Ashutosh Sharma

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Objective:

Seeking for such a healthy environment, where I can direct my technical and analytical skills towards the success of the organization, and leading myself to the opportunities for professional and academic growth.

Academic & Professional Qualification:

Qualification	Board/University/ Institute	Year of Passing	Percentage/ C.G.P.A.
Ph.D. (Electronics and Communication)	Jaypee University of Information Technology, (H.P.)	*2020*	8.3
Master of Technology (Electronics and Communication)	Jaypee University of Information Technology, (H.P.)	2016	8.2
Bachelor of Technology (Electronics and Communication	Punjab Technical University, Jalandhar	2013	79.6%
12th std.	H.P.B.S.E. D/shala	2009	75.6%
10th std.	H.P.B.S.E. D/shala	2007	83%

Experience:

Academic

➢ **Assistant Professor** in School of Electronics and Electrical Engineering, Lovely Professional University, Punjab, India from August 2019 to present.

➢ **Teaching Assistant** in department of electronics and communication at Jaypee University of Information Technology, Waknaghat (H.P.), India from 25, July 2016 to 26, August 2019.

➢ **Teaching Assistant** in department of electronics and communication at Jaypee University of Information Technology, Waknaghat (H.P.), India from July 2014 to June 2016.

Administrative Work

➢ Member of Organizing Committee 3rd International Conference on Advanced Informatics for Computing Research held at Club Mahindra, Shimla.

➢ Member of Organizing Committee 4th IEEE ISPCC 2017 conference held at JUIT, Waknaghat.

➢ One week FDP on "Signal Processing and Its Applications" at JUIT, during January 13 – 18, 2016.

➢ Volunteer in 3rd IEEE ISPCC'2015 conference held at JUIT, Waknaghat.

➢ Volunteer in 3rd IEEE PDGC'2015 conference held at JUIT, Waknaghat.

Others

➢ 6 Months training from CRIS, Chankyapuri, New Delhi.

➢ 2 Months training from HCL Infosystems, Chandigarh.

➢ 4 Weeks training from BSNL exchange Dehra Gopipur.

Research Status and Services

➢ Guest Editor of Special Issues in
  o Recent Advances in Computer Science and Communications (Scopus).
  o Journal of Computing and Information Technology (Scopus).
  o Recent Patents on Engineering (Scopus).
  o Recent Advances in Electric and Electronics Engineering (Scopus and ESCI).
  o International Journal of Healthcare Information Systems and Informatics (Scopus and ESCI).

- o International Journal of Sensor, Wireless Communication and Control (Scopus).
- o International Journal of Information Technology and Web Engineering (IJITWE) (Scopus).
- o Radioelectronics and Communications Systems, Springer (Scopus and ESCI).
- ➢ Research Papers and Conferences
    - o **Research Papers (37)**-February, 2020 **(Accepted-SCI-14, Scopus-10, Under Review/Revision-SCI-7)**
    - o **Conference Papers** (6)

Ph.D. Research Topic:
- ➢ Risk Aware Communication Network Architecture and Planning
- ➢ **Supervisor: Dr. Rajiv Kumar**, Associate Professor, Dept. of ECE JUIT, Solan.

DST Project Fellow:
- ➢ Research Associate in a project "**Reliability Modeling and Optimized Planning of Risk-based Resilient Networks**" sponsored by Indo-Polish Programme under grant DST/INT/POL/P-04/2014.
- ➢ **PIs of Project: Dr. Rajiv Kumar** (India) and **Dr. Piotr Cholda** (Poland)

Computational Skills:
- ➢ Programming Languages (Matlab)
- ➢ Operating Systems (MS Windows, Linux)
- ➢ Simulator software (NS2, GNS3, Cisco Packet Tracer, Wireshark)

Teaching Interest:
- ➢ Basic Electronic Circuit Analysis.
- ➢ Control System
- ➢ Signal and System
- ➢ Communication Networks

