

Research Guidance

PhD supervision:	01 Student (In-Progress)
Student Name:	Neha Gupta (Date of Registration 27 Nov, 2018) <u>Under Joint supervision with Prof. Punam Bedi</u>
Title of Research:	Use of Artificial Intelligence Techniques for Cyber Security
University Affiliation:	Department of Computer Science, University of Delhi

Research Publications Details:

Total Number of papers published till date:	24 (08+13+02+01)
In International Journals:	08
In International Conferences:	13
In Book Chapters:	02
In National Conferences:	01

International Journal publications

1. **Jindal, Vinita**, and Bedi, P. (2019). : Parameter tuning in MACO for actual road conditions. *Wireless Personal Communications, WPC*, 106 (3), pp. 1309-1323, Springer Science + Business Media, LLC, part of Springer, Nature, DOI: 10.1007/s11277-019-06215-2, Print ISSN: 0929-6212, Online ISSN: 1572-834X, **Impact Factor: 0.929.**
2. **Jindal, Vinita**, and Bedi, P. (2018). High Performance Adaptive Traffic Control for Efficient Response in Vehicular ad hoc Networks. Special Issue on: BDA 2014 and 2015 Conferences and DNIS 2014 and 2015 Workshops Data Modelling and Information Infrastructure in Big Data Analytics, *International Journal of Computational Science and Engineering, IJCSE 2018*, 16 (4), pp. 390-400, DOI: 10.1504/IJCSE.2018.10014959, Online ISSN: 1742-7193, Print ISSN: 1742-7185, **Impact Factor: 0.786.**
3. **Jindal, Vinita**, and Bedi, P. (2018). An Improved Hybrid Ant Particle Optimization

- (IHAPO) algorithm for reducing travel time in VANETs. *Applied Soft Computing, ASOC*, Elsevier, 64 (2018), 526-535, DOI: 10.1016/j.asoc.2017.12.038, Print ISSN: 1568-4946, Online ISSN: 1568-4946, **Impact Factor: 4.873**.
4. **Jindal, Vinita**, and Bedi, P. (2017). Preemptive MACO (MACO-P) algorithm for reducing travel time in VANETs. *Applied Artificial Intelligence, AAI*, Taylor and Francis, 31 (2), 174-196. DOI:10.1080/08839514.2017.1300017, Print ISSN: 0883-9514, Online ISSN: 1087-6545, **Impact Factor: 0.988**.
 5. **Jindal, Vinita**, and Bedi, P. (2017). Reducing waiting time with parallel preemptive algorithm in VANETs. *Vehicular Communications*, Elsevier, 7 (2017), 58-65. DOI:<http://dx.doi.org/10.1016/j.vehcom.2016.11.008>, ISSN: 2214-2096, **Impact Factor: 3.53**.
 6. **Jindal, Vinita**, and Bedi, P. (2016). Vehicular Ad-Hoc Networks - Introduction, Standards, Routing Protocols and Challenges. *IJCSI, International Journal of Computer Science issues*, 13 (2), 44-55. DOI: 10.20943/01201602.4455, Print ISSN: 1694-0814, Online ISSN: 1694-0784, <http://www.ijcsi.org/contents.php?volume=13&&issue=2>.
 7. **Vinita**, Amita Jain, Devendra K. Tayal (2008), "On reverse engineering an object-oriented code into UML class diagrams incorporating extensible mechanisms", *ACM SIGSOFT Software Engineering Notes*, Volume: 33, Issue: 5, September 2008, Special Interest Group on Software Engineering, ACM, ISSN: 0163-5948, DOI: 10.1145/1402521.1402527.
 8. **Jindal, Vinita**, and Bedi, P. (2016). Reducing travel time in VANETs using MACO with CUDA on GPU. *Journal of Network and Innovative Computing*, 4(1), 200-208, ISSN: 2160-2174, <http://www.mirlabs.net/jnic/secured/Volume4-Issue1/Volume4-Issue1.html>.

International Conference Proceedings

9. Bedi, P., Gupta, N., and **Jindal, Vinita**, (2020), "Siam-IDS: Handling class imbalance problem in Intrusion Detection Systems using Siamese Neural Network", presented in 7th WCI-2019, in collaboration of Third International Conference on Computing and

Network Communications (CoCoNet'19), published in *Procedia Computer Science*, Elsevier, Vol-171C, Issue-2020, pp. 780-789, <https://doi.org/10.1016/j.procs.2020.04.085>, ISSN : 18770509.

