Vaccination should be Taken for avoiding isolation/quarantined and disease spreading to others. Vaccination-based entry security checks in airports, cinemas, malls, and other public areas where crowds gather are causing problems for workers and individuals travelling to other countries. Due to different governments' policies on citizens' personal data sharing, there is no common platform to identify people who received varied vaccine doses and also unvaccinated people from different nations Varying nations have different vaccination requirements, therefore an international traveller returning to his home country after receiving the full vaccination dose from various countries may be classified as un-vaccinated. To circumvent such issues, a global solution such as an International Vaccination Chip that can be read anywhere in the world and used to make vaccination-based entries should be recommended. For security checks of vaccine-based entrance under the existing system, corrupted people will exhibit some body's vaccination certificate and gain access to these crowd meeting areas; these people may have the Covid-19 Virus, which might lead to a widespread outbreak.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant :VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ---Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. S. SARAVANASUNDARAM Address of Applicant : PROFESSOR & HEAD-BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ------2)Ms. M. DEEPARANI :A61B000500000, A61B0005020500, Address of Applicant :ASSISTANT PROFESSOR/BME, (51) International G16H0050300000, A61B0005024000, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, classification A61F0002060000 VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, (86) International TAMILNADU, INDIA, PIN CODE-641032, ------:NA Application No 3)Mr. R. ANANDHAKUMAR :NA Address of Applicant : ASSISTANT PROFESSOR/BME, Filing Date (87) International HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, : NA Publication No VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, (61) Patent of Addition TAMILNADU, INDIA, PIN CODE-641032. -----:NA 4)P. KAMALESH KUMAR to Application Number :NA Filing Date Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING (62) Divisional to AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, :NA Application Number COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. -------:NA Filing Date 5)R. PAVITHRA Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ------6)R. SELVA SINDHUJA Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ---------7)M. THAMOTHARAN Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032, ------

(54) Title of the invention : POST OPERATION CARDIOVASCULAR ALERTING SYSTEM FOR CARDIAC SURGERY

(57) Abstract :

Our approach gives the perfect solution to the issues that the patient experiencing post-op coronary artery bypass graft. Cardiovascular disease affects the blood vessel and the heart, and this may lead disease like the heart attack, arrhythmia, cardiomyopathy, coronary artery disease, the heart failure, rheumatic heart diseases, congenital heart disease, and an Aorta disease syndrome etc.As a result, this may lead to coronary artery bypass surgery. For our proposed smart system to detect dysrhythmia using ST Wave for post-op Coronary artery bypass operated patients. The main purpose of this project is to monitor health parameters like blood pressure, stress and pulse will be monitored through various sensor. Those sensors are used along with EKG in thissystem. If the system detected any abnormalities, it will directly call to nurses. When any of the sensed values exceeds the threshold level then an alarm will turn on. Our proposed system will also reduce the work of nurses in order to monitoring patients.

(22) Date of filing of Application :07/04/2022

(71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant :VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ---Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. S. SARAVANASUNDARAM Address of Applicant : PROFESSOR & HEAD-BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ------2)Ms. M. DEEPARANI :A61B000500000, A61B0005024000, Address of Applicant :ASSISTANT PROFESSOR/BME, (51) International G16H0040630000, A61B0005110000, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, classification E05B0065100000 VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, (86) International TAMILNADU, INDIA, PIN CODE-641032, ------:NA Application No 3)Mr. R. ANANDHAKUMAR :NA Address of Applicant : ASSISTANT PROFESSOR/BME, Filing Date (87) International HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, : NA Publication No VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, (61) Patent of Addition TAMILNADU, INDIA, PIN CODE-641032. -----:NA to Application Number 4)K. CHARUSREE :NA Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING Filing Date (62) Divisional to AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, :NA Application Number COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ------:NA Filing Date 5)S. EZHILARASI Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ------6)U. MOHAMMED ASHIK Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. ---------7)M. WASIM AKRAM Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032, ------

(54) Title of the invention : BABY KICK SCORE MONITORING DEVICE USING SENSOR FOR FULL TERM PREGNANCY

(57) Abstract :

