**Dr Poonam**
B.E.(CE), MTech. (CE), Ph.D. (CE)
Assistant Professor,Department of Computer Engineering
J. C. Bose University of Science and Technology, YMCA
Faridabad, Haryana 121006
INDIA, Orchid-id:0000-0001-8971-0743, Poonam - Google Scholar

## PERSONAL

| | | |
|---|---|---|
| Name | : | **Dr Poonam** |
| Date of Birth | : | 11th May1984 |
| Permanent Address | : | H. No.-1637 |
| | | Sector-3, Faridabad, Haryana 121006 |
| Phone Number | : | 9899284595 |
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## PROFESSIONAL QUALIFICATIONS

i) **Ph.D.** in Computer Engineering from J. C. Bose University of Science and Technology, YMCA, Faridabad. (June 2019).
Title: Game Theory based design of Secured Routing Protocol for MANET.

ii) **MTech.** in Computer Engineering from YMCA Institute of Engineering, Maharishi Dayanand University, Rohtak (2005-07).

iii) **B.Tech.** in Computer Engineering from Maharishi Dayanand University, Rohtak (2001-2005).

## EMPLOYMENT RECORD

**15 Years** of Teaching & Research experience in the field of Opportunistic Network, Adhoc Networks, Algorithm designing and Analysis, Operating Systems, IoT, Game Theory, Advanced Algorithms, Blockchain Technology.

i) Presently working as Assistant Professor (from 1 August 2007) in the Department of Computer Engineering, J. C. Bose University of Science and Technology, YMCA, Faridabad.

## AREA OF RESEARCH

- ❑ Opportunistic Networks
- ❑ Adhoc Networks
- ❑ Game Theory
- ❑ Secure Routing in Adhoc Network
- ❑ Internet of Things (IoT)
- ❑ Blockchain Technology
- ❑ QoS in MANET
- ❑ Advance Algorithm Design
- ❑ Fuzzy Modeling
- ❑ Machine Learning

## STUDENTS GUIDED FOR RESEARCH

| | | | |
|---|---|---|---|
| i) | **M. Tech.** | : | 20 (Completed) |
| ii) | **Ph.D.** (Computer Engineering): | | 02 (In progress) |

## PUBLICATIONS:

| | | | |
|---|---|---|---|
| **Total Number of Publications** | | **:** | **36** |
| a) | Research Papers (Published) International Journals | : | 23 |
| | Research Papers (Communicated) | : | 04 |
| b) | Research papers in Proceedings of conferences | : | 13 |
| | | : | |

## PATENT

Design Patent entitled "Dynamic Defense Mechanism Against Pinned Attacks of Master Nodes in Wireless Sensor Networks", Patent number: 2020101390, Date of Grant: 16 July 2020.

## PROFESSIONAL MEMBERSHIPS

- ❑ Life Time Member, IEEE
- ❑ Life Time Member, CSI

## STC/REFRESHER COURSES/ORIENTATION PROGRAMME/ WORKSHOPS ATTENED

| S.No. | Name of the Course | Duration of Course | Institute conducting Course/Workshops |
|---|---|---|---|
| 1 | Taguchi | 26-12-11 to 31-12-11 | GBU, Greater Noida |
| 2 | Applications of Advanced Computing Technologies | 2-01-12 to 14-01-12 | AICTR, Geeta Colony, Delhi |
| 3 | Web Designing and Graphic Animation | 23-01-2012 to 29-01-2012 | N G Tech, Faridabad |

