

Dr. Vimal Kumar(Computer Science)

Soft Skills: Problem Solving, Teamwork

Specialization

M.Tech: Information Security

Ph.D: Computer Science and Engineering

Area of Interest

Research: Computer Networks, Cryptography and Network Security, Network Forensics, Cyber Security

Technology Development: Cyber Security, Network Programming, CISCO, SNORT, Packet Tracer, Wireshark, ns-2, C language

Innovation: No. of Patents- 02 (Published)

Other:

1. GATE (C.S) 2008 qualified with 92.84 percentile (AIR-1278).
2. UGC NET (June 2012)

Participated - In Specialized Training / Certified Courses (Please specify)

1. Successfully passed the IBM Academic Certificate exam for Security Intelligence Engineer Mastery Award for Students.
2. Certificate course on “General Course on Intellectual Property” organized World Intellectual Property Organization, WIPO Worldwide Academy during October 1 to November 10,2009.
3. Copyright Owner of a Survey of Tribes Titled “Study of Gaddi Tribes” in 2010.
4. Participated one-week short-term course on “Advances in Computing Technology (ACT- 2017)” organized by Department of Computer Sc. &Engg, MadanMohan MalaviyaUniversity of Technology, Gorakhpur during, Feb 23 to March 01,2017.
5. Participated one-week short-term course on “Advanced Embedded System” organized by Department of Computer Sc. &Engg, Madan Mohan MalaviyaUniversity of Technology, Gorakhpur during, Feb 13 to 17,2017.
6. Participated one-week short-term course on “PHP & MySQL through ICT and Video Conferencing as a part of faculty Development Program conducted at Madan Mohan Malviya University of Technology

- Gorakhpur organized by National Institute of Technical Teachers Training and Research (NITTTR) Chandigarh, January 23-27,2017.
7. Participated one-week short-term course on “Advances in Computing Technology ” organized by Department of Computer Sc. &Engg, Madan Mohan MalaviyaUniversity of Technology, Gorakhpur during July 3-9,2016.
 8. Participated one-week short-term course on “MATLAB and LATEX: Simulation with Documentation (SIMDOC-2014)” organized by Department of Computer Science & Engineering Motilal Nehru National Institute of Technology Allahabad, 30 June-5 July 2014.
 9. Participated one-week short-term course on “Information Security and Computer Forensics (WICF-2014)” organized by Department of Computer Science & Engineering Motilal Nehru National Institute of Technology Allahabad, June 23-28,2014.
 10. Participated in one-week short term course (STC) on “Cyber Crime & Forensic Tools” through ICT and Video Conferencing as a part of faculty Development Program conducted at Madan Mohan MalviyaUniversity of Technology Gorakhpur organized by National Institute of Technical Teachers Training and Research (NITTTR) Chandigarh, January 27-31,2014.
 11. Participated in one-week short term course (STC) on “Mobile, Ad hoc and Vehicular Communication (MAVECOM-2013)” organized by Department of Electronics & Communication Engineering, Motilal Nehru National Institute of Technology Allahabad, July 22-27,2013.
 12. Attended Tutorial of IEEE organized by ICCCT in MNNIT, Allahabad,2011.
 13. Participated in workshop on “Research Methods in Engineering & Technology” organized by Department of Computer Sc. &Engg, Madan Mohan MalaviyaUniversity of Technology, Gorakhpur during December 25,2014.
 14. Participated in one day workshop on “Green energy for sustainable development: role of educational institutions organized by MadanMohan MalaviyaUniversity of Technology, Gorakhpur during January 21,2016.
 15. Participated and organized in workshop on LaTeXfor Research (LaTex-2016), organized by MadanMohan MalaviyaUniversity of Technology, Gorakhpur during December 12- 14, 2017.
 16. ITU Certification course on “Cyber Network Defence and Cyber Law "during 16 Dec 2019 to 20 Dec 2019 at ALTTC Ghaziabad sponsored by TEQIP-III, AKTU Lucknow.
 17. Participated one-week faculty development program on “Industry-4.0” conducted at M.I.E.T, Meerut.

