

SHEKHAR KUMAR

Assistant Professor, Computer Science

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PROFESSIONAL SUMMARY

Assistant Professor with 10 years academic experience. Expertise in wireless sensor networks, remote sensing, data structures, algorithms, operating systems. Ph.D. pursuing in Computer Science. Published researcher with 6 peer-reviewed journal articles and 2 book chapters. ISO 9001 certified institution experience.

CORE COMPETENCIES

Technical: Wireless Sensor Networks | Remote Sensing | Algorithm Design | Data Structures | Operating Systems | Discrete Mathematics | Theory of Computation | LIDAR Data Processing | SAR Technology | Cyber Security

Teaching & Research: UG/PG Course Instruction | Research Supervision | Curriculum Development | Paper Publishing | Academic Mentoring | Department Administration

Tools & Certifications: AI/ML Basics | Data Science Fundamentals | Artificial Intelligence | GIS Tools | LIDAR Processing | Geodata Analysis

PROFESSIONAL EXPERIENCE

Assistant Professor – Computer Science

M. B. Govt. P. G. College, Haldwani, Nainital | July 2019 – Present

- Teach undergraduate and postgraduate courses in Computer Science
- Supervise student research projects and thesis work
- Department Head administration and policy implementation
- Curriculum development aligned with NEP 2020 standards
- Member: IQAC, NAAC, Research Committee
- Nodal Officer: Samarth Program
- Coordinate IGNOU examinations and student affairs

Assistant Professor – Computer Science

M. B. Govt. P. G. College, Haldwani | 2016 – 2019

- Taught core Computer Science courses to UG/PG students
- Curriculum development and course content design
- Student mentoring and examination supervision
- Academic planning and program development

Assistant Professor – Computer Science

Graphic Era Hill University, Dehradun | 2015 – 2016

- Instruction of undergraduate and postgraduate courses
- Student mentoring and guidance
- Course assessment and evaluation

EDUCATION

| Degree | Institution | Status/Grade |
|-------------------------|---|--------------|
| Ph.D. Computer Science | Kumaun University | Pursuing |
| M.Tech Computer Science | G B Pant Engineering College, Ghurdauri | 80.5% |
| B.Tech Computer Science | Graphic Era University, Dehradun | 74.8% |
| Intermediate | G I C Lohaghat | 71.2% |
| High School | V V M Lohaghat | 73.6% |

PUBLICATIONS & RESEARCH

Journal Articles (Peer-Reviewed)

1. Kumar, S., & Chaudhary, K. (2024). Shortest Distance On-demand Stable Election Protocol. *Wireless Personal Communications*, 139(3), 1623-1635.
2. Kumar, S., & Chaudhary, K. (2022). Shortest Distance On-demand Stable Election Protocol. *Wireless Personal Communications*.
3. Kumar, S., Verma, S. K., & Kumar, A. (2015). Enhanced threshold sensitive stable election protocol for heterogeneous wireless sensor network. *Wireless Personal Communications*, 85(4), 2643-2656.
4. Kumar, S., & Verma, S. K. (2015). Enhanced threshold sensitive stable election protocol. *Journal of Computer Engineering*, 17(3), 27-33.
5. Sah, P., & Kumar, S. (2014). A New Approach to Distributed Energy-Efficient Cluster for Heterogeneous WSNs. *International Journal of Computer Applications*, 975, 8887.
6. Kumar, S., & Sah, P. (2015). A survey on energy efficient protocols for wireless sensor network. *International Journal of Computer Applications*, 120(2).

