- 7 Years of Excellence in IEEE Project development for universities across INDIA, USA, UK, AUSTRALIA, and SWEEDEN.
- Expert developers in JAVA, DOT NET, ANDROID, PHP, MATLAB, NS2, NS3, VLSI, CLOUD SIM, TANNER, MICROWIND, EMBEDDED, ROBOTICS, MECHANICAL, MECHATRONICS, WIRELESS NETWORS, OPNET, OMNET
- Over 11000+ projects, 425 clients MICANS IFNFOTECH provides IEEE & application projects for CSE,IT,ECE,EEE,MECH,CIVIL,MCA,M.TECH,M.PHILL,MBA,

#### **LOW PRICE GUARANTEED**

Cost-Aware Secure Routing (CASER) Protocol
Design for Wireless Sensor Networks

## **Abstract**

Lifetime optimization and security are two conflicting design issues for multi-hop wireless sensor networks (WSNs) with non-replenishable energy resources. In this paper, we first propose a novel secure and efficient Cost-Aware SEcure Routing (CASER) protocol to address these two conflicting issues through two adjustable parameters: energy balance control (EBC) and probabilistic-based random walking. We then discover that the energy consumption is severely disproportional to the uniform energy deployment for the given network topology, which greatly reduces the lifetime of the sensor networks. To solve this problem, we propose an efficient non-uniform energy deployment strategy to optimize the lifetime and

micansinfotech, NO: 8, 100 FEET ROAD, PONDICHERRY.

<u>WWW.MICANSINFOTECH.COM</u>; MICANSINFOTECH@GMAIL.COM

micansinfotech

+91 90036 28940 +91 94435 11725

7 Years of Excellence in IEEE Project development for universities across INDIA, USA, UK, AUSTRALIA, and SWEEDEN.

Expert developers in JAVA, DOT NET, ANDROID, PHP, MATLAB, NS2, NS3, VLSI, CLOUD SIM, TANNER, MICROWIND, EMBEDDED, ROBOTICS, MECHANICAL, MECHATRONICS, WIRELESS NETWORS, OPNET, OMNET

Over 11000+ projects, 425 clients - MICANS IFNFOTECH provides IEEE & application projects for CSE,IT,ECE,EEE,MECH,CIVIL,MCA,M.TECH,M.PHILL,MBA,

IEEE Projects 100% WORKING CODE + DOCUMENTATION+ EXPLAINATION - BEST PRICE

**LOW PRICE GUARANTEED** 

message delivery ratio under the same energy resource and security requirement. We also provide a quantitative security analysis on the proposed routing protocol.

**Existing System** 

The existing routing schemes is that try to avoid having any sensor nodes run out of energy while the energy levels of other sensor nodes in that area are still high. We implement this by enforcing a balanced energy consumption for all sensor nodes so that all sensor nodes will run out of energy at about the same time. This design guarantees a high message delivery ratio until energy runs out from all available sensor nodes at about the same time.

**Proposed System** 

In this paper, presented a secure and efficient Cost-Aware SEcure Routing (CASER) protocol for WSNs to bal-ance the energy consumption and increase

micansinfotech, NO: 8, 100 FEET ROAD, PONDICHERRY.

WWW.MICANSINFOTECH.COM; MICANSINFOTECH@GMAIL.COM

- 7 Years of Excellence in IEEE Project development for universities across INDIA, USA, UK, AUSTRALIA, and SWEEDEN.
- Expert developers in JAVA, DOT NET, ANDROID, PHP, MATLAB, NS2, NS3, VLSI, CLOUD SIM, TANNER, MICROWIND, EMBEDDED, ROBOTICS, MECHANICAL, MECHATRONICS, WIRELESS NETWORS, OPNET, OMNET
- Over 11000+ projects, 425 clients MICANS IFNFOTECH provides IEEE & application projects for CSE,IT,ECE,EEE,MECH,CIVIL,MCA,M.TECH,M.PHILL,MBA,

#### **LOW PRICE GUARANTEED**

network lifetime. CASER has the flexibility to support multiple routing strate-gies in message forwarding to extend the lifetime while increasing routing security. Both theoretical analysis and simulation results show that CASER has an excellent routing performance in terms of energy balance and routing path distribution for routing path security. We also proposed a non-uniform energy deployment scheme to maximize the sensor network lifetime.

# **System Requirements**

HARDWARE REQUIREMENTS

Processor - Pentium –III

• Speed 1.1 Ghz

• RAM - 256 MB(min)

micansinfotech, NO: 8, 100 FEET ROAD, PONDICHERRY.

WWW.MICANSINFOTECH.COM; MICANSINFOTECH@GMAIL.COM

- 7 Years of Excellence in IEEE Project development for universities across INDIA, USA, UK, AUSTRALIA, and SWEEDEN.
- Expert developers in JAVA, DOT NET, ANDROID, PHP, MATLAB, NS2, NS3, VLSI, CLOUD SIM, TANNER, MICROWIND, EMBEDDED, ROBOTICS, MECHANICAL, MECHATRONICS, WIRELESS NETWORS, OPNET, OMNET
- Over 11000+ projects, 425 clients MICANS IFNFOTECH provides IEEE & application projects for CSE,IT,ECE,EEE,MECH,CIVIL,MCA,M.TECH,M.PHILL,MBA,

#### **LOW PRICE GUARANTEED**

• Hard Disk - 20 GB

Key Board - Standard Windows Keyboard

• Mouse - Two or Three Button Mouse

• Monitor - SVGA

# SOFTWARE REQUIREMENTS:-

• Operating System : LINUX

• Tool : Network Simulator-2

• Front End : OTCL (Object Oriented Tool

Command Language)

micansinfotech, NO: 8, 100 FEET ROAD, PONDICHERRY.

<u>WWW.MICANSINFOTECH.COM</u>; MICANSINFOTECH@GMAIL.COM

- 7 Years of Excellence in IEEE Project development for universities across INDIA, USA, UK, AUSTRALIA, and SWEEDEN.
- Expert developers in JAVA, DOT NET, ANDROID, PHP, MATLAB, NS2, NS3, VLSI, CLOUD SIM, TANNER, MICROWIND, EMBEDDED, ROBOTICS, MECHANICAL, MECHATRONICS, WIRELESS NETWORS, OPNET, OMNET
- Over 11000+ projects, 425 clients MICANS IFNFOTECH provides IEEE & application projects for CSE,IT,ECE,EEE,MECH,CIVIL,MCA,M.TECH,M.PHILL,MBA,

#### **LOW PRICE GUARANTEED**

## Reference

[1] Y. Li, J. Ren, and J. Wu, "Quantitative measurement and design of source-location privacy schemes for wireless sensor networks," IEEE Trans. Parallel Distrib. Syst., vol. 23, no. 7, pp. 1302–1311, Jul. 2012.

[2] Y. Li, J. Li, J. Ren, and J. Wu, "Providing hop-by-hop authentication and source privacy in wireless sensor networks," in Proc. IEEE Conf. Comput. Commun. Mini-Conf., Orlando, FL, USA, Mar. 2012, pp. 3071–3075.

micansinfotech, NO: 8, 100 FEET ROAD, PONDICHERRY.

WWW.MICANSINFOTECH.COM; MICANSINFOTECH@GMAIL.COM