Vikas Hassija

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**Date of Birth**: 19 April 1987

**Gender**: Male

## Education

**PhD.** (Thesis submission in process) JIIT, Noida (co-supervised by Dr. Vinay Chamola, BITS-Pilani). Aug. 2018 – Present

**M.S.** (Tele-Communication and Software Engg.), BITS-Pilani, Rajasthan. Jun. 2012 – Jun. 2014

**B.E. (Hons)** Information Technology, BRCM-CET, MDU, Rohtak. Aug. 2006 – May 2010

## Experience

**Research Intern, UNSW, Sydney, Australia**  June2020 – July2020

**Research Intern, University of Kentucky, USA** June2020 – July2020

**Research Intern, National University Singapore (NUS), Singapore (Prof. Dusit Niyato IEEE fellow)** Aug 2020 – Jan2021

**Assistant Professor**, Jaypee Institute of Information technology, Noida, India Aug. 2018 – Present

**Senior Automation Engineer**, BOLD Technologies Pvt. Ltd., Noida Dec 2015 – July 2018

**Senior Automation Engineer**, Pulp Strategy Pvt. Ltd., New Delhi Jan 2015 – Dec 2015

**Automation Engineer**, LiveCareer India Ltd., Noida Feb 2014 – Jan 2015

**Software Engineer**, Tech Mahindra (Tech M), Noida Mar 2011 – Feb 2014

**Research Interests:**

Blockchain, Quantum Computing, Quantum resistant blockchain, Advanced blockchain, Distributed computing, *Internet of Things Security, and 5G Communications.*

**Courses Taught:**

Blockchain Technology, Cloud based enterprise systems, Information security

**Awards / Honours:**

1. Completed Ph.D. at JIIT in three years (with 4 SCI Journals).
2. **Reviewer** for the following journals: IEEE Transactions on Vehicular Technology(TVT),IEEE Journal on Selected Areas in Communications(JSAC), IEEE Transactions on Communications(ToC), IEEE Transactions on Sustainable Energy(TSE)
3. Article on Role of emerging technologies to tackle COVID 19 was featured by IEEE Access and was on the home page of the journal as featured article for 6 months. The article received 350 citations in just 6 months.
4. Acted as Technical program chair for SPIN-2021 conference for Blockchain track.
5. More than 1000 google scholar citations

**Project Grants/ Funding (Approved)**

1. Nvidia GPU seed grant, “Advanced blockchain algorithms for IoT”, Amount: Rs 1.5 Lakhs (Role: Principal Investigator), 2018-2019
2. Start up seed funding worth Rs. 7 Lakh from Pilani innovation and Entrepreneurship Development Society (PIEDS) for startup named Medsupervision Pvt. Ltd.

**Skills:**

Python, R, Java, C/C++, Node Js, React JS, Ethereum, Hyper ledger Fabric, Solidity, LaTex, MATLAB

**Publications summary:**

No. of SCI journals: **26,**No. of papers in IEEE Journals/ Magazines (total): **16,**No. of papers in IEEE Magazines (e.g. IEEE Communications mag., IEEE Network)**: 4,**No. of papers in IEEE Transactions (e.g. TVT,TNSE,IoT Journal)**: 8,**

No. of papers in IEEE Communications survey and tutorial **(Impact factor 22):** 1

No. of citations in google scholar: **1067**

## International Collaborations:

* 1. Prof. Mohsein Guizani , Qatar University, **Doha,** IEEE fellow
  2. Prof. Biplab Sikdar, National University Singapore, **Singapore**
  3. Prof. Nirwan Ansari, New Jersey Institute of Information technology, **USA,** IEEE fellow.
  4. Prof. Joel J.P.C. Rodrigues, University of Beira, **Portugal**, IEEE fellow.
  5. Prof. Sherali Zeadally, University of Kentucky**, USA**
  6. Prof. F. Richard. Yu, Carleton University, Canada, IEEE fellow
  7. Prof. Guangjie Han, Dalian University of Technology, China

