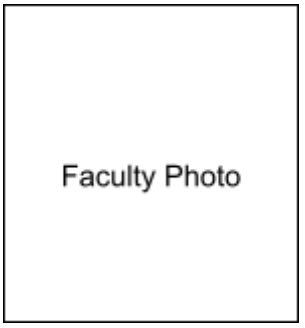
Faculty Profile



Dr. Ashok Kumar A R is an Associate Professor in Computer Science and Engineering with a strong academic foundation from premier institutions—earning his Ph.D. from IIT Guwahati, and MTech from NITK Suratkal. His academic journey through India's premier institutions is a testament to his dedication to excellence and deep-rooted interest in computer systems and network technologies. His doctoral work on data center network architectures laid the groundwork for his ongoing research in distributed computing and next-generation network technologies.

With over two decades of experience in teaching and research, Dr. Ashok Kumar maintains a strong focus on software-defined networks, 5G systems, and blockchain-based architectures. He has published extensively in reputed journals and conferences and actively mentors Ph.D. scholars and undergraduate students. His career reflects a deep commitment to academic excellence and innovation in emerging technologies.

Personal Information

- **Name:** Dr. Ashok Kumar A R
- **Designation:** Associate Professor
- **Department:** Computer Science Engineering (Cybersecurity)
- **Email:** ashokkumarar@rvce.edu.in
- **Phone:** +91-8497042779

Google Scholar: https://scholar.google.com/citations?user=_6E-boAAAAJ&hl=en&authuser=4

ResearchGate: https://www.researchgate.net/profile/Ashok-Kumar-A-R?ev=prf_overview

LinkedIn: https://www.linkedin.com/in/dr-ashok-kumar-a-r-3a714619/

ORCID: https://www.scopus.com/authid/detail.uri?authorId=55532860500

Domain of Expertise

Distributed Computing and Data Center Networks

Research Focus

1. **Primary Area:** Distributed Computing and Data Center Networks
2. **Allied Areas:**
    - Software defined networks
    - 5G Self organizing networks
    - Hierarchical Blockchain
    - Knowledge graph for Cyber Security

Academic Qualifications

- **Ph.D.**: Computer Science and Engineering, Indian Institute of Technology Guwahati (IIT Guwahati), 2016 *(4-4,1-4: A Novel Architecture for Data Center Networks and its Performance Study)*
- **M.Tech**: System Analysis and Computer Applications (SACA), NITK Suratkal, 2000
- **B.E./B.Tech**: Computer Science and Engineering, BIET Davanagere (Kuvempu University), 1997

Professional Experience

Experience

S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	BIET Davanagere	Assistant Professor, Associate Professor	01-08-1997 to 31-07-2015
2.	JSSATE Bangalore	Associate Professor	01-08-2015 to 28-11-2016
3	RVCE Bangalore	Associate Professor	29-11-2016 to till date

Publications & Patents

Journal Publications

1. A. R. Ashok Kumar, S. V. Rao, and Diganta Goswami. "Simpler, Efficient Location Based Routing for Data Center Network using IP address Hierarchy", International journal of Network Management, Vol 26, Issue 6, Wiley, 2016.
2. H. . A Jartarghar, Girish Rao Salanke, Ashok Kumar A.R, S. . G.S, and S. . Dalali, "React Apps with Server-Side Rendering: Next.js", JTEC, vol. 14, no. 4, pp. 25–29, Dec. 2022.
3. Mushtaq Ahmed D M, S R Mani Sekhar, Ashok Kumar A R, Pavithra N, "Exploring Innovations in Aquaculture: A Comprehensive Investigation of Smart Fish Farming Techniques", Seybold Report Journal, 19(6), 4-17. DOI: 10.5110/77. 1604.
4. Shweta Babu Prasad, Ashok Kumar A R, Rajini V Honnungar, "An extensive study of Decentralized Storage Network driven by Blockchain, Advancements in Communications System, SCRC India, pp. 457-470, DOI: https://doi.org/10.56155/978-81-955020-7-3-40
5. Shweta Babu Prasad, Ashok Kumar A R, Rajini V Honnungar, "Scalable IoT Data Access with Blockchain and Blooms Filters", Accepted for Publication in Journal of Electrical Systems.

