DR. CHITRA RAVI

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PROFESSIONAL SUMMARY

Dr. Chitra Ravi is an academic leader, researcher and educator with extensive experience in higher education, institutional administration, curriculum design and research mentoring. She currently serves as Director Academics in the Department of Computer Science at Maharani Lakshmi Ammanni College for Women, Bengaluru, and as Research Director at Cybersena (R&D) India Pvt. Ltd. Her research spans cloud and grid workflow scheduling, resource availability and optimisation, cybersecurity, blockchain, quantum computing, artificial intelligence and emerging computing technologies. She has held senior academic leadership roles, contributed to university governance and quality assurance, authored textbooks and research publications, and served as a resource person for faculty and student development programmes.

ACADEMIC QUALIFICATIONS

- **Ph.D. in Computer Science**, Visvesvaraya Technological University, Belagavi, Karnataka (2019). Thesis: “Scheduling Parallel Applications Modelled by Directed Acyclic Graphs onto a Network of Heterogeneous Processors to Minimize Finish Time – A Probabilistic Resource Availability Based Approach”.
- **M.Phil. in Computer Science**, Madurai Kamaraj University, Madurai (2005).
- **Master of Computer Applications (MCA)**, University of Madras, Chennai (1997).
- **B.E. in Electronics and Communication Engineering**, B.V. Bhoomraddi College of Engineering, Karnatak University, Dharwad (1998).

CURRENT ACADEMIC AND PROFESSIONAL POSITIONS

- **Director Academics**, Department of Computer Science, Maharani Lakshmi Ammanni College for Women, Bengaluru (April 2025–Present).
- **Research Director**, Cybersena (R&D) India Pvt. Ltd., Bengaluru (March 2024–Present).

ACADEMIC LEADERSHIP AND EXPERIENCE

- **Director and Professor**, School of Science Studies, CMR University, Bengaluru (December 2021–November 2023); academic leadership, curriculum development, teaching, research, mentorship, Chairperson–Board of Studies, Academic Council and IQAC responsibilities, examination oversight and NAAC documentation.
- **Head**, Department of Computer Science, Maharani Lakshmi Ammanni College for Women (September 2015–November 2021); departmental strategy, curriculum design, placements, research, quality initiatives, faculty development, industry collaborations and Chairperson roles for BOS and BOE.
- **Associate Professor** (July 2007–August 2015), **Assistant Professor/Lecturer** (July 2002–June 2007) and **Lecturer** (January 1992–August 2002), Department of Computer Science, Maharani Lakshmi Ammanni College for Women.
- **Earlier teaching appointments:** Siddaganga Institute of Technology, Tumakuru; B.V. Bhoomraddi College of Engineering and Technology, Hubballi; and College of Engineering, Guindy, Anna University, Chennai.

RESEARCH AREAS AND SPECIALISATION

- Cloud and Grid Computing; workflow and task scheduling; resource availability modelling and prediction; fault-aware and multi-criteria scheduling.
- Artificial Intelligence, Machine Learning, Neural Networks and Data Analytics.
- Cybersecurity, cloud security, blockchain applications, cryptography and secure digital systems.
- Quantum Computing and Quantum Cybersecurity; emerging applications of quantum technologies.
- Internet of Things, edge computing, wireless systems and technology-enabled education.

RESEARCH AND SCHOLARLY OUTPUT

- **Research publications:** 25 research papers and conference contributions listed in the CV, covering grid and cloud scheduling, resource prediction, workflow optimisation, blockchain, cybersecurity, IoT, edge computing, healthcare data interoperability and machine learning.
- **Selected journal and conference publications:** “Task Scheduling in Grid Computing Systems Constrained by Resource Availability” (IJEIT, 2013); “Characterization and Prediction of Resource Availability in Grids” (IJCET, 2013); “Reliable Task Scheduling Based on Resource Availability in Cloud Computing” (IJARCS, 2017); “Predictive Probabilistic Resource Availability Based Cloud Workflow Scheduling (PPRA)” (IOSR-JCE, 2017).
- **Selected recent publications:** “Multi Criteria Based Resource Score Heuristic for Cloud Workflow Scheduling” (Procedia Computer Science, 2019); “Compensatory Aggregation Based Failure Aware Cloud Workflow Scheduling” (IEEE ICIMIA, 2020; Best Paper Award); and “Securing Online Quiz Management through Blockchain Technology and Three-Tier Cryptography with Hash-Based Authentication” (IEEE I-SMAC, 2023; DOI: 10.1109/I-SMAC58438.2023.10290272).
- **Recent collaborative research:** publications on blockchain-based access control for medicine and organ donation (IEEE NMITCON, 2023; DOI: 10.1109/NMITCON58196.2023.10276026), multi-cloud security (2024), and blockchain-based electronic health records and interoperability (2023–2024).
- **Book chapters:** four chapters listed, including quantum computing and cybersecurity (Springer Nature); Power Management in TinyML (Scrivener Publishing); and two chapters on OSINT-based threat intelligence and machine-learning-based predictive vulnerability assessment (Elsevier). Three are indicated as accepted/in process in the CV.