| 4 | Quality Assurance in Teaching Learning Process | 14-05-2012 to 27-05-2012 | BVIMR, New Delhi |
|---|---|---|---|
| 5 | Application of Artificial Intelligence tools in Power System | 19-06-2012 to 25-06-2012 | YMCAUST, Faridabad |
| 6 | Information Security and Cyber Forensic | 9-07-2012 to 14-07-2012 | YMCAUST, Faridabad |
| 7 | Workshop on Nanotechnology and Embedded System | 23-07-2012 to 3-08-2012 | YMCAUST, Faridabad |
| 8 | FDP on Emerging trends in Engg., Tech. and Management | 1-07-13 to 10-07-13 | YMCAUST, Faridabad |
| 9 | FDP on Software Testing and Quality assurance | 1-14 July 2013 | YMCAUST |
| 10 | FDP on Teaching skill enhancement | 13 Jan-17 Jan 2014 | YMCAUST |
| 11 | Effective Teaching and Research | 6 Jan-10 Jan 2014 | YMCAUST |
| 12 | FDP on neural network using MATLAB | 7-11 July 2014 | YMCAUST |
| 13 | FDP on Technical teacher's role, self-esteem, Motivation and professionalism Development | 1 june-5june 2015 | YMCAUST |
| 14 | STC on Environment, Development and Sustainability | 4/7/16 to 8/7/16 | YMCAUST |
| 15 | FDP on Big Data Analytics & Data/Text Mining using SPSS | 19/12/16 to 25/12/16 | YMCAUST |
| 16 | Entrepreneurship : An Effective tool to Improve Industry- Institute Interaction | 7 Dec 2017-20 Dec 2017 | NITTTR, YMCA UST, Faridabad |
| 17 | Intellectual Property Rights and Patenting | 23 April 2018-27/4/18 | TEQIP, YMCA UST, Faridabad |
| 18 | Data Science and big data analytics | 20-08-2018-1/9/18 | YMCA UST, Faridabad |
| 19 | Graphics and animation for instructional Material Development | 11-02-2019-15/2/19 | YMCA UST, Faridabad |
| 20 | NPTEL Database Management System | Aug-18-Sep 18(1 week) | NPTEL online |
| 21 | Research Methods and Data Analysis Tools | 29/4/19-4/5/19 | J C Bose University of Science and Technology, YMCA |
| 22 | Workshop on Data Analytics | 18/10/2019 to 25/ 10/ 2019 | J C Bose University of Science and Technology, YMCA |
| 23 | Data Science with Python | 15/1/2020 to 17/1/2020 | J C Bose University of Science and Technology, YMCA |
| 24 | Digital Transformation in Teaching Learning Process | 14/02/2020 to 06/03/2020 | J C Bose University of Science and Technology, YMCA |
| 25 | Research in Modern Era | 1/6/2020 to 5/6/2020 | J C Bose University of Science and Technology, YMCA |
| 26 | FDP on R | 11/7/2020 to 15/07/2020 | J C Bose University of Science and Technology, YMCA |
| 27 | VAC COURSE on Cloud Computing | 17/8/2020 to 23/8/2020 | J C Bose University of Science and Technology, |

| | | | YMCA |
|---|---|---|---|
| 28 | FDP on Internet of Things | 12/10/2020 to 16/10/2020 | Amity School of Engineering and Technology, Noida |
| 29 | Professional Development Training Under TEQIP-III | 22-24th Feb, 2021 | IIM, Kashipur |
| 30 | Recent Advancements in AI and ML | 22-27th March, 2021 | J C Bose University of Science and Technology, YMCA |
| 31 | Emerging Research area in Big Data Computing | 11-16th Oct, 2021 | J C Bose University of Science and Technology, YMCA |
| 32 | Blockchain Technology, Cryptocurrencies and Smart Contract Programming | 1-15th Feb 2022 | NIT, Jalandhar |
| 33 | ATAL Faculty development program on Data Science | 21-25th Feb 2022 | J C Bose University of Science and Technology, YMCA |
| 34 | Blockchain Technology and Networks | 07-12th March 2022 | J C Bose University of Science and Technology, YMCA |

## BOOKS AND BOOK CHAPTERS

### Book:

Emerging Technologies for Healthcare (Internet of things and Deep Learning Models) , Scrivener Press, Wiley, First published:30 July 2021, ISBN:9781119791720, Online ISBN:9781119792345, DOI:10.1002/9781119792345

### Book Chapters

1. Sonia Garg, Poonam Mittal, C.K. Nagpal," A Novel Transmission Power Efficient Routing in Cognitive Radio Networks using Game Theory", published book chapter in the book "Advances in Intelligent Systems and Computing 718", Springer, https://doi.org/10.1007/978-981-10-7656-5_5, indexed in Scopus (UGC approved), 2018.

