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डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 388660-001
तारीख / Date : 19/06/2023
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *MACHINE LEARNING-BASED HUMANOID DEVICE FOR OBJECT IDENTIFICATION* से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Cmr Technical Campus 2. Saba Sultana 3.Tabeen Fatima 4.Raheem Unnisa 5.Marri Sireesha 6.Bushra Tarannum 7.Dr. K. Srujan Raju 8.Dr. Avala Raji Reddy के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to *MACHINE LEARNING-BASED HUMANOID DEVICE FOR OBJECT IDENTIFICATION* in the name of 1.Cmr Technical Campus 2. Saba Sultana 3.Tabeen Fatima 4.Raheem Unnisa 5.Marri Sireesha 6.Bushra Tarannum 7.Dr. K. Srujan Raju 8.Dr. Avala Raji Reddy.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 12/09/2023
Date of Issue :




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डिजाइन सं. / Design No. : 388659-001
तारीख / Date : 19/06/2023
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प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *ML BASED ROBOT FOR DETERMINING CROP YIELD* से संबंधित है, का पंजीकरण, श्रेणी 15-03 में 1.Cmr Technical Campus 2. Svsv Prasad Sanaboina 3.Dr. Suraya Mubeen 4.Dr. Mahesh Kotha 5.Dr. D. Baburao 6.Ravi Regulagadda 7.Dr. Voruganti Naresh Kumar 8.Dr. Avala Raji Reddy 9.Dr. K. Srujan Raju के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।


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डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

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डिजाइन सं. / Design No. : 389056-001
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प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *IOT BASED 3-D PRINTER* से संबंधित है, का पंजीकरण, श्रेणी 15-09 में 1.Cmr Technical Campus 2. Md. Mohammad Shareef 3.S Venkatesh 4.R Saikrishna 5.G. Lavanya 6.Bejjanki Pooja 7.Dr. K. Srujan Raju 8.Dr. Avala Raji Reddy के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-09 in respect of the application of such design to *IOT BASED 3-D PRINTER* in the name of 1.Cmr Technical Campus 2. Md. Mohammad Shareef 3.S Venkatesh 4.R Saikrishna 5.G. Lavanya 6.Bejjanki Pooja 7.Dr. K. Srujan Raju 8.Dr. Avala Raji Reddy.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

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(43) Publication Date : 31/03/2023

(54) Title of the invention : LEAF DISEASE DETECTION IN CROPS USING IMAGE PROCESSING AND MACHINE LEARNING FOR AGRICULTURAL APPLICATIONS

(51) International classification :G06N 030400, G06N 030800, G06N 200000, G06N 201000, G06T 070000
(86) International Application No :PCT/
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Leaf Disease Detection in Crops using Image Processing and Machine Learning for Agricultural Applications is the proposed invention. The proposed invention focuses on understanding the disease that has attacked the particular crop variety. The techniques of Image Processing and Machine Learning algorithms for accurate prediction of the disease.

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(22) Date of filing of Application :31/03/2023

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(54) Title of the invention : AN IoT BASED CROP RECOMMENDATION SYSTEM TO MAXIMIZE CROP YIELD USING ADAPTIVE DEEP NEURAL NETWORK MODEL