## Publications

**Journals (SCI indexed, IF: Impact factor) : Published**

1. **V. Hassija**, V. Chamola, A. Agrawal, A. Goyal, NC Luong, D Niyato,Yu FR, and M. Guizani, " Fast, Reliable, and Secure Drone Communication: A Comprehensive Survey”, ***IEEE Communications Survey and Tutorials***, May. 2021 ***(Impact factor: 22).***
2. **V. Hassija**, Batra S, Chamola V, Anand T, Goyal P, Goyal N, Guizani M. A blockchain and deep neural networks-based secure framework for enhanced crop protection. Ad Hoc Networks. 2021 Aug 1;119:102537. ***(Impact factor:4.1).***
3. Chamola V, **V. Hassija**, Gupta S, Goyal A, Guizani M, Sikdar B. Disaster and pandemic management using machine learning: a survey. IEEE Internet of Things Journal. 2020 Dec 15. ***(Impact factor: 9.9).***
4. **V. Hassija**, V. Chamola, N. Kumar and M. Guizani, "A Secure Framework for Government Tenders using Blockchain and Collective Signing”, ***IEEE IoT Journal***, Sept. 2019 ***(Impact factor: 9.9).***
5. V. Hassija, **V. Chamola**, V. Gupta, S. Jain and N. Guizani, “A Survey on Supply Chain Security: Application Areas, Security Threats, and Solution Architectures”, ***IEEE IoT Journal***, Sept. 2020, Accepted & In Press ***(Impact factor: 9.9).***
6. P. Gorla, **V. Chamola**, V. Hassija, and D. Niyato, Network Slicing for 5G by State based Allocation Modelling and Blockchain Approach, ***IEEE Network***, Accepted and in Press***(Impact factor: 7.5).***
7. V. Chamola, **V. Hassija**, B. Sikdar, N. Kumar, N. Ansari, “Energy and Latency Aware Resource Management for Solar Powered Cellular Networks, ***IEEE Network***, Sept. 2019 ***(Impact factor: 7.2).***
8. G. Praveen, V. Chamola, **V. Hassija** and N. Kumar, Blockchain for 5G: A Prelude to Future Telecommunication,***IEEE Network,*** *Feb 2020****(Impact factor: 7.2).***
9. P. Gorla, V. Chamola, **V. Hassija**, and N. Ansari, Blockchain Based Framework for Modeling and Evaluating 5G Spectrum Sharing, ***IEEE Network***, Accepted and in Press ***(Impact factor: 7.5).***
10. **V. Hassija**, V. Gupta, S. Garg and V. Chamola, Traffic Jam Probability Estimation based on Blockchain and Deep Neural Networks, ***IEEE Transactions on Intelligent Transportation Systems***, March 2020***(Impact factor: 5.7).***
11. **V. Hassija,** V. Chamola, S. Garg, N. Dara, G. Kaddoum, and N. Jayakody, “A blockchain-based framework for lightweight data sharing and energy trading in v2g network***,” IEEE Transactions on Vehicular Technology***, Nov. 2019. ***(Impact factor: 5.3).***
12. **V. Hassija**, V. Chamola, N. Dara and M. Guizani, "A Distributed Framework for Charge Trading Between UAVs and Charging Stations", ***IEEE Transactions on Vehicular Technology, Jan 2020 (Impact factor: 5.3).***
13. **V. Hassija**, V. Chamola**,** G. Han, J. Rodrigues and M. Guizani, “DAGIoV: A Framework for Vehicle to Vehicle Communication using Directed Acyclic Graph and Game Theory,” ***IEEE Transactions on Vehicular Technology***, Jan. 2020. ***(Impact factor: 5.3).***
14. **V. Hassija**, V. Chamola**,** V. Saxena and Richard Yu, "A Parking Slot Allocation Framework Based on Dynamic Pricing Algorithm and Virtual Voting", ***IEEE Transactions on Vehicular Technology,*** *Feb 2020****(Impact factor: 5.3).***
15. **V. Hassija**, V. Chamola and S. Zeadally, "BitFund: A Blockchain-based Crowd Funding Platform for Future Smart and Connected Nation", ***Sustainable Cities and Society***, Elsevier, Mar. 2020 ***(Impact factor: 4.6).***
16. **V. Hassija**, V. Chamola, V. Saxena, D. Jain, P. Goyal, B. Sikdar, "A Survey on IoT Security: Application Areas, Security Threats, and Solution Architectures", ***IEEE Access,*** June 2019 *(****Impact factor****:* ***4).***
17. V. Chamola, **V. Hassija**, V. Garg, M. Guizani, “A Comprehensive review on COVID and how IoT, AI, Drones and 5G can help mitigate its impact”, **IEEE Access,** April 2020***(Impact factor: 4).***
18. Thakur T, Mehra A, **V. Hassija**, Chamola V, Srinivas R, Gupta KK, Singh AP. Smart water conservation through a machine learning and blockchain-enabled decentralized edge computing network. Applied Soft Computing. 2021 Jul 1;106:107274. ***(Impact factor: 6.7).***
19. Chamola V, Jolfaei A, Chanana V, Parashari P, **Hassija V**. Information security in the post quantum era for 5G and beyond networks: Threats to existing cryptography, and post-quantum cryptography. Computer Communications. 2021 Jun 1. ***(Impact factor: 3.1).***
20. Bharadwaj HK, Agarwal A, Chamola V, Lakkaniga NR, **Hassija V**, Guizani M, Sikdar B. A Review on the Role of Machine Learning in Enabling IoT Based Healthcare Applications. IEEE Access. 2021 Feb 16;9:38859-90. ***(Impact factor: 5).***
21. **V. Hassija**, V. Chamola, B. Bajpai, S. Zeadally, “Security Issues in Implanted Medical Devices: Fact or Fiction?”, ***Sustainable Cities and Society***, Elsevier, October 2020 ***(Impact factor: 5.3).***
22. **V. Hassija**, V. Saxena and V. Chamola, “Scheduling Drone Charging for Multi-Drone Network based on Consensus Time-stamp and Game Theory”, ***Computer Communications,*** Elsevier, vol. 149, pp. 51-61, Jan 2020 ***(Impact factor: 3).***
23. **V. Hassija**, G. bansal, V. Chamola**,** N. Kumar, M. Guizani, Secure Lending: Blockchain and Prospect Theory-Based Decentralized Credit Scoring Model, ***Transactions on Network Science and Engineering,*** *Feb 2020****(Impact factor: 2.5).***
24. **V. Hassija**, V. Saxena and V. Chamola, "A Mobile Data Offloading Framework based on a Combination of Blockchain and Virtual Voting", ***Software: Practice and Experience***, Wiley, Dec. 2019. ***(Impact factor: 2.0).***
25. **V. Hassija**, V. Chamola, V. Saxena, V. Chanana, P. Parashari, S. Mumtaz, M. Guizani, 'The Present Landscape of Quantum Computing', ***IET Quantum Communications***, Vol.1, Iss. 2, Dec. 2020.
26. **V. Hassija**, V. Chamola, A. Goyal, S. Kanhare, N. Guizani, 'Upcoming Real Life Applications of Quantum Computing: Peeking into the Future', ***IET Quantum Communications***, Vol. 1, Iss. 2, pp. 35-41, Dec. 2020.