2. Poonam, C.K. Nagpal," Modelling and mitigation of Open Challenges in Cognitive Radio Network using Game Theory", (Published book chapter in the book "Lecture Notes in Electrical Engineering LNEE", by Springer, ISBN: 1876-1100, indexed in Scopus (UGC approved), 2018.

## LIST OF PUBLICATIONS IN INTERNATIONAL JOURNALS

1. Monika Mangla, Nonita Sharma and Poonam Mittal," A Fuzzy Expert System for predicting the Mortality of COVID'19", Turkish Journal of Electrical Engineering & Computer Science, doi:10.3906/elk, Nov.-2020. **(SCIE)**

2. Poonam Mittal, "A Novel Framework to Secure CBWSNS the against Selfishness Problem", Science & Technology Journal 2019, vol-7(2), pp.-7-16. **(UGC)**

3. Preeti Pant and Poonam, "Survey on security Framework for CBWSNs Against the Selfishness Problem", IJRECE- 2018, vol-2(2), pp.-179-184. **(UGC)**

4. Pankaj Sharma, Poonam, Deepika Punj, "Real Time System Controlling Using RGB Object Detection Process: Review", JNCET, April-2018, vol.-8(4), pp.-426-431. **(UGC)**

5. Shivani Garg, Poonam and Manvi, "Review of Under Water Image Enhancement Techniques", IJCRT, 2018, vol-2(2), pp.-981-986**. (UGC)**

6. Poonam, C.K. Nagpal," A Game Theory Based Solution for Security Challenges in Cognitive Radio Networks", in 3D Research, DOI: 10.1007/s13319-018-0161-3, ISSN: 2092-6731. **(ESCI, SCOPUS and UGC approved)**.

7. Poonam, C.K. Nagpal, Kartikay Garg and Shailender Gupta," A Fuzzy logic based efficient routing protocol for Adhoc network**",** IJFGCN, vol-10(10), ISSN: 2233-7857, 2017, pp.-1-22. **(ESCI, SCOPUS and UGC approved)**.

8. Poonam, C.K. Nagpal and Shailender Gupta, "A novel routing strategy for cognitive radio ad hoc network based on Sugeno fuzzy logic", IJFCM, 2017, vol-2(2), pp.-87-115. **(Inderscience)**.

9. Poonam Mittal, Mehak Jain C.K. Nagpal and Shailender Gupta, "A Throughput and Spectrum Aware Fuzzy Logic Based Routing Protocol for CRN", IJCNIS, March-2016, vol-3, pp.-58-64.

10. Ekta Gupta, Poonam and C.K. Nagpal," Survey on PUE attack detection and prevention techniques", IJETER, Vol.-4, Issue-4, ISSN: 2454-6410, April- 2016, pp.-90-95.

11. Poonam, RaviKant, C.K. Nagpal, "A Novel Anti-jamming technique for Cognitive radio Network", IJGDC, 2016, vol-9(11), pp.-247-260. **(ESCI, SCOPUS)**.

12. Poonam, C.K. Nagpal and Shailender Gupta, "A Delay and Spectrum Aware Fuzzy Logic Based Routing Protocol for CRN", IJCNA, vol-3, issue-1, ISSN: 2395-0455, Jan-Feb 2016, pp.-16-24.

13. Poonam, Sanjay Batra and C.K. Nagpal, Implementation of a novel routing protocol for coordination of nodes in Manet, IJCNA, vol-2, issue-2, ISSN: 2395-0455, March-April2015, pp.-99-105.

14. Vivek Kukreja, Shailender Gupta, Bharat Bhushan, Poonam Mittal and C. K. Nagpal," Enhancement of spectrum efficacy using CRN", IJFGCN, Vol-8, Issue-2, ISSN: 2233-7857, 2015, pp.-265-272.

15. Uma Sharma, Poonam Mittal and C. K. Nagpal," Implementing game theory in Cognitive radio Networks for channel allocation", IJEIC, Vol-6, Issue-2, ISSN: 2093-9655, 2015, pp.-17-22.

16. Sonia Garg, Poonam Mittal and C. K. Nagpal," Application of game theory in Cognitive radio Networks for power allocation: an overview", IJHIT, Vol.8, No. 5 (2015), pp. 251-258.