10. Gupta N., Bedi P., and **Jindal, Vinita** (2020), Effect of Activation Functions on the Performance of Deep Learning Algorithms for Network Intrusion Detection Systems. International Conference on Emerging Trends in Information Technology (ICETIT-2019), IITM, Janakpuri, Delhi, India, 21-22 June, 2019, In: Singh P., Panigrahi B., Suryadevara N., Sharma S., Singh A. (eds.) Proceedings of ICETIT 2019. Lecture Notes in Electrical Engineering, Vol 605. Springer, Cham, DOI:10.1007/978-3-030-30577-2_84, Print ISBN: 978-3-030-30576-5, Online ISBN: 978-3-030-30577-2, (pp. 949-960).
11. **Jindal, Vinita**, and Bedi, P. (2020). CUDA Accelerated HAPO (C-HAPO) Algorithm for Fast Responses in Vehicular Ad Hoc Networks. 9th International Conference on Quality, Reliability, Infocom Technology And Business Operations (Trends and Future Directions)- (ICQRITBO-2018), Delhi, India, 27 – 29 December 2018, published in: Kapur P., Singh O., Khatri S., Verma A. (eds) Strategic System Assurance and Business Analytics. Asset Analytics (Performance and Safety Management), 978-981-15-3646-5, 491348_1_En, (chapter-23), Springer, Singapore India. (pp. 12). Online ISBN: 97 https://doi.org/10.1007/978-981-15-3647-2_23, 8-981-15-3647-2.
12. **Jindal, Vinita**, and Bedi, P. (2020). An Improved HAPO algorithm using GPU harness (IHAPO-G) for rapid responses in VANETs. International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering - (ICRIEECE-2018), Bhubaneswar, India, 27 – 28 July 2018, (pp. 1150-1155). IEEE. DOI: 10.1109/ICRIEECE44171.2018.9009424, Electronic ISBN: 978-1-5386-5995-3, Print on Demand(PoD) ISBN: 978-1-5386-5996-0---presented and published.
13. **Jindal, Vinita**, & Bedi, P. (2017). GPU accelerated Preemptive HAPO (GHAPO-P) for reducing trip time in VANETs. Fifth International Symposium on Women in Computing and Informatics (WCI-2017): International Conference on Advances in Computing, Communications and Informatics (ICACCI), 13 - 16 September 2017, (pp. 2130-2136). IEEE. DOI: 10.1109/ICACCI.2017.8126065, Electronic ISBN: 978-1-5090-6367-3, USB

ISBN: 978-1-5090-6366-6, Print on Demand(PoD) ISBN: 978-1-5090-6368-0, Scopus Indexed.

14. **Jindal, Vinita**, Sharma, V. R., and Bedi, P. (2016). A preemptive hybrid ant particle optimization (HAPO-P) algorithm for smart transportation. Fourth International Symposium on Women in Computing and Informatics (WCI-2016): International Conference on Advances in Computing, Communications and Informatics (ICACCI), 21 - 24 September 2016, (pp. 1357-1363), IEEE, DOI: 10.1109/ICACCI.2016.7732237, IEEE, Electronic ISBN: 978-1-5090-2029-4, USB ISBN: 978-1-5090-2028-7, Print on Demand(PoD) ISBN: 978-1-5090-2030-0, Scopus Indexed.
15. **Jindal, Vinita**, Dhankani, H., Garg, R., and Bedi, P. (2015). MACO: Modified ACO for reducing travel time in VANETs. Third International Symposium on Women in Computing and Informatics (WCI-2015), 10 - 13 August 2015, (pp. 97-102). India: ACM. DOI: 10.1145/2791405.2791476, ISBN: 978-1-4503-3361-0. , Scopus Indexed.
16. Bedi, P., **Jindal, Vinita**, Garg, R., and Dhankani, H. (2015). A preemptive approach to reduce average queue length in VANETs. Fourth International Conference on Advances in Computing, Communications and Informatics (ICACCI – 2015), 10 - 13 August 2015, (pp. 2089–2095). Kochi, India: IEEE. DOI: 10.1109/ICACCI.2015.7275925, Electronic ISBN: 978-1-4799-8792-4, Print ISBN: 978-1-4799-8790-0, USB ISBN: 978-1-4799-8791-7, Scopus Indexed.
17. Bedi, P., and **Jindal, Vinita**, (2014). Use of Big Data Technology in Vehicular Ad-hoc Networks. International Conference on Advances in Computing, Communications and Informatics (ICACCI - 2014), 24 - 27 September 2014, (pp. 1677–1683). Greater Noida, India: IEEE. DOI:10.1109/ICACCI.2014.6968352, Electronic ISBN: 978-1-4799-3080-7, Print ISBN: 978-1-4799-3078-4. , Scopus Indexed.
18. Bedi, P., **Jindal, Vinita**, and Gautam, Anjali, (2014), “Beginning with Big Data Simplified”, International Conference on Advanced Computing, Networking, and Informatics, International Conference on Data Mining and Intelligent Computing (ICDMIC – 2014), 5 - 6 September 2014, pp. 108 – 113, IEEE, DOI: 10.1109/ICDMIC.2014.6954229, Print ISBN: 978-1-4799-4675-4, Online ISBN: 978-1-

