Dr. Vaishali D. Khairnar (PhD Computer Technology & Engineering)

Designation: Professor & Head of Department of
Information Technology

Email: vaishalikhairnar@ternaengg.ac.in

Address for Correspondence: Terna Engineeering College, Nerul (West)- Navi-Mumbai 400706

Professional Qualification:

- ➢ **Ph.D in Computer Technology & Engineering, 2016**
  Nirma University, Ahmadabad Gujarat India.
- ➢ **Master in Information Technology, 2006**
  Mumbai University, Mumbai India**.**
- ➢ **Bachelor in Computer Engineering, 1997**
  North Maharashtra University, Jalgaon India.

Short Biodata:

Dr. Vaishali D. Khairnar is having more than twenty years of teaching experience at under graduate and post graduate level in various institutes. She has published fifty plus technical papers in international journals and international conference proceedings. She published three Indian Patents. She has completed one consultancy project from 2017-2020. She has received International research grant from DST from 2022-2024. She has received consultancy project from 2022-2023. She is Board of Studies members in Information Technology University of Mumbai from September 2019 onwards. She is University of Mumbai syllabus member from 2011 onwards for UG and PG. She is Head of Information Technology in Terna Engineering College from 2011 onwards. She was Head of Computer Engineering and Information Technology, Symbiosis Institute of Technology, Pune from 2009 to 20011. He has conducted as a resource person, organized and attended several technical various STTP/FDP/workshops in the field of different fields of Information Technology. She is approved PhD guide and PhD research committee member in various university panel. She is guiding 4 PhD students and 1 student PhD awarded. Her research area is Connected Autonomous Vehicles, Blockchain technology, Metaverse etc.

Patents:

1. "Real time STDMA Based Vehicular Adhoc Communication Technique under Densed Environment", Dr. Vaishali D. Khairnar, Dr. Ketan Kotecha, Application No. 202121055666 A, Publish Date: 10/12/2021, Indian Patent.

2. "A system for node optimization & adaptive recommendations using resource capping method", Dr. Preeti Narooka, Dr. Likhesh Kolhe, Mr. Jaideep Singh Rathore, Dr. Vaishali Khairnar, Application No. 202021029081 A, Publish Date: 2020/4/9, Indian Patent.

3. "Robust Product Recommendation System using Modified Grey Wolf Optimizer and Possibilistic

Fuzzy C-Means", Dr. Likhesh Kolhe, Dr. Vaishali Khairnar, Application No: 7342/2019-CO/L. 14-05-2019.

Consultancy:

1. Consultancy Project: Jensevak App Development: The Project scope is to develop and app for TPCT Terna Engineering College, Navi-Mumbai 2022-2023.

2. Consultancy Project: Online Health Care System: The Project scope is to develop and app for Terna Speciality Hospital and Research Centre, Navi-Mumbai 2022-2023.

3. Consultancy Project on "Transformer Monitoring System using IoT" The Project scope included development of Software-Hardware in collaboration with M/s Brick & Byte Rabale Navi Mumbai, 123 KV Substation Igatpuri, 2017.

4. Consultancy Project on "Connected Factory using IoT" which consist development of Software-Hardware in collaboration with M/s Brick & Byte Rabale Navi Mumbai, 2017.

Reviewer:

1. Universal College of Engineering's International Conference on Smart City and Emerging Technologies (ICSCET 2018) in association with IEEE.