Conference Papers

1. Shweta Babu Prasad, Ashok Kumar A R, Rajini Honnugar, "An Extensive Study of Decentralised Storage Networks driven by Blockchain" accepted for International Conference on Business Intelligence and Data Analytics (BIDA 2024) Organized by RV Institute of Management (RVIM), Bangalore, India
2. Shweta Babu Prasad, Ashok Kumar A R, Rajini Honnugar, "Blockchain-Based Scalability Solutions for IoT: A Decentralized Design to Enhance Performance and Security",

accepted for 2024 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)

3. Sumukha S Srivatsa, Dipesh Pareriya N, Mohana, Minal Moharir, Ashok Kumar A R, "Image Colorization using Deep Neural Network and Generative Adversarial Network (GAN)", accepted for publication in 2023-IEEE International Interdisciplinary Humanitarian Conference for Sustainability (IIHC-2023).
4. Rakshith V, P S N Hrushikesh Reddy, Nayan Gowda M, Mohana, Minal Moharir, Ashok Kumar A R, "Digital Circuit Design Using Quantum Gates and Quantum Technologies", accepted for publication in 2023-IEEE International Interdisciplinary Humanitarian Conference for Sustainability (IIHC-2023).
5. Rushi Mayur, Mohammed Maqsood, Mohammed Raza, Mohana, Minal Moharir, Ashok Kumar A R, "Vision Transformer (ViT) for Object Recognition using Deep Learning for Computer vision Applications", accepted for publication in IEEE International Conference on Multidisciplinary Research in Technology and Management (MRTM 2023) conference, New Horizon College of Engineering, Bangalore.
6. Nitheesh Ram Chatradi, Neeli Sai Chakradhar, K K N Satya Prakash, Mohana, Minal Moharir, Ashok Kumar A R, "Smart Irrigation System using IoT sensors for Agriculture Crops", accepted for publication in IEEE International Conference on Multidisciplinary Research in Technology and Management (MRTM 2023) conference, New Horizon College of Engineering, Bangalore.
7. Manoj N, Manu A S, Mallikarjun N Y, Mohana, Minal Moharir, Ashok Kumar A R, "Vehicle Detection, Counting and Classification using YOLOv8 Deep Learning Model and OpenCV for Urban Traffic Surveillance", accepted for publication in IEEE International Conference on Multidisciplinary Research in Technology and Management (MRTM 2023) conference, New Horizon College of Engineering, Bangalore.
8. Deepti Lakshmi Ravi, Harshitha B, Harshini Rao Peruvaje, Mohana, Minal Moharir, Ashok Kumar A R, "Smart Parking System (SPS) using IoT and Sensors for Smart Cites", accepted for publication in International Interdisciplinary Humanitarian Conference For Sustainability (IIHC 2023), SVCE Bangalore
9. A. R. Ashok Kumar, H. Hoovinalli and G. R. Salanke, "Resolving Coverage and Interference conflicts in 5G," 2021 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2021), Hyderabad, India, 2021, pp. 48-53, doi: 10.1109/ANTS52808.2021.9937018.
10. A. R. Ashok Kumar and Vaishnavi C. SON coordination function between ICIC and CCO using support vector machine. Accepted for publication in "Third International conference on intelligent computing and control systems" held at VCE, Madurai on 15-17 May 2019
11. A. R. Ashok Kumar, K. L. Anusha and S. G. Hegde, Packet scheduler for meeting deadline in 4-4; 1-4 architecture, 2018 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS-2018), Indore, India, 2018, pp. 1-6. doi: 10.1109/ANTS.2018.8710169
12. A. R. Ashok Kumar, S. V. Rao, and Diganta Goswami. Greening 4-4,1-4 data center network: A greedy approach for finding an energy efficient subnetwork: In Emerging Issues in Cloud (EIC) workshop on hot topics in cloud computing in conjunction with 6th IEEE international conference on cloud computing technology and science (IEEE CloudCom), 2014, pages= 869-874, DOI= 10.1109/CloudCom.2014.139, Singapore, IEEE, Dec 2014.
13. A. R. Ashok Kumar, S. V. Rao, and Diganta Goswami. Network Simulator 3 for a study of Data Center Networks: In 12th International Symposium on Parallel and Distributed Computing (ISPDC), 2013, pages= 224-231, DOI= 10.1109/ISPDC.2013.37, Romania, IEEE, June 2013.
14. A. R. Ashok Kumar, S. V. Rao, and Diganta Goswami. BCube-IP – Bcube with IP address hierarchy for efficient routing: In International Conference on Advanced Computing,

