

MOUMITA DAS

ASSISTANT PROFESSOR

Department of Computer Science & Engineering

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Academic Credentials

Pursuing Ph. D (Registered): NIT, Arunachal Pradesh

M. Tech: BESU, Shibpur

B. Tech: WBUT

Research Activities

Interested research fields: Network Security & Cryptography

Experience

I have also worked as Guest Lecturer (from August 2015) in the department of Computer Science & Engineering at **National Institute of Technology, Arunachal Pradesh**. I have also completed one project as a Junior Research Fellow in the department of Electronics & Communication Engineering at **National Institute of Technology, Arunachal Pradesh** (January 2014-July 2015). 4.6+ Years rich experience with **Bengal Institute of Technology & Management, Birbhum** under West Bengal University of Technology as a Teaching Associate in the department of Information Technology.

List of Publications

International Journals

1. Moumita Das, Rajat Subhra Goswami, C.T.Bhunia, "Implementation of New Method to Generate a Key in Automatic Variable Key for Perfect Security", International Journal of Security and Its Applications, Volume 10, No 4, pp. 367-376, **2016**.
2. Moumita Das, Rajat Subhra Goswami, Manash P Dutta, S.K. Chakraborty, C.T.Bhunia, "Technique to Generate Variable Keys with Key Variation with Noise Burst Bit for Achieving Perfect Security in Cryptology towards Optimum Data Transfer", International Journal of Security and Its Applications, Volume 11, No 3, pp. 39-50, **2017**.
3. Moumita Das, Pranab Roy, Rajat Subhra Goswami, C. T. Bhunia, "Investigation a New Technique of Automatic Variable Key Using Two Dimensional Matrix Approach to Achieve Perfect Security", International Journal of Communication Networks and Distributed Systems, InderScience publisher, Volume 20, No 2, pp. 214-225, **2018**.

International Conferences

1. Moumita Das, Rajat Subhra Goswami, Manash P Dutta, S. K. Chakraborty, C. T. Bhunia, "Methods to Generate Variable Keys with Noise Burst Bit in Modern Cryptography for Achieving Perfect Security", IEEE ICIIP 2017 (IEEE International Conference on Image Information Processing 2017) , pp. 1-6, 21st -23rd December **2017**.

Skills and Proficiencies

Subjects	:	Data Structure, Operating System, Digital Electronics, Computer Networking, Network Security.
Programming languages	:	C, C++, Core Java.
Operating Systems	:	Win-8, Win-7, Win-XP, MS-DOS.

Participation

1. Faculty training workshop on “Ethical Hacking and Information Security” at Bengal Institute of Technology and Management, Bolpur from 23rd -24th August, 2011 conducted by IIT Kharagpur.
2. Faculty Development Program on ”Optical Communication and Networking” from 21st-30th September, 2013 organized By department of Electronics and Communication Engineering and Computer Science & Engineering at Bengal Institute Of Technology and Management, Bolpur.
3. 3 day IEEE workshop on “VLSI, Embedded system and Modern communication System Design Techniques” at Bengal Institute Of Technology and Management from 21 st-23rd October ,2013 in association with Kolkata Chapter of IEEE EDS & IEEE comsoc.
4. Faculty Development program on ”Advances in Semiconductors, Communication, Electronics and Nanotechnology ASCENT ” from 26th-30th May, 2014 at National Institute Of Technology, Arunachal Pradesh organized by the department of Radio Physics, Electronics, University of Calcutta.
5. 5 day TEQIP-III workshop on “Machine Learning, Big Data, and IOT”, at National Institute of Technology, Arunachal Pradesh organized by the department of Computer Science & Engineering from 13th November- 17th November 2017.

Projects

- **JRF Project:**

Title : Intelligent Voice Stick for Blind and Partially Sighted People.

Abstract: The main aim of this project is to assist blind persons without human assistance. It is well known that blind people carry a hand stick with them whenever they move around. Sometimes even when they use this stick there is no guarantee that they are safe and secured in reaching their destinations. There may be an obstacle in their path which they didn't come across with the help of the stick. Thus the person may be injured if the obstacle is big enough or dangerous. Thus a prototype has been suggested to assist the blind person and provide them a clear path. The system consists of ultrasonic sensor fixed to the user's stick. While the user moves the stick in the forward direction, the ultrasonic sensor fixed to the stick tries to detect the obstacle if any present in the path. If the sensor detects the obstacle the output of the receiver triggers and this change will be detected by the microcontroller since the output of the receivers is given as inputs to the microcontroller. Thus the microcontroller immediately alerts the buzzer as soon it receives the triggered output from any of the sensors. Thus the user can change the direction of the stick in any other direction to avoid any kind of injury as soon the buzzer is activated. The entire controlling unit will be fixed to the hand stick. The system not only gives the buzzer sound with

the same intensity but it gives the sound which depends on the distance between the user and the obstacle. We can even add the voice module to generate the messages indicating the distance of the obstacle from the user. The aim of the overall system is to provide a low cost and efficient navigation aid for blind which gives a sense of artificial vision by providing information about the environmental scenario of static and dynamic objects around them. Ultrasonic sensors are used to locate and calculate distance of the obstacles around the blind person and guide them towards available paths. Here the output is in the form of voice which the blind person can hear.