2. International Journal of Vehicle Design (IJVD)

3. International Journal of Big Data Intelligence (IJBDI)

4. Advances in Science, Technology and Engineering Systems Journal (ASTESJ)

5. International Journal of Big Data.

6. Asian Journal of Mathematics and Computer Research, IK Press.

7. British Journal of Mathematics and computer science, Science domain International.

8. Journal of Scientific research & reports, Science domain International.

9. Journal of Basic & Applied research International, IK Press.

10. Journal of Global Economics Management and Business research, IK Press.

11. International Journal of Computer Science & Business information.

12. Journal of Transportation Technologies, Scientific research Publisher.

13. Journal of Information Processing, JIPS Korea.

14. International Journal of Computer Applications.

15. ICGCT'13, International conf. SIES GST, Nerul.

16. International Journal of Network Security.

17. NCNTE-12, FRCRIT, Vashi.

18. Transaction on Information Forensics & Security, 2014 Virginia Tech. USA.
19. IEEE symposium on Computer & Informatics (ISCI), 2011.
20. Journal of computer science
21. Cyberc'15.
22. MobiApps'2016
23. KIPS Transactions on Computer and Communication Systems
24. International Journal for Innovative Research in Science and Technology
25. CEEC'16
26. IEEE WCNC 2017
27. Asian Journal of Current Research, IK press.

Major Subjects:

Mobile Application Development, Functional Programming using Haxkell, Wireless technology, Internet Technolgy, Information storage management and retrieval, Storage Network Management and retrieval , Adhoc Sensor Networks, Internet of Things, High Performance Computing, Python Programming, Data structure algorithm and analysis, Open source technology etc.

Citation Analysis:

510 citations (h-index 12 and i10-index 13) in google scholar

https://scholar.google.co.in/citations?hl=en&user=wZw-YL4AAAAJ&view_op=list_works&sortby=pubdateList of Publication

Journal Publications:

1. Dr. Vaishali D. Khairnar, Dnyaneshwar Madhukar Bavkar, Ramgopal Kashyap, "Optimal Pretrained Deep Ensemble of Classification Model for Multimodal Sarcasm Detection" Research Square, 2023
2. Dr. Vaishali D. Khairnar, Dakshata Argade, "Comparative Analysis of Deep Learning-Based Abstractive Text Summarization Techniques", Intelligent Sustainable Systems: Proceedings of ICISS 2022, Springer Nature Singapore, 2022
3. Dr. Vaishali D. Khairnar, Dnyaneshwar Madhukar Bavkar, Ramgopal Kashyap, "Multimodal Sarcasm Detection via Hybrid Classifier with Optimistic Logic" Journal of Telecommunications and Information Technology, 2022.
4. Dr. Vaishali D. Khairnar, Neha Patil, "Smart Farming System using IoT and Cloud", Computer Networks and Inventive Communication Technologies , Springer, Scopus, pp-215-232, September 2021.

5. Dr. Vaishali D. Khairnar, Rohan Desai, "Hybrid Prediction Model for the Success of Bank Telemarketing", Intelligent Sustainable Systems , Springer, Scopus, pp-693-710, August 2021.

6. Dr. Vaishali D. Khairnar, Rohan Desai, "Performance Enhancement of Hybrid Algorithm for Bank Telemarketing", Turkish Journal of Computer and Mathematics Education, Scopus, Vol.12 No. 8 (2021), 2703-2711, April-2021

7. Likhesh Kolhe, Dr. Ashok Kumar Jetawat, Dr. Vaishali Khairnar, "Robust product recommendation system using modified grey wolf optimizer and quantum inspired possibilistic fuzzy C-means", Cluster Computing, Springer US, Scopus, 2020/8/25

8. Dr. Khairnar V. Kamath V., Lubal O., Daware S, "PlagoBot: A Confluence of Plagiarism and RPA", Inventive Communication and Computational Technologies, 2020/9

9. Dr. Vaishali Khairnar, Likhesh Kolhe, Sudhanshu Bhagat, Ronak Sahu, Ankit Kumar, Sohail Shaikh, "Industrial Automation of Process for Transformer Monitoring System Using IoT Analytics", Inventive Communication and Computational Technologies, Springer, Singapore, 2020

10. Dr. Vaishali D Khairnar, Archana Saroj, Pooja Yadav, Shraddha Shete, Neelam Bhatt," Primary healthcare using artificial intelligence", International Conference on Innovative Computing and Communications, Springer, Singapore, 2019.

11. Dr. Vaishali Khairnar, Mrs. Bhavana Chaudhari, "Implications of Q & A on Online Social Network", ICMAE-2018, 3 & 4 June 2018.