Lab Courses Taken:
- ➢ Basic Electrical Circuit Analysis.
- ➢ Computer Communication
- ➢ Electronic Circuit Design and Analysis (PSPICE)
- ➢ Integrated Circuits and Power Electronics

Projects:
- ➢ B.Tech Minor Project on "Design of Efficient and Smart Home Light System Using LDR" and Major Project on "Analysis of Security Challenges in Computer Communication Networks"
- ➢ M.Tech. Project on "A Tuning-based Approach for the Multi-Constrained Data-Path Transmission" http://172.16.73.104:8080/jspui/handle/123456789/7830
- ➢ Ph D course work at Jaypee University of Information Technology, Solan,

Awards and Achievements:
- ➢ Participated and presented a paper entitled, "An Optimal Routing Scheme for Critical Healthcare HTH Services – An IoT Perspective", in 2017 4th ICIIP held at JUIT during 21-23 Dec., 2017.
- ➢ Participated in AICTE recognized short term course on "Wireless and Mobile Communication through ICT" held at JUIT from 30 Oct., 2017 to 03 Nov., 2017.
- ➢ Participated in the MHRD one day workshop on "Virtual labs" held at JUIT on 28th Feb., 2017.
- ➢ Participated in the one day workshop on "Patent Filling & Geographical Indication" held at JUIT on 27th Feb., 2017.
- ➢ Participated in AICTE recognized short term course on "Cyber Crime & Forensic Tools" held at JUIT from 06 Feb., 2017 to 10 Feb., 2017.
- ➢ Participated in "Innovation & Intellectual Property Rights" at JUIT on 9th Dec.2016.

- ➤ Participated in 'Mock Paper Presentation' on "Li-Fi technology: A New Era of Visible Light Communication" at 'R&D Expo' organized by IEEE-JUIT branch at JUIT on 14th May, 2016.
- ➤ Participated in "Technical Manuscript Preparation with LaTex" at JUIT on 29 Nov., 2015.
- ➤ Seminar on Li-Fi Technology: A new era of Visible Light Communication at JUIT, Waknaghat, India.
- ➤ Seminar on Mission Critical Applications-MPLS Network at JUIT, Waknaghat, H.P. India
- ➤ Participated and presented the badminton team at block level annual sports day at GSSS Bkd. on 2009.
- ➤ Got 66th position in 10th HP board exam-2007.
- ➤ Got 94th position in 11th HP board exam-2008.

Membership of Professional Organization:
- ➤ IEEE Student Member #9339356

Reviewer and Editorial:
- ➤ IEEE Communication Letters
- ➤ IEEE Access
- ➤ Future Generation Computer System
- ➤ Journal of Supercomputing
- ➤ Various IEEE Conferences
- ➤ International Journal of Distributed Sensor Networks
- ➤ Journal of Advanced Transportation
- ➤ Recent Patent on Computer Science

References:

1) Dr. Rajiv Kumar
   Department of Electronics and Communication Engineering
   Jaypee University of Information Technology, Waknaghat, Solan-173234, India
   Email: rajiv.kumar@juit.ac.in

2) Dr. Razi Iqbal
   College of Computer Information Technology
   American University in the Emirates, UAE.
   Email: razi.iqbal@ieee.org

3) Prof. Dr. Naveen Chilamkurti
   Department of Computer Science and IT
   La Trobe University, Melbourne, Australia-3086
   Ph: 03-9479 1269, Email: N.Chilamkurti@latrobe.edu.au

4) Dr.Vijayakumar V.
   Associate Dean and Professor
   School of Computing Science and Engineering,
   VIT Chennai, India
   Email: vijayakumar.v@vit.ac.in

List of Publication:

Journals (SCI)

1. **A. Sharma** and R. Kumar, "SLA-Energy Cooperative Quickest Ambulance Routing for Critical-Healthcare Services", *Arabian Journal for Science and Engineering,* vol.44, pp.1-18, 2019. https://doi.org/10.1007/s13369-018-3687-z. **(Scopus) (SCI) IF 1.518**