Publication - Books / Chapters / Papers / Articles / Blogs (Please provide details)

Book Chapters Publications

1. Vimal Kumar and RakeshKumar ,”An Optimal Authentication Protocol using Certificateless ID- based Signature in MANET “ Book Chapter publication in Springer, CCIS series, Vol.536, pp.110-121, 2015. (Indexed in SCOPUS, DBLP andSCImago)
2. Vimal Kumar and RakeshKumar, “A Cooperative Black Hole Node Detection and Mitigation Approach for MANETs,” Book Chapter publication in Innovative Security Solutions for Information Technology and Communications, Springer, Lecture Notes in Computer Science (LNCS), Vol.9522 , pp.171-183, 2015. (Indexed in SCOPUS, DBLP andSCImago)
3. Vimal Kumar and Rakesh Kumar, “Prevention of Blackhole Attack using Certificateless Signature (CLS) Scheme in MANET,” Book Chapter publication in IGI-Global Advances in Information Security, Privacy, and Ethics (AISPE) series, pp.130-150, 2016. (Indexed in Scopus, Advances in Information Security, Privacy, and Ethics,InfoSci-Books)
4. Dhruvi Sharma, Vimal Kumar and RakeshKumar ,” Prevention of Wormhole Attack using Identity based Signature Scheme in MANET,” Book Chapter publication in Springer AISC series, Vol.411, pp.475-485, 2015. (Indexed in SCOPUS andSCImago)
5. Jitendra Singh, Vimal Kumar and RakeshKumar, “An Efficient and Secure RSA Based Certificateless Signature Scheme for Wireless Sensor Networks,” Book Chapter publication in Springer AISC series, Vol.425, pp. 685-697, 2015. (Indexed in SCOPUS, DBLP andSCImago)
6. Ajai Mishra, Vimal Kumar, RakeshKumar and Jitendra Singh, “A Grid Based Approach to Prolong Lifetime of WSNs using Fuzzy Logic,” Book Chapter publication in Advances in Computational Intelligence, Springer, 2016. (In Press) (Indexed in SCOPUS andSCImago)
7. AkhilendraPratap Singh, Vimal Kumar, Sandeep Singh Senger and ManojWairiya “Detection and Prevention of Phishing Attack using Dynamic Watermarking”, Book Chapter publication in Springer, CCIS series, Vol.147, pp.132-137, 2011. (Indexed in SCOPUS andSCImago)
8. Shivi Panwar and Vimal Kumar, “Computational Intelligence In Automatic Slot Booking Management For Electric Vehicle Charging” in ICBDCI-2020, Book Chapter publication in Springer, CCIS series (Accepted) Indexed in SCOPUS andSCImago).
9. HARSH MALIK, MANSI MALIK, SIDDHANT MALIK, SIMAR PREET AND VIMAL KUMAR "Human pose and behaviour detection" in ICBDCI-2020, Book Chapter publication in Springer, CCIS series (Accepted) Indexed in SCOPUS andSCImago).
10. Kushagra Agarwal and Vimal Kumar, “A general discussion on blockchain and its applications in decentralized marketplace” in ICBDCI-2020, Book Chapter publication in Springer, CCIS series (Accepted) Indexed in SCOPUS andSCImago).
11. SAJAN ARORA, SHIVAM GUPTA, VARUN SHARMA, VIPUL TYAGI and Vimal Kumar, “Advance speech Recognition” in ICBDCI-2020, Book Chapter publication in Springer, CCIS series (Accepted) Indexed in SCOPUS andSCImago).