BOOKS AND TEXTBOOK PUBLICATIONS

- **29 textbooks and academic books** listed, authored or co-authored for BCA, B.Sc., B.E. and PUC curricula, spanning Software Engineering, Design and Analysis of Algorithms, Data Structures, Computer Architecture, Database Management Systems, Web Programming, Computer Networks, Data Communication, Cryptography and Network Security, Digital Electronics and Computer Science.
- **Recent titles:** *Human + Machine = Artificial Intelligence* (San International Scientific Publications, 2024; ISBN 978-81-964397-1-2); *Fundamentals of Data Science* (BCA, 2024); *Design and Analysis of Algorithms* (BCA, 2024); *Software Engineering* (2023); and *Computer Architecture* (BCA, 2024–2025).
- **Online articles:** three articles on foundational principles of quantum computing (Parts I and II) and cybersecurity skills and career pathways for high-school students, published through Entech Online in 2025.

PATENTS

- Four patent/design filings listed: Universal Education System (Application No. 202241042050; filed 22 July 2022); IoT-Based Smart Traffic Management System (Application No. 202341022945; filed 29 March 2023); AI-Based Walking Stick for Visually Impaired People (Design No. 388235-001; filed 13 June 2023); and AI-Based Cloud Security Device (Design No. 395223-001; dated 15 September 2023).

AWARDS AND RECOGNITIONS

- Rex Karmaveer Global Fellowship and Karmaveer Chakra Award 2024–25 (Bronze Medal), instituted by iCONGO in partnership with the United Nations.
- Lifetime Achievement Award, Ramfo Academic and Research Excellence Awards (RARE), 2023.
- Outstanding Science Author, National Trailblazers Triumph Award, 2023.
- Best Paper Award, IEEE 2nd International Conference on Innovative Mechanisms for Industry Applications (ICIMIA), 2020, for “Compensatory Aggregation Based Failure Aware Cloud Workflow Scheduling”.
- Panelist, Mint–Microsoft Edunext Series, Bengaluru (2023); featured in Fitbots Champions Hall of Fame III; article featured in Outlook India.

ACADEMIC GOVERNANCE AND PROFESSIONAL CONTRIBUTIONS

- Chairperson/Member, Board of Studies and Board of Examiners at Bangalore University, Maharani Lakshmi Ammanni College for Women, CMR University and several autonomous institutions and universities.
- Chairperson, Research Committee, School of Science Studies, CMR University; Member, Academic Council and IQAC; NAAC Internal Auditor; and editorial-board member for international journals.
- Research supervisor to scholars at CMR University; IEEE conference-paper reviewer; member of the Computer Society of India (membership listed in CV, validity through June 2025).
- Member, Association of All Computer Science Teachers (AACST) and Bangalore Unit Event Coordinator (July 2024–Present).

WORKSHOPS, FACULTY DEVELOPMENT AND RESOURCE PERSON ENGAGEMENT

- Convener of national-level programmes on Computational Thinking (2024), Quantum Computing Technologies (2024), Blockchain Bootcamp: Developing Smart Contracts (2025) and Quantum Quest: Principles, Security and Applications (2025).
- Resource person and invited speaker on Quantum Computing, AI, Machine Learning, Cybersecurity, Data Analytics, Research Methodology, Physics in Technology and emerging IT trends at institutions including Dayananda Sagar institutions, REVA University, St. Claret’s College, DR. N.G.P. Arts and Science College and Vidya Pratishthan’s KBIET.
- Delivered a six-day faculty development programme on Learning Management System (Moodle) for MES College of Arts, Science and Commerce and MES Institute of Management Studies.

RESEARCH PROFILE

LinkedIn: https://www.linkedin.com/drchitraravi66

Selected publication DOI: https://doi.org/10.1109/I-SMAC58438.2023.10290272

Selected publication DOI: https://doi.org/10.1109/NMITCON58196.2023.10276026

Mint–Microsoft Edunext feature: https://brandstories.livemint.com/Microsoft_EduNext_Series/bengaluru.php

Outlook India feature: https://www.outlookindia.com/national/poor-educational-infrastructure-play-spoilsport-as-gaming-industry-takes-off-in-india-news-189995

Profile prepared from the supplied CV dated 10 September 2025. Personal details not relevant to an academic resume have been omitted. Publication and patent details are retained as provided in the source CV.