2. **A. Sharma** and R. Kumar, "A Constrained Framework for Context-Aware Remote E-healthcare (CARE) Services, "*Transactions on Emerging Telecommunications Technologies,"* 2019. https://doi.org/10.1002/ett.3649. **(Scopus) (SCI) IF 1.258**

3. **A. Sharma**, and R. Kumar, "Service Level Agreement and Energy Cooperative Cyber Physical System for Quickest Healthcare Data Transmission Services", *Journal of Intelligent & Fuzzy Systems,* vol. 36, no. 5, pp. 4077-4089, 2019. https://doi.org/10.3233/JIFS-169968. **(Scopus), (SCI) IF 1.637**

4. **A. Sharma**, G. Rathi, R. Kumar, H. Saini, V. Vijaykumar, Y. Nam and N. Chilamkurti, "A Secure, Energy and SLA Efficient (SESE) E-healthcare Framework for Quickest Data Transmission using Cyber Physical System," *Sensors*, Vol. 19, no. 9, 2019. https://doi.org/10.3390/s19092119. **(Scopus), (SCI) IF 3.031**

5. G. Rathi, **A. Sharma,** R. Kumar and R. Iqbal, "A Secure Communicating Things Network Framework for Industrial IoT using Blockchain Technology", *Ad Hoc Networks*, Vol. 94, 2019. https://doi.org/10.1016/j.adhoc.2019.101933. **(SCI) IF 3.490**

6. **A. Sharma** and R. Kumar, "Computation of the Reliable and Quickest Data Path for Healthcare Services by Using Service-Level Agreements and Energy Constraints", *Arabian Journal for Science and Engineering,* vol. 44, pp.1-18, 2019. https://doi.org/10.1007/s13369-019-03836-4. **(Scopus), (SCI) IF 1.518**

7. G. Rathi, **A. Sharma,** R. Iqbal, M. Aloqaily, N. Jaglan, and, R. Kumar "A Blockchain Framework for Connected and Autonomous Vehicles Services Delivery," *Sensors,* Vol. 19, no. 4, pp. 3165, 2019. https://doi.org/10.3390/s19143165. **(Scopus), (SCI) IF 3.031**

8. G. Rathi, **A. Sharma,** R. Kumar, H. Saini, and R. Iqbal, "A Hybrid Framework for Multimedia Data Processing in IoT-Healthcare using Blockchain Technology," *Multimedia Tools and Applications*, pp.1-23, 2019. https://doi.org/10.1007/s11042-019-07835-3. **(Scopus), (SCI). IF 2.101**

9. **A. Sharma**, R. Kumar, MWA. Talib, S. Srivastava and R. Iqbal, "Network Modelling and Computation of Quickest Path for Service Level Agreements Using Bi-Objective Optimization," *International Journal of Distributed Sensor Networks*, vol. 15, no. 10, 2019. https://doi.org/10.1177/1550147719881116 **(Scopus), (SCI) IF 1.614**

10. A. Sharma, P.K. Singh, **A. Sharma** and R. Kumar, "An efficient architecture for the accurate detection and monitoring of an event through the sky," *Computer Communications,* 2019. https://doi.org/10.1016/j.comcom.2019.09.009 **(Scopus), (SCI) IF 2.766**

11. M. Poongodi, **A. Sharma,** V. Vijayakumar, V. Bhardwaj, AP. Sharma, R. Iqbal and R. Kumar, "Etherium Blockchain Cryptocurrency Price Prediction in Industrial Finance System", *Computers & Electrical Engineering,* Vol. 81, 2020. https://doi.org/10.1016/j.compeleceng.2019.106527 **(Scopus), (SCI) IF 2.189**

12. M. Singh, R. Tomar, M. Srivastava, **A. Sharma**, R. Kumar, N. Chilamkurti and S. Rho, "A Novel Cloud Data Security Model for Financial Institutions," *Journal of Cloud Computing*, vol., no., pp., 2020. **(Accepted) (Scopus), (SCI) IF 2.284**