Publications in International Journals

1. Vimal kumar and Rakeshkumar, "An Adaptive Approach for Detection of Black hole in Mobile Ad hoc Network," *Procedia Computer Science*, Elsevier, vol.48, pp. 472-479, Dec. 27-28, 2014. (Indexed in SCOPUS)
2. Vimal Kumar and Rakesh Kumar, "An RSA based Certificateless Proxy Signature Scheme without Pairing for MANET," In *Computers and Electrical Engineering Journal*, Elsevier, April 2016.(Indexed in SCI Expanded, SCImago and SCOPUS) (Under Review)
3. Vimal kumar and Rakeshkumar, "A Rule based Scheme for Mitigating TCP SYN Flooding Attack in MANET," In *International Journal of Applied Engineering Research (IJAER)*, vol.10, pp.35064-35059, June 2015.(Indexed in SCOPUS andSCImago)
4. Vimal Kumar, Rakesh Kumar and Jitendra Singh, "An efficient and secure RSA-based certificateless signature scheme for wireless sensor networks, *International Journal of Trust Management in Computing and Communications (IJTMCC)*, Inderscience. (Indexed in SCOPUS and SCImago)
5. Vimal kumar and Rakeshkumar. "Mitigation of Wormhole Attack using SOA in MANET", *Global Journal of Pure and Applied Mathematics*, vol.13, pp.431-452, 2017. (Indexed in SCOPUS and SCImago)
6. Vimal Kumar, AkhilendraPratap Singh, AnjaniKr. Rai and ManojWairiya "Self Alteration Detectable Image Log File for Web Forensics", *International Journal of Computer Applications (0975 – 8887)Volume 18– No.5, March2011*.
7. Anjani K. Rai, Vimal Kumar, Shivendu Mishra, "An Improved Password Based EAP Method for WiMAX with Formal Verification", *International Journal of Computer Science andApplications*.
8. Anjani K. Rai, Vimal Kumar, Shivendu Mishra, "Strong Password Based EAP-TLS Authentication Protocol for WiMAX", *International Journal on Computer Science and Engineering (IJCSSE)*, Vol. 02, No. 02, 2010,2736-2741.
9. Vimal Kumar and Rakeshkumar, "An Efficient RSA based Certificateless Signature Scheme for Prevention of Wormhole Attack in MANETs", *International Journal of Network Security*. (Revision)
10. Vipul Narayan, YashPalSingh, Vimalkumar, Sanjay Kumar, Euring Data Integrity in Distributed System Architecture, " *European Journal of Scientific Research*, Volume 145 Issue 2 **(Indexed in SCOPUS and SCImago)**.
11. VipulNarayan, YashPalSingh, VimalKumar, Sanjay Kumar, Mohammad Faiz "A Comparative study of various Hashing techniques in Distributed System." *European Journal of Scientific Research*, Volume 145 Issue 4**(Indexed in SCOPUS and SCImago)**
12. Goel, M., Kumar, V. "Data Acquisition From Mobile Phone using Mobicedit" In *International Journal of Innovative Technology and Exploring Engineering (IJITEE)Volume-8, Issue- 9S2*, pp. 188-191, July 2019. **(Indexed in Scopus)**
13. Aayushi Jain and Vimal Kumar "A review on Classification of Malevolent and Benevolent Network Traffic" in *International Journal of Scientific & Technology Research*. **(Accepted)**
14. Vaishali Deshwal and Vimal Kumar "Study of Coronavirus Disease (COVID-19) Outbreak in India, In *Journal of King Saud University – Computer and Information Sciences* **(Under Review)**

15. VidhiTyagi, ShivamArora, Sattyam Gupta, Vijay Sharma and Vimal Kumar, “ Architecture of an IoT-based Women Safety System” in International journal of future generation communication and networking (**In Press**) (**Indexed in ESCI**)