<p>(51) International classification :A01D 41 1270, G06K 096200, G06N 030400, G06N 030800, G06Q 500200</p> <p>(86) International Application No Filing Date :PCT// :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA</p> <p>(62) Divisional to Application Number Filing Date :NA</p>	<p>(71)Name of Applicant : 1)Annapurna Gummadi Address of Applicant :Assistant Professor, Department of CSE (Cyber Security), CVR College of Engineering, Vastunagar, Mangalpalli (V), Ibrahimpatnam Mandal, Rangareddy District, Telangana-501 510, India. Rangareddy -----</p> <p>2)Dr. Gangolu Yedukondalu 3)V Bhavana 4)Ravindra Changala 5)Dr. G Vinoda Reddy 6)Saba Fathima 7)K Rajesh 8)Rakshita okali 9)T. Anitha 10)Syeda Sumaya Afreen</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Annapurna Gummadi Address of Applicant :Assistant Professor, Department of CSE (Cyber Security), CVR College of Engineering, Vastunagar, Mangalpalli (V), Ibrahimpatnam Mandal, Rangareddy District, Telangana-501 510, India. Rangareddy -----</p> <p>2)Dr. Gangolu Yedukondalu Address of Applicant :Professor & HoD, Department of CSE (AI&ML), Vignana Bharathi Institute of Technology, Aushapur, Ghatkesar, near HPCL, Hyderabad, Telangana-501301, India. Hyderabad -----</p> <p>3)V Bhavana Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, CMR Technical Campus Hyderabad, Kandlakoya (V), Medchal Road, Hyderabad – 501401, Telangana, India. Hyderabad -----</p> <p>4)Ravindra Changala Address of Applicant :Assistant Professor, Department of IT, Guru Nanak Institutions Technical Campus, Khanapur Village, Manchal, Ibrahimpatnam, Telangana-501506, India. Ranga Reddy -----</p> <p>5)Dr. G Vinoda Reddy Address of Applicant :Professor, Department of CSE (AI & ML), CMR Technical Campus, Kandlakoya, Hyderabad, Telangana-501401, India. Hyderabad -----</p> <p>6)Saba Fathima Address of Applicant :Assistant Professor, Department of Civil Engineering, Stanley College of Engineering and Technology for Women (Autonomous), Chapel Road, Fateh Maidan, Abids, Hyderabad, Telangana-500001, India. Hyderabad -----</p> <p>7)K Rajesh Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Stanley College of Engineering and Technology for Women & Research Scholar Shri JNT university Rajasthan Chapel Road, Fateh Maidan, Abids, Hyderabad, Telangana-500001, India. Hyderabad -----</p> <p>8)Rakshita okali Address of Applicant :Assistant Professor, Department of CSE, CMR Technical Campus, Kandlakoya (V), Medchal Road, Hyderabad – 501401, Telangana, India Hyderabad -----</p> <p>9)T. Anitha Address of Applicant :Assistant Professor, Department of CSE, ISL ENGINEERING COLLEGE, International, Airport Rd, Bandlaguda, Chandrayangutta, Hyderabad, Telangana-500005, India. Hyderabad ----</p> <p>10)Syeda Sumaya Afreen Address of Applicant :Assistant Professor, Department of CSE(AI&ML), CMR Technical Campus, Kandlakoya (V), Medchal Road, Hyderabad – 501401, Telangana, India. Hyderabad -----</p>
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(57) Abstract :
ABSTRACT AN IoT BASED CROP RECOMMENDATION SYSTEM TO MAXIMIZE CROP YIELD USING ADAPTIVE DEEP NEURAL NETWORK MODEL The prediction of the right crop at the right place at the right time will be extremely helpful in increasing the crop yield, which also results in economic proliferation. Machine learning is an emerging technique in the field of agriculture in various ways, including soil classification, soil nutrient analysis, crop prediction or suggestion. Deep learning has previously been utilized to construct decision support systems in a variety of fields with the help of Deep Neural network. As a result, there's an incentive to use it in other essential areas like agriculture. A prospective study area has been predicting which crop to grow based on environmental, soil, water, and crop factors. Farmers may use an accurate crop recommendation model to help them determine what to grow and when to grow it. Crop Recommendation Systems are approached in different ways Based on the given input, the model applies an extreme learning machine, a fast learning classifier algorithm, for suggesting the appropriate crop to its users. ML-based model, Smart Crop Selection (SCS), which is based on data of metrological and soil factors. These factors include nitrogen, phosphorus, potassium, CO2, pH, EC, temperature, humidity of soil, and rainfall. Existing IoT-based systems are not efficient as compared to our proposed model due to limited consideration of these factors. In the drafted work, real-time sensory data is sent to Firebase cloud for analysis. Multiple Linear Regression leverages prediction of the rainfall in future, a much-desired information for the health of any crop and also visualized on the Android app.