17. Mehak Jain, Poonam, C. K. Nagpal and Shailender Gupta," Minimum total power spectrum aware routing scheme", IJCTSN, Vol-3, Issue-2, ISSN: 2246-7845, 2015, pp.-37-46.

18. Poonam, "Impact of Random waypoint mobility on reactive routing protocols of Scalable mobile Ad Hoc network", in IOSR Journal of Computer Engineering", Jul-Aug-2014, vol. 16, issue 4.

19. Ritu Rahar, Poonam, Sanjay Batra," Performance analysis of DYMO and LANMAR routing protocols in manet using QualNet simulator", IJERSTE, ISSN: 2319-7463, Feb-2014, vol.: 3 ISSUE: 2.

20. Poonam, Ritu Rahar and C.K. Nagpal, "Performance analysis of MANET under Wormhole attack", YMCAUST-IJR, vol: 2, ISSUE: 1, ISSN: 2319-9377, July-2014, pp.-67-72.

21. Sneha Kanchan, Poonam, and C.K. Nagpal, "Effect of enhancing MAC layer security and power saving mode in Ad Hoc network", IJCSET, Vol: 5, ISSUE: 7, ISSN: 2229-3345, July-Aug. 2014, pp.-784-791.

22. Veena Garg, Poonam Mittal," Impact of Various mobility models on the performance of AODV, DSR and LAR", IJCATR, vol-3, issue-9, ISSN: 2319-8656, Nov-2014, pp.-600-603.

23. Poonam, C.K. Nagpal, Swatie Bansal" Impact of Random Waypoint mobility model on Hybrid routing protocols in MANET", IJIRD, ISSN: 2278-0211, Oct-2013, vol.:2 ISSUE:10, pp.-121-125.

## Proceedings in International Conferences

1. Poonam Mittal, Monika Mangla and Nonita Sharma," Clinical and Epidemiological Factors Analysis for COVID-19 by Mamdani-Fuzzy Inference System" published in the proceedings of Innovation, research and Challenges in Emerging Technologies (IRCET 2021)

2. Sonu Sharma, Poonam Mittal and Payal Gulati," Fertilizer Recommendation and Prediction using Machine learning" published in the proceedings of Innovation, research and Challenges in Emerging Technologies (IRCET 2021)

3. Sonu Sharma, Poonam Mittal, Payal Gulati," A Review on: Increase the efficiency of crop by fertilizer recommendation and prediction using machine learning" published in the proceedings of Rebuilding Bharat with Artificial Intelligence Interventions After Covid-19 Pandemic: Opportunity and Challenges (A2ICP-2020).

4. Monika, Poonam, Preeti Sethi, "A Novel technique to prevent PUE attack in CRN", published in the proceedings of Advances in Mathematics and Computing (AMC-2017).

5. Poonam, Ravikant, "Challenges in Cryptographic techniques in CRN AdHoc networks", Proceedings of National conference on role of science and technology towards "Make in India", 5-7 March 2016.

6. Poonam, "Effect on different mobility models on performance of proactive and hybrid routing protocol", in Recent Trends in Computer Science and Information Technology (RTCSIT- 15 JUNE-2012).

7. Poonam, "The impact of mobility models on the performance of AODV, DSR and LAR routing protocols", in New Paradigms in Electronics, Communication and Computing (NCNPECC-19-May-2012).

8. Poonam Mittal, Ashutosh Dixit and A.K. Sharma," A scalable, extensible web crawler based onP2P overlay network", published in the proceedings of ACM conference ICWET, Feb-2010, pp.-159-162.

9. Nisha Pahal, Payal Gulati, Poonam and Parul Gupta," Context Ontology Driven Relevant Search using Data Mining Techniques (CODT) International Conference on Methods and Models in Computer Sciences (ICM2CS-2010) to be held on December 13-14, 2010.

10. Poonam Mittal, Mukta Mittal and Kavita Khanna," A scalable, extensible web crawler based on refined conjunct query", published in the proceedings of IEEE conference ICIT, June-2009.

11. Nisha Pahal, Payal Gulati, Poonam," A tool for multiple condition coverage of VHDL models", published in the proceedings of IEEE conference ICIT, June-2009.