



Name of the faculty: Dr. Pinaki Ghosh

Designation: Professor & Head of School of Advanced Computing & Computer Application

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Researcher ID: J-4039-2016

Total Citation Index: 36 (9 Documents), H-index: 3 (Scopus)

Total Citation Index: 123 (H-index: 7, i10-index: 6) (Google Scholar)

Educational Qualification:

PhD (Computer Engineering), M. Tech (CSE), B.E (Computer Science)

Total Experience: 21 yrs

Academic: 20 yrs. | Industry: 1 yr.

Areas of Interest:

Internet of Things, Wireless Networks, RFID Communication, Network Security

Brief Profile:

Dr Pinaki Ghosh has 21 years of experience in teaching and industry in various institutions and universities. He is currently working as a Professor and Head of School at School of Advanced Computing & Computer Application. He has published more than 40 research papers in peer reviewed journals and conferences of international repute. He has one patent published and five

patents filed. His research area includes Internet of Things, RF Communication, Wireless and Adhoc Networks, and Machine Learning.

Research publications in International Journal:

1. Lilhore, U. K., Simaiya, S., Pandey, H., Gautam, V., Garg, A., & Ghosh, P. (2022). Breast Cancer Detection in the IoT Cloud-based Healthcare Environment Using Fuzzy Cluster Segmentation and SVM Classifier. In *Ambient Communications and Computer Systems* (pp. 165-179). Springer, Singapore.
2. Lilhore, U. K., Simaiya, S., Ghosh, P., Garg, A., Trivedi, N. K., & Anand, A. (2022). Role of Swarm Intelligence and Artificial Neural Network Methods in Intelligent Traffic Management. In *Machine Learning and Autonomous Systems* (pp. 209-222). Springer, Singapore.
3. Garg, A., Ghosh, P., & Kamali Gupta, D. P. (2021). Framework for Reducing Response Time using Semi-Distributed Load Balancing. *Annals of the Romanian Society for Cell Biology*, 01-08.
4. Ghosh, P., Prasad, D., & Guleria, K. (2020). An m-IoT Framework for Remote Monitoring of ECG Signals. *Journal of Advanced Research in Dynamical and Control Systems*, 296-300.
5. Hassan, A., Wahid, S. A., Prasad, D., & Ghosh, P. (2020). Design and Development of Android Libraries to be Leveraged by Developer for Better Application Automation. *Journal of Computational and Theoretical Nanoscience*, 17(9-10), 4543-4547.
6. Singla, S., Ghosh, P., & Kumari, U. (2019). Breast cancer detection using genetic algorithm with correlation-based feature selection: experiment on different datasets. *International Journal of Computer Sciences and Engineering*, 7(4), 406-410.
7. Ghosh, P., & Mahesh, T. R. (2019). Untraceable privacy-preserving authentication protocol for RFID tag using salted hash algorithm. *International Journal of Advanced Intelligence Paradigms*, 13(1-2), 193-209.
8. Ghosh, P., & Mahesh, T. R. (2015). Smart city: concept and challenges. *Int. J. on Advances in Engineering, Technology and Science*, 1(1).
9. Vyas, S., & Ghosh, P. (2014). Review and Proposed Work for MODI-LEACH for Improvement of LEACH for Energy Consumption in Wireless Sensor Networks. *JAERD-2014*.

10. Jeejo, P. P., & Ghosh, P. (2015). Performance Study of AODV Protocol during Collaborative Blackhole Attack in MANET. *International Journal for Universal Science & Technology*, 1(2).
11. Jeejo, P. P., & Ghosh, P. (2015). Performance Study of AODV Protocol during Collaborative Blackhole Attack in MANET. *International Journal for Universal Science & Technology*, 1(2).
12. Nagar, S. J., Raimagia, D. G., & Ghosh, P. (2014). Identification and Elimination of Selfish Nodes in Ad hoc Network. *International Journal of Engineering Research and Development*, 10(4), 2278-067.
13. Trambadiya, S. N., Ghosh, P., & Rathod, J. N. (2013). Group caching: A novel cooperative caching scheme for mobile ad hoc networks. *Int. J. Eng. Res. Develop.*, 6(11), 23-30.
14. Goyal, R., & Ghosh, P. (2010). Evaluation of Cooperative Black Hole Attack in AODV Routing Protocol in MANET. *BLB- International Journal of Science & Technology*, 1(2), 161-170.