No. of Pages : 12 No. of Claims : 7


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Application Details

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APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	20/02/2023
APPLICANT NAME	1 . DR BAGAM LAXMAIAH 2 . DR MEENAKSHI SHARMA 3 . DR. P. MARISHKUMAR 4 . RANJITH K 5 . NIYAS AHAMED S 6 . REVANTH KUMAR 7 . SHRIDHARSHAN V A K 8 . DR.R.RAMKUMAR
TITLE OF INVENTION	MAINTENANCE OF HYGIENIC ENVIRONMENT IN VARIOUS HUMAN PERSONAL HYGIENE THROUGH WRIST BAND USING AI TECHNIQUES
FIELD OF INVENTION	ELECTRONICS
E-MAIL (As Per Record)	
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Application Status

IoT based artificial intelligence indoor air quality monitoring system using enabled RNN algorithm techniques

Article type: Research Article

Authors: [Ramachandraarjunan, Senthilkumar](https://content.iospress.com:443/search?q=author%3A%28%22Ramachandraarjunan.Senthilkumar%22%29) (https://content.iospress.com:443/search?q=author%3A%28%22Ramachandraarjunan.Senthilkumar%22%29)^a - | [Perumalsamy, Venkatakrishnan](https://content.iospress.com:443/search?q=author%3A%28%22Perumalsamy,Venkatakrishnan%22%29) (https://content.iospress.com:443/search?q=author%3A%28%22Perumalsamy,Venkatakrishnan%22%29)^b | [Narayanan, Balaji](https://content.iospress.com:443/search?q=author%3A%28%22Narayanan,Balaji%22%29) (https://content.iospress.com:443/search?q=author%3A%28%22Narayanan,Balaji%22%29)^c

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Abstract: Monitoring indoor air quality stays needed for human health because people use more than 95% of air in their indoor rooms. An Intelligent Internal Air Quality Monitoring (IIAQM) system built on the Internet of Things (IoT) devices has been developed and tested in Quantanics Techserv Private Limited, Tamilnadu, India. To monitor the levels of CO2, PM2.5 (Particle Matters 2.5), and moisture measurement, the IIAQM model has been used to monitor the present level of air quality. The gateway collects IIAQM sensor data in a few seconds and transfers data to cloud server. Approved users can incorporate the cloud systems through mobile applications or web servers. Installation of sensor networks, instrument transformers, and IoT-powered microcontrollers will provide air quality monitoring for buildings. The proposed window controller configuration is designed with the help of a Recurrent Neural Network (RNN) to predict the air quality level in advance. If the air quality level is above the normal level, the window controller automatically will open with the help of sensor activity control system. After the AQI (Air Quality Index) becomes normal, hence the window controller is closed automatically. The air quality index, CO2, and humidity data are visualized on the Grafana dashboard.

Keywords: Internet of things, machine learning, recurrent neural networks humidity sensor, intelligent internal air quality monitoring system

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Journal: [Journal of Intelligent & Fuzzy Systems](https://content.iospress.com:443/journals/journal-of-intelligent-and-fuzzy-systems) (https://content.iospress.com:443/journals/journal-of-intelligent-and-fuzzy-systems), vol. 43, no. 3, pp. 2853-2868, 2022

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2

LI-FI Based Voice Communication

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Abstract— In a world of wireless technology, the number of devices accessing the internet is growing every day. Wi-Fi is one of the most adaptable and compelling innovation with radio frequencies for the transmission of information. But Wi-Fi is confronting numerous difficulties specially limit, accessibility, effectiveness and security. The Wi-Fi radiates radio waves which are extremely unsafe for the patients and they decipher the clinic instruments. This paper focuses on developing a light fidelity (Li-Fi) based system and analysing performance. This is much more secure method of transmission compared to existing technologies. This protocol can be adapted where radio waves are restricted, such as airplanes, hospitals and in some research facilities. This technology envisions our future where data for laptops, smart phones, and tablets will be transmitted in an economic and eco-friendly medium of light in room. To design our project, Li-Fi technology we use platforms like Arduino IDE, Li-Fi transmitter, receiver and LED's.

Keywords: *Arduino IDE, Eco-Friendly, LED's, Li-Fi, Li-Fi Transmitter and Receiver, Wi-Fi.*

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I. INTRODUCTION

In [1] The target of this project is to design a Li-Fi based voice communication system, as Light Fidelity (Li-Fi) is the future technology which replaces the Wi-Fi. Because Li-Fi overcomes disadvantages of Wi-Fi like data transfer speed of Li-Fi is more than 1Gbps. Li-Fi uses light as a carrier and its visible light spectrum has 10,000 broad spectrum in comparison of radio frequencies. Li-Fi is a bidirectional, cheaper, high speed and fully networked wireless communication technology similar to Wi-Fi. Li-Fi based audio transmission is much faster and secured communication.