Networking, and Informatics (ICACNI - 2014),319-326, DOI= 10.1007/978-81-322-1665-0-30, Springer LNCS, Raipur, India, June 2013.
15. A. R. Ashok Kumar, S. V. Rao, and Diganta Goswami. 4-4, 1-4: Architecture for data center network based on IP address hierarchy for efficient routing. In 11th International Symposium on Parallel and Distributed Computing (ISPDC), 2012, pages 235 242, DOI= 10.1109/ISPDC.2012.39, Germany, IEEE, june 2012.
16. A. R. Ashok Kumar, S. V. Rao, Diganta Goswami, and G. Sahukari. DCell-IP: DCell emboldened with IP address hierarchy for efficient routing. In Proceedings of International Conference on Advances in Computing, volume 174 of Advances in Intelligent Systems and Computing, pages 739746, DOI= 10.1007/978-81-322-0740-5-88, Springer LNCS, India, 2012.
17. A. R. Ashok Kumar, S. V. Rao, Diganta Goswami: New architecture of Data Center Networks : In Proceedings of the Second Workshop on Issues in Virtualization and Cloud Computing -WIVCC, IIT Bombay, India (February 2012)

Books/Book Chapters

1. Girish Rao Salanke, Girish Rao Salanke, Ashok Kumar A. R., ShivaKumar Dalali, "Petri Nets-Based Optimization of Multi-Level Marketing Schemes for the Green Economy" in Achieving Economic Growth and Welfare Through Green Consumerism, IGI Global, Chapter 10 Pages(240-254), DOI: 10.4018/978-1-6684-8140-0.ch010.

Patents [Filed / Published / Granted]

NIL

R & Grants & Consultancy Projects

NIL

Ongoing & Completed Research Projects

NIL

Ongoing & Completed Consultancy Projects

1. A Novel Packet Scheduler policy for multi-hop wireless networks using diameter based consensus algorithm – Appcraft Consultancy (Rs 1,50,000)

Professional Memberships

2. MISTE : Life Member of Indian Society For Technical Education. Membership ID LM33920
3. ICST : The Institute for Computer Sciences, Social Informatics and Telecommunications Engineering
4. IEEE : Senior IEEE Member. Membership ID 94349667.

Awards & Recognitions

1. Received KSCST Best Project Award under My guidance under the category "Student Project Programme – 46th Series (2023)" for the Project "ADAPTIVE ANOMALY DETECTION SYSTEM FOR SOFTWARE DEFINED NETWORKS" by the students Mr. Keerthan Kumar and team.
2. Instrumental in getting IEEE financial sponsorship for the conference CSITSS 2022 organized by the Computer Science and Engineering department of RVCE. Financial sponsorship helped the Institute to save amount around 3000$ (1450$ one time payment and 22$ per paper) which is around Rs 2,50,000 (Two lakhs and Fifty thousand) to be given to IEEE towards the publication in IEEE Explore.
3. Received 250$ from Geographic Activity Committee (GAC) of IEEE Computer Society for conducting five days workshop on Software Defined Networks for the year 2021
4. Received Best Branch Counselor for IEEE Student Chapter from IEEE Bangalore Section for the year 2020
5. Received travel grant of Rs 1,45,000 (one lakh forty five thousand) from Institute Microsoft travel grant to participate and present paper in 11th ISPDC conference at Munich, Germany.

Student Supervision

- **Ph.D. Candidates:** Three (On going)
- **M.Tech/M.Sc. Students:**
- **Undergraduate Research Mentees:** 32

Professional Roles

- **Editorial Board:** [Journal Name]
- **Chair/Committee Member:** [Conference Name, e.g., *IEEE International Conference on Robotics*]
- **Industry Advisor:** [Company/Startup Name]

Teaching

Core Courses: [Current semester]

- Network Programming and Security
- Design and Analysis of Algorithm

Advanced/Lab Courses:

- Ethical Hacking (Lab)

Professional Roles

- **Excom member:** IEEE Computer Society Bangalore Chapter (Year 2020-21, Year 2021-22)

Responsibilities

- **Faculty Advisor:** IEEE Computer Society RVCE Student Branch
- **Coordinator:** Major Project

External Connect

- VTU Nominee, BOS, Artificial Intelligence and Data Science Dept (AIDS), GAT, Bangalore
- VTU Nominee, BOS, Computer Science and Engineering Dept (CSE), DBIT, Bangalore
- VTU Nominee, BOS, Computer Science and Engineering Dept (CSE), BIET, Davanagere