This project presents a foetal observing during pregnancy time so that they can ensure the proper care and safety of their babies and knows the kick score of their baby and need not to panic in any stages. This system can detect the baby's heart rate and movement of baby before labour period. In this task, we present a gadget that is utilized to quantify the pulse during the hour of pregnancy. This baby monitoring system is capable of detecting kick moment condition of the baby automatically. This ATmega328P Arduino Nano microcontroller is used to make the total control system of the hardware and Vibration sensor is incorporated to detect baby's movement and IR sensor used'to capture the baby's moment. A Display is used to have a kick count of sleeping baby. Finally the developed hardware is tested to analysis the capability of detecting moment of baby. This proposed system can provide an easier and convenient way for t}i|sy pareitflTin terms of taking care of their babies.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : COVID ICU PATIENT TRACKING SYSTEM					
 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61B0005000000, G08B0021040000, A61B0005110000, G06Q0050220000, G16H0040670000 :NA :NA :NA :NA :NA	 (71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant : VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE- 641032. Name of Applicant : NA Address of Applicant : PROFESSOR & HEAD-BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. 2)Ms. S. SHOBHA CHRISTILA Address of Applicant : ASSISTANT PROFESSOR/BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. JMS. M. DEEPARANI Address of Applicant : ASSISTANT PROFESSOR/BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. JMS. M. DEEPARANI Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. TOTOME SISK. SARASWATHI Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. TOTOME TOTOME Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. TOTOME Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA, PIN CODE-641032. TOTOME TOTOME TOTOME, TAMILNADU, INDIA, PIN CODE-641032. TOTOME TOTOME, TAMILNAD			

(57) Abstract :

We must safeguard ourselves and others throughout this pandemic. However, the rapid spread of contagious disease necessitates more hospitality and doctors to keep track on covid patients. Our project will assist doctors in keeping track of covid patients and will notify the appropriate person. Here, a sensor technology is being used to keep an eye on ICU patients in case of an emergency or if someone in the worst situation needs to take immediate action to help the patient recover. Sensors such as body temperature, fall detection, pulse sensor, and wetness detection sensors are utilized to keep track on the patient. And if there is any deviation in the patient, the system will send an alert to the appropriate person via Bluetooth.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : RESPIRATORY MONITORING SYSTEM FOR ASTHMA PATIENTS BASED ON IOT (71)Name of Applicant : 1)Hindusthan College of Engineering and Technology Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. ------Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor: 1)Dr. S.Saravanasundaram Address of Applicant : Professor & Head - BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. -----:A61B0005000000, A61B0005080000, (51) International 2)Ms.S.Shobha Christila A61B0005087000. A61M0015000000. classification Address of Applicant : Assistant Professor / BME, Hindusthan A61B0005091000 College of Engineering and Technology, Valley Campus, Pollachi (86) International Highway, Coimbatore, Tamilnadu, India 641032. ------:NA Application No :NA Filing Date 3)Ms.D.Monisha (87) International Address of Applicant : Assistant Professor / BME, Hindusthan : NA Publication No College of Engineering and Technology, Valley Campus, Pollachi (61) Patent of Addition :NA Highway, Coimbatore, Tamilnadu, India 641032. -----to Application Number :NA Filing Date 4)R.Amal Stefy Rose (62) Divisional to Address of Applicant :Hindusthan College of Engineering and :NA Application Number Technology, Valley Campus, Pollachi Highway, Coimbatore, :NA Filing Date Tamilnadu, India 641032. ------5)V.Janani Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. ------6)L.Keerthana Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. ------7)R.Manoraniitham Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. ------

(57) Abstract :

Annexure 3 Asthma is a common chronic disease that affects most of the children world-wide. It is characterized by continuous cough, wheezing, shortness of breath, reversible air flow limitation and bronchial hyperresponsiveness. Asthma in young children is difficult to diagnose as lung function measurements are not much reliable in young children. Symptoms that the young children possess are not necessary to be asthma specific symptoms. This proposed system is to provide support and help the children to be diagnosed and treated in advance to reduce the chances critical complications. The sensors implemented in this prototype detect the pollution and dust particles levels. If any difficulties in breathing is detected among the children, the 10T alert system triggers an alarm and alert the emergency contact person's device connected to the alert system through message notifications. In this way, proper medical assistance can be given to the children immediately.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : LOW COST ARTIFICIAL BREATHING SUPPORT SYSTEM IN HEALTHCARE