13. G. Rathi, **A. Sharma,** R. Kumar, F. Ahmad and R. Iqbal, "A Trust Management Scheme to Secure Mobile Information Centric Networks," *Computer Communication,* vol. 151, pp. 66-75, 2020. https://doi.org/10.1016/j.comcom.2019.12.024 **(Scopus), (SCI) IF 2.766**

14. M. Poongodi, M. Hamdi, **A. Sharma,** M. Maode, and P.K. Singh, "DDoS Detection Mechanism using Trust Based Evaluation System in VANET," *IEEE Access,* Vol. 7, pp. 183532-183544, 2019.

https://doi.org/10.1109/ACCESS.2019.2960367 **(Scopus), (SCI) IF 4.098**

15. R. Srivastava, R. Tomar, **A. Sharma**, N. Chilamkurti, A. Kumar and B.G. Kim, "Multimodal Biometric Authentication of Human using Face Feature Analysis," *Electronics,* 2020. **(Under review) (Scopus), (SCI) IF 1.764**

16. M. Poongodi, **A. Sharma,** M. Hamdi, M. Maode, and N. Kumar, "Peer-to-Peer Trust Management in Intelligent Transportation System: An Aumann's Agreement Theorem Based Approach," *IEEE Transactions on Vehicular Technology*, 2020. **(Under review) (Scopus), (SCI) IF 5.339**

17. **A. Sharma** and V. Sehgal, "Emerging Architecture for Heterogeneous Smart Cyber-Physical Systems," *Future Generation Computer Systems*, 2020. **(Under review) (Scopus), (SCI) IF 4.624**

18. A. Khanna, R. Tomar, P. Maheshwari and **A. Sharma**, "Predicting Indian Elections: Reading Political Sentiment and Mood of the Indian Electorate," *Future Generation Computer Systems*, 2020. **(Under review) (Scopus), (SCI) IF 4.624**

19. **A. Sharma,** and N. Kumar, "An Efficient and Secure Internet of Things Transportation Mechanism for Critical Services," *IEEE Transactions on Mobile Computing*, 2020. **(Under review) (Scopus), (SCI) IF 4.474**

20. **A. Sharma** and R. Kumar, "SLA Constraint Hybrid Reliability Evaluation with Extension of Quickest Path Problem in the Capacitated network," *IEEE Transactions on Reliability*, vol. , no. , pp. , 2019. **(Under review) (Scopus), (SCI) IF 2.888**

21. **A. Sharma,** R. Kumar and R. Iqbal, "A Secure SLA Aware Healthcare Services using Blockchain Technology," *IEEE Transaction on Industrial Informatics,* Vol. no. pp. 2019. **(Under review) (SCI) IF 7.377**

Journals (Scopus):

1. **A. Sharma**, R. Kumar and P. Koundal, "A Tuning-based Approach for the Multi-Constrained Data-Path Transmission", *International Journal of Control and Applications (IJCTA)*, vol. 9, Issue 11, pp. 5521-5528, 2016. **(Scopus)**

2. **A. Sharma** and R. Kumar, "A Framework for Pre-computated Multi-Constrained Quickest QoS Path Algorithm," *Journal of Telecommunication Electronic and Computer Engineering*, vol. 9, no. 3-6, pp. 73-77, December, 2017. **(Scopus)**

3. **A. Sharma**, and R. Kumar, "Risk-Energy Aware Service Level Agreement Assessment for Computing Quickest Path in Computer Networks", *International Journal of Reliability and Safety,* vol. 13(1-2), pp.96-124. 2019. https://doi.org/10.1504/IJRS.2019.097019 **(Scopus)**

4. **A. Sharma,** R. Kumar and P.K. Singh, "The SLA Constraint Quickest Path Problem for the Data Transmission Services in Capacitated Networks"*, International Journal of Performability Engineering,* vol.15, no. 4, pp.1061-1072, 2019. https://doi.org/10.23940/ijpe.19.04.p1.10611072 **(Scopus)**