Li-Fi can play a major role in relieving the heavy loads which the current wireless systems face since it adds a new and unutilized bandwidth of visible light to the currently available radio waves for data transfer. Many popular internet applications such as video and audio downloads, live streaming, etc., use Li-Fi technology. These applications place heavy demands on the downlink bandwidth, but require minimal uplink capacity. In this way, the majority of the internet traffic is off-loaded from existing RD channels, thus also extending cellular and Wi-Fi capacities [2].

II. EMBEDDED SYSTEMS

[7] Embedded systems are computer systems that are part of larger systems and they perform some of the requirements of these systems. It is a both combination of software and hardware which together form a component of a larger machine. Embedded systems cover a large range of computer systems from ultra-small computer-based devices to large

systems monitoring. Due to small size and requirements for mobility, but also extremely low production costs these systems require small and controlled resource consumption and have limited hardware capacity.

III. LITERATURE SURVEY

1. Audio Transmission Using Li-Fi Technology (Year 2019): From the project [1], the main aim is to solve issues such as the shortage of radio – frequency bandwidth and also allow internet where traditional radio-based wireless isn't allowed such as aircraft (or) hospital.
2. Li-Fi Based High Data Rate Visible Light Communication for Data and Audio Transmission (Year 2017): In this project [2], the objective is to transmit data and audio through light at very high data rates without use of microcontrollers and its other peripheral devices. This project describes that the transfer of data and audio without microcontrollers is much more effective and powerful.
3. Li-Fi Based Audio Transmission with Home/Office Automation System (Year 2016): The project [4], describes that Li-Fi based automation can control the number of devices by using the DTMF encoder. Different key combinations can control the number devices. In future three phase devices can be controlled by using Li-Fi technology.
4. Li-Fi: Wireless Communication Media (Year 2016): The aim of this project [3] is to make system for data transfer in indoor unit. With the use of LED, data can transmit at



Adjustable Road Divider Using IoT

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Abstract— Traffic congestion is the major problem in countries like India. We are facing a lot of issues regarding traffic majorly in the morning and the evening hours. This paper proposes an embedded system solution for traffic congestion using existing resources effectively. So, our project help people to save their time and fuel. It consists of IR Sensors which detects number of vehicles on both the lanes and a DC gear motor is fixed to move the road divider. A buzzer is arranged to alert people when the divider is moving. If number of vehicles is more on right side, the divider moves towards left and accordingly.

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Keywords: Arduino UNO, Barrier, Density of traffic, IR Sensors, Lane divider, Movable road divider, Traffic control.

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I. INTRODUCTION

In [4] Now-a-days number of private vehicles increasing day by day especially in major cities like Hyderabad and creating more rush. [1] High volume of vehicles, the inadequate infrastructure and the irrational distribution of the signalling system are main reasons for chaotic congestions. It indirectly adds to the increase in pollution level as engines remain on in most cases, a huge volume of natural resources in forms of petrol and diesel is consumed without any fruitful outcome.

Divider is generally used to divide the road into parts. Movable road divider moves according to the flow of traffic. In many areas we observe heavy traffic on one side of the road and the other side remains empty. In such situations we can use the empty side of the road to clear traffic on opposite side. We can give priority to government vehicles and VIP vehicles.

II. EMBEDDED SYSTEMS

An [9] embedded system is a computer hardware system having software embedded in it. An embedded system can be an independent system or it can be a part of a large system. An embedded system is a microcontroller or microprocessor based system which is designed to perform a specific task. It is a large combinational system. It is combination of three major components: hardware, application software, real time operating system.

III. PRESENT SIGNALLING SYSTEM

We can observe that the present signalling system is controlled by traffic police and traffic signals. These traffic

signals are embedded with fixed time. We require man power to handle the traffic conditions

IV. LITERATURE SURVEY

1. IoT deployed automatic movable smart road divider to avoid traffic problems (Year 2019): From the project [5], Ultrasonic sensors are placed to generate high frequency sound waves. Time period cameras are used to gather information and send to cloud. The blob analysis and the traffic density victimization morphological filtering has discovered in this system.
2. Implementation of movable road divider using Internet of Things (Year 2018): In this project [4], the objective is to reduce traffic congestion in a smarter way and also reduce manual dependency and manual traffic coordination. This mechanism not only saves times but also fuel.
3. Design and implementation of smart movable road divider (Year 2017): The project [3], formulated a mechanism of automated movable road divider that can shift lanes, so that we can have more number of lanes in the direction of rush. The sensors placed on the dividers sense the flow of traffic.
4. Reducing emergency services response time in smart cities (Year 2015): The aim of this project [2] is to reduce the delay of emergency vehicles and police cars which are leading to increase in deaths on roads and financial losses. This can be achieved with a traffic management system (TSM).