(57) Abstract :

ANNEXURE 3 The major objective of this project is to design an efficient low cost ventilator for covid-19 patients and to measure the vital parameters using integrated patient monitoring system which can simultaneously works on adult and pediatric mode and can be available for multiple patients. A mechanical ventilator is a device that supports enough oxygen for patients with respiratory distress in an intensive care unit (ICU). In this work, a portable mechanical ventilator is designed in such a way that it can be used in emergency vehicles and can also be used as a portable ventilation device for patients who are suffering from breathing. Through the integration of advanced electronics and mechanical instruments such as microcontroller and sensors like heart beat sensor, spo2 sensor, temperature sensors, pulse sensors, we implement a portable high-frequency ventilator which can measure ECG, SP02, Temperature and Pulse. It is capable of working at two different modes at a time by adding motor drivers which can be controlled via switches. All the sensed data is updated to the microcontroller and it will process the ventilator data and updated to the concerned person through 10T. All the updates will be disDlaved on the mobile phone/PC through Thinkspeak.

No. of Pages : 5 No. of Claims : 5

The Patent Office Journal No. 17/2022 Dated 29/04/2022

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : COVID SAFETY ENTRANCE WITH MASK DETECTION

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		Address of Applicant :Hindusthan College of Engineering and
		Technology, Valley Campus, Pollachi Highway, Coimbatore,
		Tamilnadu, India 641032
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		(72)Name of Inventor :
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		Address of Applicant :Professor & Head - BME. Hindusthan
		College of Engineering and Technology, Valley Campus, Pollachi
		Highway, Coimbatore, Tamilnadu, India 641032,
(51) International	:A61B0005000000, A61B0005024000,	2)Ms.S.Shobha Christila
classification	A61B0005020500, A41D0013110000,	Address of Applicant : Assistant Professor / BME. Hindusthan
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(86) International	:NA	Highway, Coimbatore, Tamilnadu, India 641032,
Application No	:NA	
Filing Date		3)Ms.M.Deenarani
(87) International	: NA	Address of Applicant : Assistant Professor / BME. Hindusthan
Publication No		College of Engineering and Technology, Valley Campus, Pollachi
(61) Patent of Addition	¹ :NA	Highway, Coimbatore, Tamilnadu, India 641032,
to Application Number	:NA	
Filing Date		4)Ms.R.Krishnaveni
(62) Divisional to	:NA	Address of Applicant Hindusthan College of Engineering and
Application Number	·NA	Technology Valley Campus Pollachi Highway Coimbatore
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		7)Mr V Prahhakaran
		Address of Applicant Hindusthan College of Engineering and
		Technology Valley Campus Pollachi Highway Combatore
		Tamilnadu India 641032

(57) Abstract :

ANNEXURE 3 This project is to implement the automatic safety entrance system. Since, the last few years, the occurrence of infections COVID-19 caused by SARS-COV-2 virus (also known as coronavirus) has infected almost aspects of people lives. It is transmitted directly through respiratory droplets, but also indirectly via surfaces. Hence, it is spreading widely and vigorously. Due to these facts, many protection and safety measures were taken by governments in order to reduce the disease spread, such as mask wearing, social distancing, self- isolation etc. Despite the fact that the pandemic seemed weaker at some points, most of safety regulations are still applied due to unstable situation. We implement a new device which can monitor temperature and heartbeat of a people. Initially a sanitizer is sprayed and a face mask is detected using revalant software. Followed by the body temperature and heart rate is measured using IR sensors which is implemented in Arduino. If it is in normal range, servo motor helps the door to open or else buzzer will ring. We are all know that Prevention Is . Better than Cure. Wearing of face mask is one of the precautionary steps to prevent corona infections.

(19) INDIA

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : 3D PRINTING FOR SURGICAL INSTRUMENTS		
 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61B0017000000, B29C0064153000, B33Y0010000000, A61F0002000000, A61B0017040000 :NA :NA :NA : NA :NA :NA :NA :NA :NA	 (71)Name of Applicant : 1)Hindusthan College of Engineering and Technology Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. S.Saravanasundaram Address of Applicant :Professor & Head - BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032.