Publications in the Proceedings of the International Conferences

1. Vimal Kumar, Prashant S. Modi and ManojWairiya “An Efficient Preservation of Network Traffic for Network Forensic Analysis”, First International Conference on Innovations and Advancements in Information and Communication Technology (ICIAICT-2012), Vol. IV, 136- 141, March2012.
2. Anjani K. Rai, Vimal Kumar, Shivendu Mishra, “An Efficient Password Authenticated Key Exchange Protocol for WLAN and WIMAX”, International Conference and Workshop on Emerging Trends and Technology (ICWET), 2011 proceedings by ACM at MumbaiMaharashtra.
3. Jitendra Singh, RakeshKumar, Vimal Kumar and Ajai Mishra,” Intruder Detection by Visual Cryptography in Wireless Sensor Networks” In International Conference on Communications and Signal Processing (ICCSP-2015), April 2-4 ,2015,pp.1436-1439.
4. Vimal kumar and Rakesh kumar, “Detection of SYN flooding Attack in Mobile Ad Hoc Network,” In the proceedings of 8th International Conference on Computer Communication Networks(ICCNC-2014), Elsevier, Bangalore, pp. 178-185, July 2014.
5. Vimal Kumar and RakeshKumar,” Detection of Phishing Attack using Visual Cryptography in Ad hoc network” In International Conference on Communications and Signal Processing (ICCSP-2015), pp.1025-1029, April2015.
6. Jitendra Singh, Rakesh Kumar and Vimal Kumar, “ An RSA based Certificateless Signature Scheme for Wireless Sensor Networks” In Proceedings of the IEEE International Conference on Green Computing and Internet of Things (ICGCIoT), Greater Noida, India, pp.443-447,2015.
7. Yashendra shiv, Rohit Kumar, ,Vimal Kumar, ManojWairiya" A Light weight Authentication Scheme for wearable Medical Sensors 8th international conference on cloud computing, Data Science and Engineering(Confluence) IEEE, 2018 , pp.366-370.
8. Kumar, Rohit, Yashendra Shiv, Vimal Kumar, and ManojWairiya. "An authentication technique in mobile Ad hoc network using elliptic curve cryptography." In *2018 8th International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, pp. 14-15. IEEE, 2018.
9. Gangwar, Krishanveer and Kumar, Vimal and Singh, Ajay Kr. and Sharma, Vijay Kr., Classification of Image Dataset using Convolutional Neural Network (March 9, 2019). Proceedings of 2nd International Conference on Advanced Computing and Software Engineering (ICACSE) 2019.

10. Rohit Kumar, Yashendrashiv, Vimal Kumar, Manoj Wairiya " An Authentication Technique in Mobile Ad hoc Network using Elliptic Curve Cryptography" in 8th international conference on cloud computing, Data Science and Engineering (Confulence), IEEE, 2018 , pp.209-213.
11. Goel, M., Kumar, V. "Layered Framework for Mobile Forensics Analysis." In Second International Conference on Advanced Computing and Software Engineering (ICACSE), 2019.
12. Goel, M., Kumar, V. "Major challenges of Mobile Forensics." In First International Conference on Future Communication and Computing Technology (ICFCCT), CASS-ISSN: 2581-6403, Volume 3, Issue 1, Addendum 9, May 2019.

Publications in the Proceedings of the National Conferences

1. Vimal Kumar and Rakesh Kumar, "Detection of Phishing attack using Visual Cryptography", In the National Conference on Digital Information & Mobile communication Technology and its Applications (DIMCTAP 2014), pp. 446-452, April 2014.

Funded Projects Undertaken (Please provide details)

1. TEQIP-III sponsored workshop on “Digital Image Processing” by organized Department of Computer Sc. &Engg, Meerut Institute of Engineering and Technology, Meerut during June 10-14,2019.
- 2.