## Conferences

1. **V. Hassija**, G. Bansal, V. Chamola, V. Saxena, B. Sikdar, "BlockCom: A Blockchain based Commerce Model for Smart Communities using Auction Mechanism", ***IEEE ICC***, Shanghai, China, May 2019.
2. G. Bansal, **V. Hassija**, V. Chamola, N. Kumar and M. Guizani, "Smart Stock Exchange Market: A Secure Predictive Decentralised Model",**IEEE Globecom,** Waikoloa, USA, Dec. 2019.
3. **V. Hassija**, A. Patel and V. Chamola, "Police FIR Registration and Tracking Using Consortium Blockchain", ***MOSICOM***, Dubai, Jan 2020
4. **V. Hassija**, V. Saxena and V. Chamola "A Blockchain-based Framework for Drone-Mounted Base Stations in Tactile Internet Environment", ***IEEE INFOCOM,*** Toronto, Canada, Feb2020
5. **V. Hassija**, Patel A, Chamola V. Police fir registration and tracking using consortium blockchain. InAdvances in Machine Learning and Computational Intelligence 2021 (pp. 785-794). Springer, Singapore.
6. **V. Hassija**, V. Gupta, V. Chamola and G.S.S. Chalapathi, "A Blockchain based Framework for Secure Data Offloading in Tactile Internet Environment", ***IEEE IWCMC 2020***, Limassol, Cyprus, June 2020.
7. **V. Hassija**, V. Gupta, V. Chamola and G.S.S. Chalapathi, "A Framework for Secure Vehicular Network using Advanced Blockchain", ***IEEE IWCMC 2020***, Limassol, Cyprus, June 2020.
8. **V. Hassija**, V. Gupta, V. Chamola and S. Kanhare, "A Blockchain based- Framework for Energy Trading between Solar Powered Base Stations and Grid", ***ACM MobiHoc 2020.***