(57) Abstract :

Annexure 3 Our project approach is to have a replacement for our regular metal or steel instruments used in present days where sterilization of those instruments takes a huge amount of our time than the surgical procedure. A surgical set consisting of hemostats, needle driver, scalpel handle, retractors, and forceps was designed using SolidWorks (Dassault Systems SolidWorks Corp., Waltham MA). These designs were then printed using a Sinterstation HiQ selective laser sintering (SLS) machine (3D Systems, Rock Hill SC). Practicing general surgeons tested the final printed goods for ergonomic usefulness and performance, which included simulated surgery and human inguinal hernia repairs. By altering design and build metrics, improvements were identified and addressed. It took an average of three days to complete an iterative cycle that included design, production, and testing. The SLS Sinterstation HiQ was used to construct each surgical set, which took an average of 6 hours to complete. It is possible to create functional surgical instruments using 3D printing. When compared to traditional production methods, there are several advantages. Functional 3D printed surgical instruments are feasible. Advantages compared to traditional manufacturing methods include no increase in cost for increased complexity, accelerated design to production times and surgeon specific modifications.

(22) Date of filing of Application :07/04/2022

(54) Title of the invention : NON INVASIVE GLUCOMETER USING IR MODULE

 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61B0005000000, A61B0005145000, A61B0005145500, G01L0005000000, G16H0010600000 :NA :NA :NA :NA :NA :NA	 (71)Name of Applicant : 1)Hindusthan College of Engineering and Technology Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. S.Saravanasundaram Address of Applicant :Professor & Head - BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 2)Ms.M.Deeparani Address of Applicant :Assistant Professor/BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 3)Ms.Raja Rajeswari Chandni Address of Applicant :Assistant Professor/BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 3)Ms.Raja Rajeswari Chandni Address of Applicant :Assistant Professor/BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 4)D.Deepika Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 5)B.Gowri Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 6)B.Keerthana Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 6)B.Keerthana Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 7)V.pankaj Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032. 7)V.pankaj
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(57) Abstract :

Annexure-3 This study helps monitor the blood glucose level of a patient with the help of a standalone portable non-invasive glucometer. Diabetes is a disease in which the blood glucose levels are too high and considered to be one of the leading causes of death affecting millions of people worldwide. In this study, a portable device that measures the blood glucose level was developed using the near-infrared light-emitting diode and a photodiode that works together as the NIR sensor which measures the blood sugar level. The Raspberry Pi microcontroller does the processing of the information that came from the sensor patch. The touch-screen liquid crystal display module displays the data results gathered from the tests made and a microSD card is used to store the results that will then be used in the device history. During the testing, results showed that the measured values done using the device and the commercially available glucometer had no significant difference, based on the results of t-test conducted. All test made in the device is based on the International Organization for Standardization, ISO 15197:2013 standard where 95 percent of the results should fall within the acceptable range, 97.14 percent was the percentage the researchers were able to get, where 68 out of 70 tests made the cut of having a difference of positive or negative 20 percent based on the standard.

(19) INDIA

(22) Date of filing of Application :09/05/2022

(71)Name of Applicant : 1)HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY Address of Applicant :HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA-641032. -----Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Ms. M. DEEPARANI Address of Applicant : ASSISTANT PROFESSOR/BME, HINDUSTHAN COLLEGE OF ENGINEERING AND :A61H0003060000, G09B0021000000, TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, (51) International A61F0009080000, G08B0003100000, COIMBATORE, TAMIL NADU, INDIA-641032. -----classification G08G0001133000 (86) International 2) Dr. S. SARAVANA SUNDARAM :NA Address of Applicant : PROFESSOR & HEAD-BME, Application No :NA Filing Date HINDUSTHAN COLLEGE OF ENGINEERING AND (87) International TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, : NA COIMBATORE, TAMIL NADU, INDIA-641032. ------Publication No (61) Patent of Addition :NA to Application Number :NA 3)Mr. R. ANANDHAKUMAR Filing Date Address of Applicant : ASSISTANT PROFESSOR/BME, (62) Divisional to HINDUSTHAN COLLEGE OF ENGINEERING AND :NA Application Number TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, :NA Filing Date COIMBATORE, TAMIL NADU, INDIA-641032. ------4)Mr. BOOBALAN. T Address of Applicant :ASSISTANT PROFESSOR/ECE, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA-641032. -----____ 5)Ms. D. MONISHA Address of Applicant : ASSISTANT PROFESSOR/BME, HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMIL NADU, INDIA-641032. ------