Density based traffic signal system (Year 2014): The paper [1] describes the development of a density based dynamic traffic system. The image captured in the traffic signal is processed and converted into grayscale image then its threshold

Design of CMOS Base Band Analog

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Summary

A complementary metal–oxide semiconductor (CMOS) less-energy receiver baseband analog (BBA) Base band analog continuous analog circuit design found on irregular filter and level of the gain is described. The most effective allocation of the gain, noise figure (NF), and the input-referred third-order intercept point (IIP3) of every block was carried out to decrease utilization of power by using the specified guidelines of the analog block. The BBA receiver strip was manufactured on 0.18- μm CMOS generation and 30 dB of IIP3 with 55 dB of gain, and 31dB of NF was acquired at energy utilization of 4.86 mW. It was used to decrease the consumption of power. The use of the Miller capacitance in the receiver BBA improved the phase margin for the operational amplifier (op-amp). This circuit was designed with micrometer CMOS generation with good gain and NF, which is very useful in communication systems.

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A Novel Low-Power Frequency-Modulated Continuous Wave Radar Based on Low-Noise Mixer

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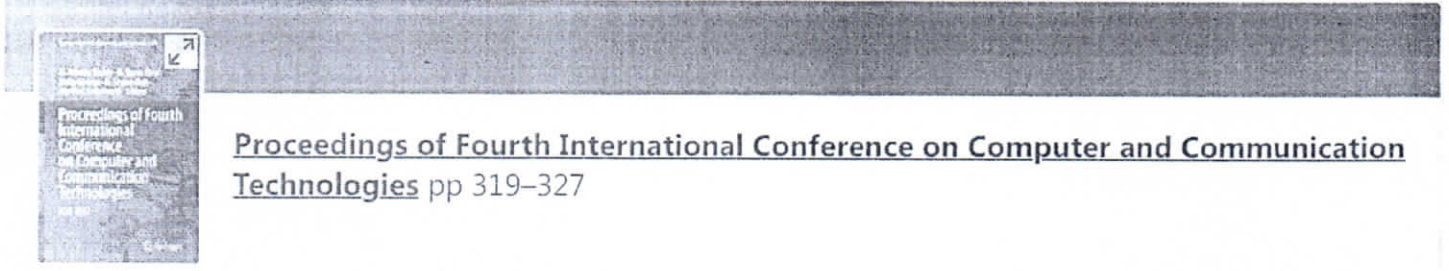
Summary

In this article, a 24-GHz DCR for frequency-modulated continuous wave ranging radar based on short flicker noise mixer in 90-nm SOI CMOS technology is available. A low-noise and low-power LNA acquire SNIM method is discovered. Nullify tools and enhance inductor are found to extend production. The expense result of discrete low-noise amplifier proves the peak gain is 17.2 dB at 23.8 GHz and the frequency range is approximately 2.2 GHz from 22.8 GHz to 25 GHz. The low-noise amplifier achieves standard 3 dB NF inside the 24-GHz band. A current-bleeding mixer is used for lower noise and the elements effect FN has been considered. Appropriate component values and local oscillator power has been selected to create the mixer lesser noise. Evaluation outcome demonstrate the Rx displays 20.3 dB peak gain, 7 dB SSB noise figure. FN of the mixer and the Rx is calculated correspondingly and the noise knee-point of Rx was noticed 60 kHz. The Rx absorbs only 16 mW with chip size of 0.65 mm² with pads. The outcome express that the future Rx can be a good applicant for frequency-modulated continuous wave ranging radar.

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Anomaly-Based Hierarchical Intrusion Detection for Black Hole Attack Detection and Prevention in WSN

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Abstract

The wireless sensor network (WSN) is the network of sensors which might be deployed in the surroundings for sensing any kind of physical phenomenon. Further sensed data is transmitted to base station (BS) in order to processes the data. During data processing, routed data security is most vital and is very challenging in WSN. The black hole is a most malicious attack, and it targets the routing protocols of sensors. This type of attack may have devastating impacts over hierarchical routing protocols.

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