


## Faculty Profile

|                                |   |                   |                           |   |
|--------------------------------|---|-------------------|---------------------------|---|
| Name                           | Dr. Anil Kumar  |                   |                           |  |
| Designation                    | Professor   |                   |                           |   |
| Pay Scale                      | Level-14  |                   |                           |   |
| Department                     | Electronics and Communication Engineering   |                   |                           |   |
| Qualification                  | Ph.D., M.E, B.E.  |                   |                           |   |
| Date of joining                | Institute   | Present Post      |                           |   |
|                                | 15/6/2016   | 15/6/2019         |                           |   |
| Experience ( <i>in years</i> ) | Total   | Teaching          | Industry                  |   |
|                                | 21  | 19.5              | 0.6                       |   |
| Research Interests             | Wireless Sensor Networks, IoT, AI and ML, Embedded Sysytem Design   |                   |                           |   |
| Contact Details:               | Email   | Mobile/Phone      |                           |   |
|                                | anilrose@ccet.ac.in   | 9416234853        |                           |   |
| Research Publications          | International Journals  | National Journals | International Conferences | National Conferences  |
|                                | 15  | 2                 | 8                         | 2   |
| Books/Chapters Published       | 01  |                   |                           |   |
| Research Guidance              | Ph. D.  | 03                | Masters                   | 15  |
| Research Projects              | Completed   | Nil               | Inprogress                |   |
| Consultancy Projects           | Completed   | Nil               | Inprogress                |   |
| Seminar/Conference/STTPs       | Attended  | 10                | Organized                 | 03  |
| Professional Affiliations      | IEEE, Life member ISTe  |                   |                           |   |
| Awards/ Fellowships etc.       |   |                   |                           |   |
| List of Publications           | Attached  |                   |                           |   |
| Research Project Detail        | NiL   |                   |                           |   |
| Patent Detail                  | Slotted Wheel Microstrip Patch Antenna Based RF, Energy Harvesting System, Patent No:528558, DOI: 01/05/2019,Government of India.   |                   |                           |   |
| Consultancy                    | Nil   |                   |                           |   |
| Ph.D Scholars Names            | 1. Parulpreet Singh, 2. Himanshu, 3. Muktasha (in progress)   |                   |                           |   |
| Institute Responsibility       | <ol style="list-style-type: none"> <li>1. Prof Incharge IIRC</li> <li>2. Joint Incharge IQAC</li> <li>3. Joint Incharge PURC</li> <li>4. Joint Incharge IAC</li> <li>5. Member, Board of Studies (ECE), Panjab University</li> <li>6. Member of Universities inspection Committees</li> </ol> |                   |                           |   |
| Department Responsibility      | <ol style="list-style-type: none"> <li>1. NBA coordinator</li> <li>2. Member Purchase Committee</li> </ol>  |                   |                           |   |

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| Any Other Information |  |
|-----------------------|--|

Signature of faculty

### International Journal

1. Anil Kumar, Himanshu, Rajesh Khanna (2022) [Artificial intelligence applications for target node positions in wireless sensor networks using single mobile anchor node](#) in Computers & Industrial Engineering by Elsevier (Impact Factor 7.18)
2. Anil Kumar, Himanshu, Rajesh Khanna (2021), Knowledge acquisition for 3D coordinates of target in wireless sensor networks for smart city application, Expert Systems (Wiley) Impact factor 2.587, SCI Journal.
3. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2018), “Biogeography Based optimized Localization of Target Nodes Using Single mobile Anchor Node in Wireless Sensor Networks”, Computing, Springer **Impact factor 1.589, SCI Journal.**
4. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2018), “Optimized Localization of Target Nodes using Single Mobile Anchor Node in Wireless Sensor Networks”, **International Journal of Electronics and Communications by Elsevier, (accepted), Vol. 91, 55-65, Impact factor 1.45, SCI Journal.**
5. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2018), Computational Intelligence Based Localization of Moving Target Nodes Using Single Anchor Node in Wireless Sensor Networks, **Telecommunication Systems by Springer, Vol. 67, No. 4, 1-15, Impact Factor 1.542, SCI Journal.**
6. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2017), 3D Localization of Moving Target Nodes Using Single Anchor Node in Anisotropic Wireless Sensor Networks, **International Journal of Electronics and Communications, Elsevier, Vol. 82, 543-552, Impact factor 1.45, SCI Journal.**
7. Anil Kumar, Arun Khosla, Jasbir Singh Saini and Satvir Singh (2015), “Range-Free 3D Node Localization in Anisotropic Wireless Sensor Networks” **Applied soft computing, Elsevier, vol. 34, 438-448, Impact factor 3.541, SCI Journal.**
8. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2017) , “A Novel Approach for Localization of Moving Target Nodes in Wireless Sensor Networks”, **International journal of Grid and Distributed Computing, Vol. 10 (No. 10) 2017, 33-44 (Scopus Indexed)**
9. Anil Kumar, Arun Khosla, Jasbir Singh Saini, and Satvir Singh (2013). “Stochastic Algorithms for 3D Node Localization in Anisotropic Wireless Sensor Networks” **Advances in Intelligent Systems and Computing, Vol.201, 1-14, 2013, by Springer (Scopus Indexed).**
10. Anil Kumar, Nisha Yadav, Manoj Duhan (2017), Biometric Human Recognition using ECG Signals, International Advanced Research Journal in Science, Engineering and Technology, Vol. 4, Issue 6, 168-171.
11. Anil Kumar, Parul Preet Singh, Arun Khosla and Mamta Khosla (2017), Wireless sensor networks localization and its location optimization using bio inspired localization algorithms: A survey, International journal of current engineering and scientific research, Vol. 4, 74-80.