(54) Title of the invention : PUBLIC VEHICLE ACCESS SYSTEM FOR VISUALLY IMPAIRED USING NFC

(57) Abstract :

For blind and visually impaired persons, public transport is the only viable mobility option to get social connectivity those who live in a limited environment and cannot able to sense what happen around them which reduces their activity in transportation. This project demonstrates the concept of bus identification system for a blind people using NFC. The bus is equipped with detector tag whenever the bus comes nearer to bus stop, detector reads the tag which is connected to microcontroller and wireless network used to transmit the information to the receiver placed at bus stop and then the microcontroller will activate the voice chip. This system will be indicating the bus number and the destination place with the help of controller.

(22) Date of filing of Application :11/07/2022

(54) Title of the invention : IOT BASED PORTABLE PATIENT MONITORING KIT

 (51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date 	:A61B0005000000, A61B0005020500, H04L0029080000, A61B0005021000, G06Q0050220000 :NA :NA : NA : NA	 (71)Name of Applicant : 1)Hindusthan College of Engineering and Technology Address of Applicant :Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032 Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.S.Saravanasundaram Address of Applicant :Professor & Head-BME, Hindusthan College of Engineering and Technology, Valley Campus, Pollachi Highway, Coimbatore, Tamilnadu, India 641032
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(57) Abstract :

With an improvement in technology and miniaturization of sensors, there have been attempts to utilize the new technology in various areas to improve the quality of human life. One main area of research that has seen an adoption of the technology is the healthcare sector. The people in need of healthcare services find it very expensive this is particularly true in developing countries. As a result, this project is an attempt to solve a healthcare problem currently society is facing. The main objective of the project was to design a portable patient monitoring kit. It's comprised of three main parts. The first part being, detection of patient's vitals using sensors, second for sending data to cloud storage and the last part was providing the detected data for remote viewing. Viewing of the data enables a doctor or guardian to monitor a patient's health progress away from hospital premises.

(22) Date of filing of Application :25/04/2022

(54) Title of the invention : DEEP VEIN THROMBOSIS ASSISTIVE BOT FOR ELDERLY PEOPLE

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(57) Abstract :

Deep Vein Thrombosis (DVT) is a condition where blood gets clogged in the veins, especially the lower extremities due to lack of movement. This condition mostly affects patients who are in prolonged bed rest like stroke, post-surgery resting period etc, at present DVT is prevented either by pharmacological prophylaxis or mechanical prophylaxis. Most of the mechanical prophylaxis currently available are platform based or pneumatic compressor based which limits the user end comfort and accessibility. The method used here assist as a robotic device in prophylaxis with two degrees freedom for dorsiflexion and plantar flexion in passive ankle movement. Then the pressure of the foot is measured for the stretch reflex provided by the calf muscles. This device can be very useful in preventing DVT.

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(54) Title of the invention : EARLY BRAIN DIAGNOSIS ASSISTIVE DEVICE FOR BRAIN DISEASE DETECTION SYSTEM

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(57) Abstract :

The purpose of this study was to objectively measure the transcutaneous elasticity of a decompressive site in a cranial defect using a tactile resonance sensor and to evaluate the relationship between brain edema and that elasticity. Brain stiffness measurement is a useful parameter used to detect brain edema which is caused by inflammation of brain, the main aim of this work is to design . a tactile resonance sensor which can detect brain stiffness which is in turn given to a flexible circuit consisting of a piezoelectric sensor and a phase shift circuit. The output of this measurements were expressed in three variables depth, pressure and change in frequency .The bio signal are acquired using micro fabrication sensor technology . This clinical research was aimed at a possible mechanism to facilitate the non-invasive assessment of brain edema which was one of the post-operative complications. Thus, in addition to screening for potential brain edema, daily assessment of brain stiffness may also help to determine if therapy instituted to address such edema is successful.