12. Dr. Vaishali Khairnar, Shruti Amburle, "Message Validation in Wireless Sensor Network", IJECS, May 2018, Pages 23896-23900.

13. Dr. Vaishali Khairnar, Kanchan Chaware "A Framework for Integrated Routing, Scheduling and Traffic Management in Adhoc Sensor Network", Imperial Journal of Interdisciplinary Research (IJIR), Vol-3, Issue-8, August 2017, Pages 39-42.

14. Dr. Vaishali Khairnar, Dr. Deven Shah, Kanchan Chaware "Framework for Integrated Routing, Scheduling and Traffic Management in Adhoc Sensor Network", International Journal of Engineering Science and Computing, volume 7, Issue 8, August 2017, Pages 14485-14489.

15. Dr. Vaishali Khairnar, Prabhakar Manish "Cloud Computing into VANET to Create Ad Hoc Cloud Network Architecture", International Journal of Innovative Research in Computer and Communication Engineering, volume 4, Issue 06, June 2016, Pages 11982-11989.

16. Dr. Vaishali Khairnar, Satish Kale "SIP Implementation for Ad-hoc Network", International Journal of Science, Engineering and Computer Technology, Volume 6, Issue 6, Jun 2016, Pages 191-194.

17. Vaishali Khairnar, Sushmita Zimal, Shabda Khodaskar, Mamta Kusalkar "ANDROID SMART LIFE", International Journal of Technical Research and Applications, Volume 4, Issue 2, April 2016, Pages 281-283.

18. Gaurav Sudhir Deshmukh, VD Khairnar, Sujata Kadu "Clustering Routing Protocol for Energy Efficiency of Wireless Sensor Network using Genetic Algorithm" , International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395 -0056, Volume: 03 Issue: 04 , Apr-2016, Pages 2645 – 2651.

19. Dr. Vaishali Khairnar, Pooja Navdeti, Sumita Parte, Prachi Talashilkar, Jagruti Patil, "Patient Parameter Monitoring System using Raspberry Pi", International Journal of Engineering and Computer Science ISSN: 2319-7242, Volume 5, Issue 3, March 2016, Pages 16018-16021.

20. Kalyani Ganesh Kadam, Vaishali Khairnar, Deven Shah, Hariram K Chavan, "Location based services on windows phone", IJARCET, Volume 04, Issue 10, Pg. 3964-3968, Oct., 2015.

21. Kalyani Ganesh Kadam, Vaishali Khairnar, "Hybrid RSA-AES encryption for web services", IJTRA, Special Issue 31, Pg. 51-56, Sept., 2015.

22. Prof. Vaishali D. Khairnar, Narkhede Sachin G, Sujata Kadu, "Brain Tumor Detection Based On Bilateral Symmetry Information", IJERA, Volume 04, Issue 06(version 3), Pg. 98-103, June 2014.

23. Prof. Vaishali Khairnar, Mr. Pradip Suresh Mane, "Analysis of bus tracking system using GPS on smartphones", IOSR Journal of Computer Engineering (IOSR-JCE), Volume 16, Issue 02, Pg. 80-82, Mar. –Apr. 2014.

24. Prof. Vaishali D. Khairnar, Dr. Ketan Kotecha, "Propagation Models For V2V Communication in Vehicular Ad-hoc Networks", Journal of Theoretical and Applied Information Technology, Volume 61, Issue 3, Pg. 686-695, March 2014.

25. Prof. Vaishali D. Khairnar, Dr. Ketan Kotecha, "Simulation Based Performance of Mumbai-Pune Expressway Scenario for Vehicle-to-Vehicle Communication Using IEEE 802.11 P", Transport and Telecommunication Journal, Volume 14, Issue 4, Dec. 2013, pg. 300-315.

26. Prof. Vaishali Khairnar, Narkhede Sachin G, "Brain Tumor Detection Based On Symmetry Information", International Journal of Engineering Research and Application Volume 3, Issue 6, Nov. 2013, pg. 430-432. www.ijera.com.