12. Anil Kumar (2013). Stochastic Range-Free Node Localization in Wireless Sensor Networks, *International Journal of Electronics Engineering*, Vol. 5, no.1, June 2013, 82-88, Impact factor 0.65.
13. Anil Kumar (2013). Optimized Distributed Range-Based Node Localization in Wireless Sensor Networks, *International Journal of Electronics Engineering*, Vol. 5, no.1, June 2013, 76-81, Impact factor 0.65.
14. Monika Rani, Maridul Chawla, and Anil Kumar (2011). "IPSec performance on Wimax Networks" *International Journal of Electronics and Computer Technology*, Vol. 2 issue 3, ISBN 2230-9543.
15. Monika Rani, and Anil Kumar (2011). "Basic Study of Wimax simulation", *World journal of engineering*, Vol. 1, 937-941, ISSN No. 1465-8763
16. Monika Rani, Anil Kumar and Maridul Chawla (2011). Review of Public Key Cryptography on WImAX using Rsa Algorithm, *International Journal of Engineering Research and Studies (JERS)*, Vol. 2, issue 4, 219-222. ISBN No. 0976-7916
17. Anil Kumar, Nisha Rangi, and Prachi Chaudhary (2012). "A Mesh based Triangulated Approach to Reconstruct 3-D Surfaces" *International Journal of Emerging Trends in Engineering and Management*, Vol. 1 No.1, 1-4.

### Patent

Shilpa Jindal, Krishna Gopal Sharma, Bhasker Gupta and Anil, Kumar, "Slotted Wheel Microstrip Patch Antenna Based RF, Energy Harvesting System" Patent No:528558, DOI: 01/05/2019, Government of India.

### Book Chapter

1. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2018), Computational Intelligence Techniques for Localization in Static and Dynamic Wireless Sensor Networks- A Review, **Computational Intelligence in Sensor Networks by Springer (SCI Indexed)**.

### Conferences (National and International)

1. Anil Kumar, Anvi Priya, Parulpreet Singh, Arun Khosla and Mamta Khosla (2018) Localization in Wireless Sensor Network Using PSO with Flip Ambiguity Mitigation, **IEEE 6th International conference on Smart Energy Grid Engineering (SEGE2018)** to be held in UOIT, Oshawa, Canada, during August 12-15, 2018 (**Scopus Indexed**).
2. Anil Kumar, Parulpreet Singh, Arun Khosla and Mamta Khosla (2017), Optimized Localization by Mobile Anchors in Wireless Sensor Network by Particle Swarm Optimization, IEEE International Conference on Computing and Communication Technologies for Smart Nation (IC3TSN 2017) (**Scopus Indexed**).
3. Anil Kumar and karampal Kaur (2015), "Optimized range-free 3D node localization in wireless sensor networks using firefly algorithm", IEEE International conference on Signal and Communication (ICSC 2015), IIIT Noida from 15-18 march 2015, [www.ieee.org](http://www.ieee.org), (**Scopus Indexed**).
4. Anil Kumar, Arun Khosla, Jasbir Singh Saini, and Satvir Singh, (2012). "Computational Intelligence Based Algorithm for Node Localization in Wireless Sensor Networks", **IEEE 6<sup>th</sup>**

- International conference on Intelligent Systems (IEEE-IS'12)*, held at Sofia (Bulgaria), from 6-8 Sep., 2012. Available at [www.ieeeexplorer.org](http://www.ieeeexplorer.org), (**Scopus Indexed**).
5. Anil Kumar, Arun Khosla, Jasbir Singh Saini, and Satvir Singh, (2012). "Meta-heuristic Range Based Node Localization for Wireless Sensor Networks", *IEEE International conference on Localization and Global Navigation Satellite Systems (ICL-GNSS)*, held at Starnberg, Germany from 24-26 June, 2012. Available at [www.ieeeexplorer.org](http://www.ieeeexplorer.org), (**Scopus Indexed**).
  6. Anil Kumar, Naveen Goel, Arun Khosla, J. S. Saini and Shakti Kumar (2008). "A well structured Rule through Reinforcement Learning for Wireless Sensor Networks Security", *The International Conference on Wireless Networks (ICWN'08)*, 14-17 July 2008, at Las Vegas, Nevada, USA, (**Scopus Indexed**).
  7. Anil Kumar, J. S. Saini, Anuja Gupta and Sunil Dutt Paliwal (2008). "A Frame Work for Memetic Algorithm Visualization (MAVEL)" *International Conference on Intelligent Systems and Networks (ISN-2008)*, at Institute of science and Technology Kalawad, Jagadhri, from Feb 22-24, 2008.
  8. Anil Kumar, Sudesh Pahal and Arun Khosla (2008). "An Improved WiMAX Security Scheme Based on Asymmetric Key Based Approach" *IEEE National Conference on Application of Intelligent systems (AIS-2008)*, at Hindu College of Engineering Sonapat, India, from 13-15 March, 2008.
  9. Anil Kumar, Prachi Chaudhary, Pawan Dahiya, J. S. Saini and Shakti Kumar (2008). "Evolutionary Computation in DSP Design", *IEEE National Conference on Application of Intelligent systems (AIS-2008)*, at Hindu College of Engineering Sonapat, India, from 13-15 March, 2008.
  10. Anil Kumar, Juhi Singla, J.S. Saini, (2008). "IMPLEMENTATION OF ANT COLONY OPTIMIZATION ON MANETS", *2<sup>nd</sup> National Conference on Wireless and Optical Communication (WOC-2008)* at PEC, Chandigarh.