Book Chapters

1. Shekhar Kumar & Gaurav Joshi. Crop Monitoring System. In *Exploring the Himalayas: Land and the People*. Aadharshila Prakashan. ISBN: 978-93-81913-60-4
2. Gaurav Joshi & Shekhar Kumar. Role of Technology in Indian Culture. ISBN: 978-81-926605-7-8

Research Review Contribution

- Reviewer for Wireless Personal Communications (Springer Journal)
 - Article under review in Wireless Personal Communications
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PROFESSIONAL DEVELOPMENT & CERTIFICATIONS

2024

- AI/ML for Geodata Analysis (A+ Grade) – IIRS Dehradun
- LIDAR Data Processing and Application (A+ Grade) – IIRS Dehradun
- Introduction to Artificial Intelligence – Infosys Springboard
- Introduction to Data Science – Infosys Springboard
- Faculty Enablement Program – Infosys Chandigarh

2023-2024

- NEP 2020 Orientation & Sensitization Programme – UGC MMTC
- Refresher Course (A Grade) – UGC-HRDC Himachal Pradesh University
- SAR Technology Application in Disaster Management – ISRO/IIT Roorkee
- Implementation of NEP-2020 Professional Development (86%) – UGC Approved
- Capacity Building Workshop – Uttarakhand Science Education & Research Centre

2020-2022

- Ethical Hacking and Cyber Security – Federation of Community Radio Stations
 - ICT Tools for Teaching and Learning – NIT Patna, MNIT Jaipur, IIT Guwahati
 - UGC Induction Programme (A Grade) – UGC-HRDC Aligarh Muslim University
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ACADEMIC LEADERSHIP & ORGANIZATION

Guest Lecturer & Resource Person

- Cyber Security Awareness – M.B. Govt. P.G. College (November 2025)
- Cyber Security Topic Expert – M.B. Govt. P.G. College (November 2025)
- Computer Application in Research (Pre-Ph.D. Coursework) – M.B. Govt. P.G. College (March 2024)
- OBS Tutorial for Teachers – College of Teacher Education
- Application of Mobile Applications in Teaching – M.B. Govt. P.G. College (March 2019)
- Development of Computer Skills – College of Teacher Education

Chief Speaker & Keynote Addresses

- Online and Digital Education - Equitable Use of Technology – D.I.E.T Udham Singh Nagar (September 2020)
- Use of ICT in Classroom Practices and Possibilities – D.I.E.T Udham Singh Nagar (February 2020)

Workshop Organization & Coordination

- Organizing Member: National Workshop Basic Concepts of Mathematics & Quantum Mechanics (January 2025)

- Organizer: National Workshop on Advances in Computer Networking (February 2020)
- Organizer: Workshop 75 Years of Independence - Girl Child Education (February 2023)
- Organizer: National Workshop on IPR (March 2021)
- Organizer: Government e-Marketplace (GeM) Workshop (January 2020)
- Organizer: Developing Synergy Between ICT & Academics (March 2017)

Workshop Participant

- 75 Years of Independence: Tribal Education and Challenges (November 2024)
- NAPS Technical Training and SDP Awareness (October 2022)
- Industry Academia Gap: Diagnosis and Remedies – College of Technology Pantnagar (February 2020)
- Intellectual Property Rights – Government Degree College Garurbanj (February 2020)

Conference & Seminar Participation

- International Seminar on Sustainable Homestay Tourism (February 2025)
- Uttarakhand Educator's Summit (December 2019)
- National Conference on Leveraging Technology for Education – MIET Kumaon (November 2019)
- National Seminar on Progression and Innovation in Higher Education (November 2019)

Expert Designation

- Subject Expert in Computer Science – EMRS Khatima Interview Board (November 2023)

ADMINISTRATIVE RESPONSIBILITIES

- **Head:** Department of Computer Science (2019 – Present)
- **Nodal Officer:** Samarth Program (Present)
- **Committee Member:** IQAC, NAAC, Research Committee
- **Assistant Coordinator:** IGNOU (2018 – 2025)

AWARDS & SCHOLARSHIPS

- MHRD Monthly Scholarship – 12,400/- per month (2 years) – Master's Degree
- Master's Degree with Honors
- First Prize Winner – National Science Exhibition

PROFESSIONAL MEMBERSHIPS

- Member, Institute of Electrical and Electronics Engineers (IEEE)
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RESEARCH INTERESTS

Wireless Sensor Networks | Design and Analysis of Algorithms | Theory of Computation |
Data Structures | Operating Systems | Discrete Mathematics | Remote Sensing | LIDAR
Technology | Geodata Analysis | Cyber Security