4799-4674-7, INSPEC Accession Number: 14776039. , Scopus Indexed.

19. **Jindal, Vinita**, and Bedi, P. (2015). Reducing Travel Time in VANETs with Parallel Implementation of MACO (Modified ACO). *Innovations in Bio-Inspired Computing and Applications* (pp. 383-392). India: Springer International Publishing. DOI:10.1007/978-3-319-28031-8_33, Advances in Intelligent Systems and Computing, Springer International Publishing, Germany, 2015, 16 – 18 December 2015, Print ISBN: 978-3-319-28030-1, Online ISBN: 978-3-319-28031-8, with Print ISSN 21945357, Online ISSN: 21945365, **listed in the UGC list** with Sr. No. 49365.
20. Bedi, P., **Jindal, Vinita**, Dhankani, H., and Garg, R. (2015). ATSOT: Adaptive Traffic Signal Using mOTes. *10th International Workshop on Databases in Networked Information Systems, DNIS 2015. LNCS 8999*, 23 – 25 March 2015, pp. 152-171. Aizu-Wakamatsu, Japan: Springer International Publishing, Switzerland. DOI:10.1007/978-3-319-16313-0_11, **listed in the UGC list** with Sr. No. 4520.
21. Punam Bedi, Sumit Kumar Agarwal, **Vinita Jindal**, and Richa (2014), “MARST: Multi-Agent Recommender System for e-Tourism Using Reputation Based Collaborative Filtering”, DNIS 2014, 9th International Workshop on Databases in Networked Information Systems, 24 – 26 March 2014, LNCS 8381, pp. 189–201, Springer International Publishing Switzerland 2014, DOI: 10.1007/978-3-319-05693-7_12, Print ISBN: 978-3-319-05692-0, Online ISBN: 978-3-319-05693-7.

Book Chapters

22. **Jindal, Vinita**, and Singhal, D., (2020). Implementing Information Security using Multimodal Biometrics (150320-102901). In Cruz-Cunha, Maria Manuela and Nuno Ricardo Mateus-Coelho, Handbook of Research on Cyber Crime and Information Privacy. IGI Global, Ch-17, <http://doi:10.4018/978-1-7998-5728-0>, ISBN13: 9781799857280, ISBN10: 179985728X, EISBN13: 9781799857297.
23. Bedi, P., Gupta, N., and **Jindal, Vinita** (2020). Dark Web: A Boon or a Bane. In M. Khosrow-Pour D.B.A. (Ed.), Encyclopedia of Criminal Activities and the Deep Web (pp. 152-164). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-9715-5.ch010, ISBN13:

9781522597155, ISBN10: 1522597158, EISBN13: 9781522597162

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24. Tayal, D. K. and **Vinita** (2007), “An algorithm to reverse engineer Object oriented code into UML class diagrams”, National Conference on Emerging Computing Technologies at Indian Habitat Centre organized by ITS Ghaziabad in April’ 2007, 6 - 7 April 2007, pp: 239-252. Print ISBN: 81-89547-27-5.