Papers presented in International Conferences:

1. Sarangi, P. K., Chawla, M., Ghosh, P., Singh, S., & Singh, P. K. (2022). FOREX trend analysis using machine learning techniques: INR vs USD currency exchange rate using ANN-GA hybrid approach. *Materials Today: Proceedings*, 49, 3170-3176.
2. Tiwari, D., Prasad, D., Guleria, K., & Ghosh, P. (2021, October). IoT based Smart Healthcare Monitoring Systems: A Review. In *2021 6th International Conference on Signal Processing, Computing and Control (ISPCC)* (pp. 465-469). IEEE.
3. Simaiya, S., Gautam, V., Lilhore, U. K., Garg, A., Ghosh, P., Trivedi, N. K., & Anand, A. (2021, October). EEPsA: Energy Efficiency Priority Scheduling Algorithm for Cloud Computing. In *2021 2nd International Conference on Smart Electronics and Communication (ICOSEC)* (pp. 1064-1069). IEEE.
4. Garg, A., Lilhore, U. K., Ghosh, P., Prasad, D., & Simaiya, S. (2021, August). Machine Learning-based Model for Prediction of Student's Performance in Higher Education. In *2021 8th International Conference on Signal Processing and Integrated Networks (SPIN)* (pp. 162-168). IEEE.
5. Ghosh, P., & Mahesh, T. R. (2016, November). A privacy preserving mutual authentication protocol for RFID based automated toll collection system. In *2016*

International Conference on ICT in Business Industry & Government (ICTBIG) (pp. 1-5). IEEE.

6. Dubai, M. J., Mahesh, T. R., & Ghosh, P. (2011, April). Design of new security algorithm: Using hybrid Cryptography architecture. In 2011 3rd International Conference on Electronics Computer Technology (Vol. 5, pp. 99-101). IEEE.
7. Ramani, A. K., Silakari, S., & Ghosh, P. (2004). A Cost-Effective Iris Recognition System Using Linear Discriminant Analysis and Cross-Correlation Techniques in ICETE (2) (pp. 140-145).

Papers presented in National Conferences:

1. Baldev, D. S., & Ghosh, P. (2015). Review of parking spaces assistance schemes in vehicular networks. ETCEE–2015, 17.
2. Detroja, H. C., Kaneriya, N. C., & Ghosh, P. (2015). A Performance Comparison of Various Energy Efficient Algorithms on AODV Protocol in MANET. ETCEE–2015, 40.

Patents:

1. Title: Covid19 Intelligent Detection System
Type: Innovation
File Number: 2021100784
Country Filed: Australia
Status: Granted
Filing Date: 09-02-2021
2. Title: Automatic Wearable Safety Device
Type: Innovation
File Number: 202111021845
Country Filed: India
Status: Filed
Filing Date: 14-05-2021
3. Title: Power Saving System for Operating Machine and Method Thereof
Type: Innovation
File Number: 202111049806
Country Filed: India
Status: Filed
Filing Date: 30-10-2021
4. Title: Parcel Delivery System using Unmanned Aerial Vehicle and Method Thereof

Type: Innovation

File Number: 202111051349

Country Filed: India

Status: Filed

Filing Date: 09-11-2021

5. Title: Multipurpose Desk Utility

Type: Design

File Number: 360866-001

Country Filed: India

Status: Filed

Filing Date: 17-03-2022

6. Title: Refrigerator Including System for Tracking Food Freshness

Type: Innovation

File Number: 202211026000

Country Filed: India

Status: Filed

Filing Date: 04-05-2022

Master's Level Thesis Guided:

1. LCD based Resin 3D Printer, Annandita Singh Bhati
2. Image Compression using Neural Network, Niharika Krishna
3. Hybrid DE/BBO Approach for PEGASIS Algorithm, Chetna Singh
4. Improving Energy Efficient in Wireless Sensor Networks, Bhavini Saraswat
5. Investigating the Impact of Black Hole on Hierarchical Protocol - LEACH, Sheffy Jindal
6. Vehicular Opportunistically-Assisted Parking Scheme using Inter-Vehicular Ad-Hoc Network, Drashti S Baldev
7. A Secure Method for AODV Routing using Detection and Prevention of Collaborative Blackhole Attacks In MANET, Payyappilly Priya Jeejo
8. An Enhancement Energy Consumption Model on AODV Protocol for MANET, Hetal C Detroja
9. Improving slow start strategy of TCP newReno Protocol based on congestion control algorithm, Chintan Chabadiya
10. MOD-LEACH: Improvement of LEACH for energy consumption in Wireless Sensor Networks, Shekhar Vyas

11. G-MDM: Group-based Mobile Data Management, Suhani N Trambadiya
12. Devised formulation for improving the lifetime and energy efficiency of routing algorithm in wireless sensor network, Surabhi Mishra
13. Service Based Trusted System using Social Networking, Hardik P Jagad
14. Timely Based Confide System with Social Networking, Niraj D Bhagchandani
15. Securing AODV Routing Protocol Against Cooperative Blackhole Attack in MANET, Rupali Goyal
16. Evolution of Lossless Still Image Compression Method based on Low Complexity Lossless Compression & DWT, Urmila Mahor
17. Intrusion Detection in Wireless Ad-hoc Network, Banshilal Patidar
18. Specialized Study of Routing Protocols to Maximize Efficiency of MANET using NS-2, Akhilesh A Wao
19. Enhanced Hash based Strong Password Authentication Protocol, Vijay Kumar Lokhande
20. Anomaly Detection using Two Approaches, Munmun Sharma
21. Ear Recognition based on Average Ear Approach, Gopal Singh Tandel

Workshops/Seminars/Conference Organized:

1. International Conferences on “Recent Advances in Sciences and Engineering” at SAGE University Bhopal, India on 23rd April 2022.
2. 3rd International Conference on Computing: Communication, Networks and Security (IC3NS-2018), at Mody University, Lakshmanagarh, India on February 23-24, 2018.
3. National Conference on Computing and Informatics (NCCI-2015), at Mody University, Lakshmanagarh, India on December 2, 2015.
4. National Conference on Emerging Trends in Computer, Electrical and Electronics (ETCEE-2015) at Atmiya Institute of Technology and Science, Rajkot, India on March 13-14, 2015.
5. National Conference on Emerging Trends in Computer and Electrical Engineering (ETCEE-2014) at Atmiya Institute of Technology and Science, Rajkot, India on March 7-8, 2014.
6. National Training Workshop on Self-Management of Excessive Tension (SMET-2013) at Atmiya Institute of Technology and Science, Rajkot, India on February 3, 2013.
7. CSI Sponsored Faculty Development Programme in Data Mining at Bansal Institute of Science and Technology, Bhopal, India in April 2008.

8. AICTE Sponsored Staff Development Programme in Pattern Recognition in Neural Networks at Oriental Institute of Science and Technology, Bhopal, India on January 16 to 28 in 2006.

Membership of Professional Bodies:

1. Life member of CSI
2. Life member of ISTE
3. Member of IAENG
4. Member of CSTA

Other Achievements:

1. Delivered multiple sessions in Two Weeks Summer School on “Applications of IoT” from 30th May 2022 to 3rd June 2022 at SAGE University, Bhopal.
2. Conducted Hands-on Workshop on “Internet of Things using Arduino & Raspberry Pi” as a resource person from 13th December 2021 to 17th December 2021 at Chitkara University, Punjab.
3. Delivered session on “Internet of Things – Hand-on Experience” in One-week ATAL Faculty Development Programme on “Internet of Things (IoT) – Challenges and Applications” at Deenbandhu Chhotu Ram University of Science & Technology (DCRUST), Sonapat on 18th November 2021.
4. Delivered session on “Outcome-based Education (Importance and Implementation)” in Two-day National E-Workshop on “Outcome-based Education and Examination Reforms” at Sri Sai College of Engineering & Technology, Pathankot on 15th May 2021.