Project Title			PI	Name of Sponsoring Agency	A. Status	
"Building awareness at School level and ITI, Polytecnic, Advanced Training Institutes(ATI)" "Awareness Program on Cyber Security"			Dr. Vimal Kumar	DST	Under Review	
"Building awareness at School level and ITI, Polytecnic, Advanced Training Institutes(ATI)": "Awareness Program Block Chain"			Dr. Vimal Kumar	DST	Under Review	
""Training programmes : in-house Short term training/FDP Programmes for Faculty/UG/PG/Doctoral Students of two weeks duration"): Training Program On "Big Data Analytics"			Dr. Vimal Kumar	DST	Under Review	
STTP	Computer Science & Engineering (CS)	Cyber Security and laws	Dr. Vimal Kumar	AICTE	Under Processing	4.95 Lacs

Technology Transfer:

1. Presented paper, "An Optimal Authentication Protocol using Certificateless ID-based Signature in MANET "InThird International Symposium on Security in Computing and Communications (SSCC'2015) , Springer, 10-13 August, 2015, Kerala,India.
2. Presented paper , "A Fuzzy-Time Stamp Based Adaptive Gateway Discovery Protocol in Integrated Internet MANET " In 4th International Conference on Advances in Computing , Communication & Informatics(ICACCI 2015) , Springer, 10-13 August, 2015, Kerala,India.
3. Presented paper," An Adaptive Approach for Detection of Black hole in Mobile Ad hoc Network " In International Conference on Intelligent Computing, Communication & Convergence (ICCC-2014) being organized by IIMT Research Network, Bhubaneswar, Dec, 27-28,2014.
4. Presented paper," Detection of Phishing Attack using Visual Cryptography in Ad hoc network" In International Conference on Communications and Signal Processing (ICCSP-2015), April 2-4,2015.
5. Presented paper," Detection of Phishing Attack Using Visual Cryptography" In National Conference on Digital Information & Mobile Communication Technology and its Applications(DIMCTAP-2014),04-05 April2014.
6. Presented paper, "Layered Framework for Mobile Forensics Analysis." In Second International Conference on Advanced Computing and Software Engineering (ICACSE), 2019, KNIT, Sultanpur, UP, India.

B. Additional Post held in Parent College/University

- 1) Worked as Counselor (MCA, BCA), for IGNOU at the Regional Study Centre Lucknow, from Jan 2011 to June2013.
- 2) Worked as Deputy Head Examiner (Theory) for the evaluation of answer sheets of B.Tech and MCA assigned by UP Technical University,Lucknow.
- 3) Worked as Centre Controller for conducting the examination of B.Tech, MCA of UP Technical University,Lucknow.
- 4) Worked as Center observer for conducting the examination of B.Tech, MCA of Madan Mohan Malaviya University of Technology, and Gorakhpur.
- 5) Volunteered Faculty Development Program on "Information Security" organized by ISEA at MNNIT,Allahabad.
- 6) Student coordinator one-week short-term course on "Advances in Computing Technology " organized by Department of Computer Sc. &Engg, MadanMohan MalaviyaUniversity of Technology, Gorakhpur during July 3-9,2016.
- 7) Organized a TEQIP-II sponsored workshop on latex for research at by Department of Computer Sc. &Engg, MadanMohan MalaviyaUniversity of Technology, and Gorakhpur during Dec 12-

14,2016.

- 8) Coordinator TEQIP-III sponsored workshop on “Digital Image Processing” by organized Department of Computer Sc. &Engg, Meerut Institute of Engineering and Technology, Meerut during June 10-14,2019.
- 9) Conference Co-Chair ICFCCT-2018 organized byDepartment of Computer Sc. &Engg, Meerut Institute of Engineering and Technology, Meerut during December 20-21,2018.
- 10) Conference Chair ICFCCT-2019 organized by Department of Computer Sc. &Engg, Meerut Institute of Engineering and Technology, Meerut during July 17-18,2019.
- 11) Session Chair International Conference on Information Technology and Management for the Sustainable Development (ICITMSD-2019) during 9-10 August 2019 UIM, Uttaranchal University, Dehradun, Uttarakhand, India.