Dr. Kapil Kumar Nagwanshi Ph.D. (CSE)

Associate Professor, SoS Engineering & Technology, Guru Ghasidas Vishwavidyalaya (Central University), India

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Research Summary

Computer Science researcher and educator with 19+ years in teaching, R&D, and academic leadership. 6 patents (India/Australia), SCI/SCOPUS publications, reviewer for IEEE/IET journals, and extensive post-graduate supervision in AI/ML, biometrics, networking, and parallel computing.

Research Interests

Biometrics & Image Processing; Artificial Intelligence & Machine Learning; Network Programming; Parallel/High-Performance Computing; Cybersecurity; Data Mining.

Academic Appointments (selected)

Associate Professor (CSE) — SoS Engg. & Tech., Guru Ghasidas Vishwavidyalaya, India	2022–Present
Associate Professor — University of Stirling (RAK, UAE)	2022
Associate Professor — Amity Univ. Rajasthan	2020–2022
Assistant Professor — MPSTME, SVKM's NMIMS, Shirpur	2019–2020
Associate Professor/Lecturer — RCET Bhilai; NIT Raipur; SSCET Bhilai; GEC Bilaspur	2002–2018

Education

Ph.D., Computer Science & Engineering — CSVTU (RCET Bhilai)	2019
M.Tech., CSE — CSVTU (SSCET Bhilai), Division I	2008
B.E. (Hons.), CSE — Guru Ghasidas University (now Central Univ.)	2001

Selected Publications

- **IEEE Access** (2022): Effective Flow Table Space Management in Hybrid SDN Networks.
- **Wireless Communications and Mobile Computing** (2022): Enhancing Route Optimization for Internet of Vehicles.
- **PLOS ONE** (2021): Multi-class classification of breast cancer abnormalities using Deep CNN.
- **Multimedia Tools and Applications** (2021–2022): WBCs-Net and ML for photonic crystal defect classification.

Patents (abridged)

India: Child Safety Handband; Stress & Emotions Detecting Cap; IoT Flowerpot.
Australia: IoT-based COVID Detection System; Automated Irrigation using IoT; Home Automation with User Detection.

Research Supervision

Ph.D.: 2 submitted; 4 ongoing (IoV routing; WSN load balancing; Brain-tumor DSS via TDA & Deep Learning; Nature-inspired IR).
M.Tech.: Multiple theses in biometrics, vision, security, and parallel computing.

Professional Certifications

DeepLearning.ai *Deep Learning Specialization*; *TensorFlow in Practice*. IBM *AI Engineering*, *Data Science* (Professional). Simplilearn *Masters in AI Engineer*.

Awards & Professional Service

Best Presentation (ICIVC 2021); Best Paper (ICAIBDS 2019). Reviewer: *IEEE Access*, IET Image Processing, Imaging Science Journal, etc.

Memberships

Senior Member IEEE; Life Member CSI; Life Member IETE; IAENG; CSTA-ACM.

Teaching & Skills

Teaching: Data Structures, COA, Operating Systems, Cloud Computing, Network Programming, Research Methodology.
Tools: MATLAB, Python, LaTeX, Git; AI/ML workflows; citation & writing pipelines.