27. Prof. Vaishali D. Khairnar, Dr. Ketan Kotecha, "Simulation-Based Performance Evaluation of Routing Protocols in Vehicular Ad-hoc Network", International Journal of Scientific and Research Publications, October 2013, Volume 3, Issue 10, pg. 1-14.

28. Prof. Vaishali Khairnar, Mr. Pradip Suresh Mane, "Power Efficient Location Based Services on Smart Phones", International Journal of Emerging Technology and Advanced Engineering, October 2013, Volume 3, Issue 10, Pg. 350-354.

29. Prof. Vaishali D. Khairnar, Dr. Ketan Kotecha, "Simulation-Based Performance Evaluation of Routing Protocols in VANET with Different Scenarios", International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE), June 2013, Volume 3, Issue 6.

30. Prof. Vaishali Khairnar, Saurabh D Patil, DV Thombare, "DEMO: Simulation of Realistic Mobility Model and Implementation of 802.11 p (DSRC) for Vehicular Networks (VANET)", IJCA, April 2013.

31. Prof. Vaishali Khairnar, SN Pradhan, "Comparative study of simulation for vehicular ad-hoc network", IJCA, April 2013.

32. Prof. Vaishali Khairnar, Dnyaneshwar M. Bavkar, Vishwajit B. Gaikwad, "PAV: Parking Allotment for Vehicles using VANET", International Journal of Latest Trends in Engineering and Technology (IJLTET), March 2013, Volume 2, Issue 2, pg. 68-76.

33. Prof. Vaishali Khairnar, S. Mane, "Detection of SQL Injection", Emerging Trends in Technology and its Application (ICETTA-2013), March 2013.

34. Prof. Vaishali Khairnar, Dr. Ketan Kotecha, "Performance of Vehicle-to-Vehicle Communication using IEEE 802.11p in Vehicular Ad-hoc Network Environment", International Journal of Network Security & Its Applications (IJNSA), March 2013, Volume 5, Issue 2, Pg. 143-170. airccse.org

35. Prof. Vaishali Khairnar, Srikhant N Pradhan, "Simulation Based Evaluation of Highway Road Scenario between DSRC/802.11 p MAC Protocol and STDMA for Vehicle-to-Vehicle Communication", Journal of Transportation Technologies, 2013, Volume 3, Pg. 88-104.

36. Prof. Vaishali Khairnar, Satish Kale, "Car to Car Communication Protocol Issues", International Journal of Global Technology Initiatives ISSN (Online): 2320-1207, December 2012, Volume 1, Issue 2, Pg. 26-33.

37. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Simulation Based Study and Analysis of Routing Protocol in Vehicular Ad-hoc Network", International Journal of Electronics Communication and Computer Engineering, May 2012, Volume 3, Issue 3, Pg. 198-205.

38. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Simulation Based Study and Analysis of Routing Protocol in Vehicular Ad-hoc Network", International Journal of Computer Technology and Applications (ISSN: 2229-6093), March 2012, Volume 3, Issue 2, Pg. 617-625.

39. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Study of V2V Communications on Mumbai-Pune Express Highway", Asian Journal of Engineering and Applied Technology ISSN 2249-068X, January 2012, Volume 1, Issue 1, Pg. 19-21.

40. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "<u>V2V COMMUNICATION SURVEY - (WIRELESS TECHNOLOGY)</u>", International Journal of Computer Technology & Applications (IJCTA), 2012, Volume 3, Issue 1, Pg. 370-373.

41. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Mobility Models for Vehicular Ad-hoc Network Simulation", International Journal of Computer Applications, December 2010, Volume 11, Issue 4, Pg. 8-12.

Conferences and Workshops Publications:

1. Dr. Vaishali Khairnar, Mrs. Ashmita Shah, "Mining Utility Patterns", @nd International Conference on ICICCT-2018, IEEE, 20-21 April 2018, Pages 726-729.

2. Dr. Vaishali Khairnar, Pooja, Archana, Shraddha, Neelam, "Primary Healthcare using Artificial Intelligence", ICICC-2018, May 2018, Springer.