5. J. Dogra, S. Jain, **A. Sharma**, R. Kumar, M. Sood, "Brain Tumor Detection from MR Images employing Fuzzy Graph Cut Technique," *Recent Patent in Computer Science,* 2019. (In Press) https://doi.org/10.2174/2213275912666181207152633 **(Scopus)**

6. **A. Sharma**, RK. Bajaj and R. Kumar, "On Energy-constrained Quickest Path Problem in Green Communication Using Intuitionistic Trapezoidal Fuzzy Numbers", *Recent Patent in Computer*

Science, 2019 (In Press) https://doi.org/10.2174/2213275911666181025125224. **(Scopus), (ESCI)**

7. S. Bhailaik, **A. Sharma,** R. Kumar, and N. Sharma, "Performance Modeling and Analysis of WDM Optical Networks under Wavelength Continuity Constraint using MILP", *Recent Advances in Electrical and Electronic Engineering,* 2019. (In Press) https://doi.org/10.2174/2352096512666190214105927. **(Scopus), (ESCI)**

8. D. Sharma, **A. Sharma,** R. Kumar, and N. Sharma, "A Holistic Survey on Disaster and Disruption in Optical Communication Network", *Recent Advances in Electrical and Electronic Engineering,* vol. , 2019. (In Press) https://doi.org/10.2174/2352096512666190215141938. **(Scopus), (ESCI)**

9. **A. Sharma** and R. Kumar, "A Framework for Risk-Energy Aware Service-Level Agreement Provisioning (RESP) for Computing the Quickest Path," *Journal of Computer Networks and Communications,* vol. 2019, p. 8, 2019. https://doi.org/10.1155/2019/4109453. **(Scopus) (ESCI)**.

10. HK. Gianey, M. Ali, V. Vijaykumar, **A. Sharma** and R. Kumar, " Low Cost and Centimeter-Level Global Positioning System Accuracy Using Real-Time Kinematic Library and Real-Time Kinematic GPSA", *Recent Patent in Computer Science,* 2019. **(**In Press**)** https://doi.org/10.2174/2213275912666190328201322. **(Scopus)**

Conferences

1. D. Sharma, **A. Sharma**, R. Kumar, and N. Sharma, "Restoration of the Network for Next Generation (5G) Optical Communication Network" *in proceeding of 5th International Conference on Signal Processing and Communication (ICSC),* Noida, 7-9th March 2019.

2. **A. Sharma** and R. Kumar, "Performance comparison and detailed study of AODV, DSDV, DSR, TORA and OLSR routing protocols in ad hoc networks," in proceeding of *2016 Fourth International Conference on Parallel, Distributed and Grid Computing (PDGC)*, Waknaghat, pp. 732-736, 2016.

3. **A. Sharma**, Mohd. D. Ansari and R. Kumar, "A Comparative Study of Edge Detectors in Digital Image Processing," in p*roceedings of 2017 Fourth International Conference on Signal Processing, Computing and Control (ISPCC)*, Waknaghat, pp. 246-250, September 2017.

4. **A. Sharma** and R. Kumar, "An Optimal Routing Scheme for Critical Healthcare HTH Services – An IOT Perspective," in proceeding of *2017 Fourth International Conference on Image Information Processing (ICIIP -2017)*, Waknaghat, pp. 585-589, December, 2017.

5. **A. Sharma**, R. Kumar and P. Kaur, "Study of Issues and Challenges of Different Routing Protocols in Wireless Sensor Network," *2019 Fifth International Conference on Image Information Processing (ICIIP)*, Shimla, India, 2019, pp. 585-590. doi: 10.1109/ICIIP47207.2019.8985915

Other Details:

Declaration:

I do hereby declare that all the information stated above is true and correct to the best of my knowledge and belief.

(**Ashutosh Sharma)**