3. Dr. Vaishali Khairnar, Likhesh Kolhe, "Vehicular Ad-Hoc Network For Energy Conservation Using IoT", 12th INDIACom; INDIACom-2018; IEEE Conference, 5th International Conference on "Computing for Sustainable Global Development" New Delhi (INDIA) 2018/3/14, pages 1518-1522.

4. Dr. Vaishali Khairnar, Bhavana Chaudhari ,"Frequest Item set Mining On Hadoop Cluster For Data Partitioning", 3 rd International Conference on Engineering Confluence (Equinox 2017).

5. Dr. Vaishali Khairnar, Ashmita Saha, "High Utility Mining Patterns", 3 rd International Conference on Engineering Confluence (Equinox 2017).

6. Dr. Vaishali Khairnar, Shruti S. Amburle, "Source Anonymous Message Authentication", 3 rd International Conference on Engineering Confluence (Equinox 2017).

7. Dr. Vaishali Khairnar, Abhishek R. Chandan, "Internet of Things", 3 rd International Conference on Engineering Confluence (Equinox 2017).

8. Dr. Vaishali Khairnar, Abhishek R. Chandan, "Bluetooth Low Energy (BLE) crackdown using IoT", 2 nd INTERNATIONAL CONFERENCE ON INVENTIVE COMPUTATION TECHNOLOGIES (ICICT 2017), Coimbatore, 2017. ISBN: 978-1- 5090-6697- 1.

9. Dr. Vaishali Khairnar, Abhishek R. Chandan, "Security Testing Methodology of IoT ", IEEE explore 2017, 2 nd INTERNATIONAL CONFERENCE ON INVENTIVE COMPUTATION TECHNOLOGIES (ICICT 2017), Coimbatore, 2017. ISBN: 978-1- 5090-6697- 1

10. Manish Prabhakar, Vaishali Khairnar, "EMAP Protocol in VANET to Authenticate, Access Cloud Services", 2nd International Conference, Equinox 2015, Terna Engineering college, Sept., 2015

11. Prof. Vaishali D. Khairnar, "Collaborative Data Download in Vehicular Scenario" 1st International Conference on Engineering Confluence Equinox-2014, 30th Sept 2104.

12. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Simulation Based Study and Analysis of Routing Protocol in Vehicular Ad-hoc Network", International Journal of Computer Technology and Applications (ISSN: 2229-6093), March 2012, Volume 3, Issue 2, Pg. 617-625.

13. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Study of V2V Communications on Mumbai-Pune Express Highway", Asian Journal of Engineering and Applied Technology ISSN 2249-068X, January 2012, Volume 1, Issue 1, Pg. 19-21.

14. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "V2V COMMUNICATION SURVEY - (WIRELESS TECHNOLOGY)", International Journal of Computer Technology & Applications (IJCTA), 2012, Volume 3, Issue 1, Pg. 370-373.

15. Prof. Vaishali Khairnar, S B Patil, "Survey on Routing Protocols in VANET", National Conference organized by Terna Engineering College Nerul, Navi-Mumbai, September 2011.

16. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Propagation Models for Vehicular Ad-hoc Network", i-COST 2011 – First International Conference on Sunrise Technologies, 13-15 January 2011.

17. Prof. Vaishali Khairnar, Dr. S.N. Pradhan, "Mobility Models for Vehicular Ad-hoc Network Simulation", Computers & Informatics (ISCI), 2011 IEEE Symposium.

18. Prof. Vaishali Khairnar, "Improve of Broadcast Reliability in VANET", National Conference on emerging trends in computers, communications &Information Tech. Assoc. IEEE, CSI, IETE Mumbai chapter, March 2009.

19. Prof. Vaishali Khairnar, "Survey on Mobile Ad hoc Networks", National Conference on wired and wireless communication co sponsored by IEEE Mumbai Section, March 2008.

Books, chapters:

1. Internet of Everything, StarEdu Solutions Pvt. Ltd, New Delhi, ISBN 978-93-86765-70-3 (2020)

2. Research Methodology, StarEdu Solutions Pvt. Ltd, New Delhi, ISBN 978-93-86765-55-0 (2020)

3. Dr. Vaishali Khairnar, Likhesh Kolhe, Sudhanshu Bhagat, Ronak Sahu, Ankit Kumar, Sohail Shaikh, "Industrial Automation of Process for Transformer Monitoring System Using IoT Analytics", Inventive Communication and Computational Technologies, Springer, Singapore, 2020

4. Wireless Networks, StarEdu Solutions Pvt. Ltd, New Delhi, ISBN 98-93-86765-79-6 (2019)

5. Information and Communication Technology for Competitive Strategies, Springer, Singapore Publication 2018.

6. Transportation Engineering and Technology, Volume-I, Samuel Morgan, College Publishing House, UK, 2018.

7. Storage Network Management and retrieval, Wiley precise textbook series, ISBN 978-81-265-5866-7 (2016)

8. Chapter on lab sessions in wireless technology (includes practical & numerical) Dreamtech Press, New Delhi, Pg. 307 – 378, ISBN 978-93-5119-795-9 (2015)

Research and Scholarly Contributions:

➢ **Ph.D. Research**: Study of Reliability Issues for Communication Protocols in Vehicular Ad-hoc Networks

➢ **M. E. Research**: Instant Messager.

Funding Received:

1. India Serbia Joint Project: Title: Development of real-time traffic control algorithms for unconventional intersection designs using artificial intelligence methods, by DST from year 2022-2025, Amount R. 29 lacs. Dr. Ketan Kotecha, Dr. Vaishali D. Khairnar, Dr. Rahee, Dr. Likhesh Kolhe

Software Tools:

1. Python, Remix, Vissim, Sumo, NS2 etc.

Professional Association:

➢ CSI-Member
➢ Indian Society of Technical Education (ISTE) - Member
➢ Transportation Research Board
➢ ACM Mumbai Chapter.

Experience:

➢ More than 20 years of teaching experience in various engineering and technology institutes.

Responsibilities Handled:

➢ Head of Department (Information Technology), ICC Committee Chairman at college level, Research Committee member, Board of studies member at University of Mumbai, Syllabus Committee member at University of Mumbai etc.

Talks Delivered:

1. Short Term Training Program (STTP) on "Internet of Things" on July 2017 arranged by Computer

Engineering Department Thadomal Shahani Engineering College

2. STTP on "Internet of Things" on June 2017 arranged by Information Technology Department Pillai college of Engineering Rasayani.

3. STTP on "High Performance Computing with CUDA, MPI and Open MP" on 1st February, 2017 arranged at Information Technology Department, Vidyalankar Institute of Technology Wadala.

4. Workshop on "open source technologies & NS-2" on 6th September, 2016 arranged at ARMIET institute of Engg. And Tech. Shahapur, Asangaon.

5. Workshop on "Big Data Analytics" on 25th Feb 2016, organized at Terna Engineering College, Nerul, Navi-Mumbai.

6. Workshop on "Network Security" on 14Th to 18th Feb 2016, organized at Terna Engineering College, Nerul, Navi-Mumbai.

7. Orientation program "Wireless technology" on 21 July, 2015, organized at Shivajirao Jondhale COE, Dombivali.

8. One week STTP & workshop "NS-2" on 20-24 Dec., 2013 at Terna Engineering College, Nerul.

9. Workshop on "iOS" on 10-11 & 17-18 Mar., 2012 at Terna Engineering College, Nerul.

10. One week STTP "Emerging trends in wireless networks and security" on 4-8 July, 2011 delivered at Terna Engineering College, Nerul.

SESSION CHAIR/JUDGE:

1. Session chair for International conference "green computing and Technology (ICGCT'13)" on 05 Sept., 2013 held at SIES GST, Nerul.

2. Convener for National conference on "Nascent trends in information & Communication Technologies (equinox 2013)", conducted from 11-13 March 2013.

3. Judged National Level Technical Paper Presentation competition TECHXTER'12 on 03 Feb., 2012 at SIES GST, Nerul.

Declaration
I hereby declare that the foregoing information are correct and complete to the best of my knowledge.

Dr. Vaishali D. Khairnar

Place: Navi Mumbai