



NATIONAL LEVEL ACHIEVEMENTS:

❖ **RECEIVER OF VISVESVARAYA PART-TIME PH.D. FELLOWSHIP FROM 2019 -2023 DURING PH.D.**

Research Fellow under Visvesvaraya PhD Scheme for Electronics and IT” for Part-Time Ph.D by the Ministry of Electronics and Information Technology (**MeitY, GOI**) , Government of India.

Awardee Number: MEITY-PHD-3113

❖ **QUALIFIED GATE (CSE) 2012:**

Registration Number : CS 3039463

❖ **QUALIFIED NATIONAL ELIGIBILITY TEST (NET- JUNE 2012)**

Roll No: 17876698

PROFESSIONAL QUALIFICATION

- **Ph.D (Computer Science Engineering)** from USIC&T, Guru Gobind Singh Indraprastha University, Delhi. Registered 2018, Awarded: April- 2023
- **M.Tech (CSE)** from USIC&T, Indraprastha University, Delhi in 2015 with 77.13 CPI.
- **M.Phil (CS)** from Manav Bharati University , Solan in 2012 with 68.2 %.
- **Master of computer Applications (MCA)** from Institute of Basic Science, Dr. B. R. Ambedkar University, Khandari, Agra in the year 2001 with 73.7%.

TOTAL WORK EXPERIENCE: 19+ YEARS (18+ Years in Teaching + 1 Year in Industry)

CURRENT EMPLOYMENT

- ❖ Presently working as Assistant Professor (Ad-Hoc) at Dept. Of Computer Science HANSRAJ COLLEGE, DELHI UNIVERSITY since 9th Oct 2012.
- ❖ **Active Participation at College Level:**

1. Course Coordinator of B.Sc.(H) Computer Science from September 2021 till date.
2. Serving as the active member of the following Staff Council committees:
 - a. ICT enabling Committee

- b. Purchase Committee
 - c. SC/ST Committee
 - d. Women Development Cell
 - e. e-Waste Committee
 - f. Auction Committee
3. Member, IQAC Criteria 6 for NAAC committee.
 4. Member, Research Council, Hansraj College.
 5. Member, Research Collaboration & Community Cell under Research Development Cell.

Roles held in past:

1. Served as the active member of the following Staff Council committees:
 - a. ICT enabling Committee
 - b. Purchase Committee
 - c. SC /ST Committee
2. OBE Department In-charge, Aug'21- May'22.
3. CS(H) Admission In-charge, Admission 2021-22, 2022-23.
4. Department Nominee, IQAC HRC, July-Nov'21.
5. Served as Deputy Superintendent (Evening) for College Semester examinations May-June-2019.
6. Member departmental Time -Table committee in HRC during 2015, 2017, 2020,2021
7. Member, Organizing Committee for the " National seminar -"Cyber Security in Cloud Computing & Social Networking" at Hansraj College, on Thursday, January 12, 2017
8. Member, Admission Committee (Science Group) in HRC during June-Aug 2013,
9. Departmental Admission in 2014-15, 2015-16, 2016-17, 2018-19, 2019-20.

Active Participation at University / Departmental Level:

1. Actively participated in **Syllabus design and guidelines structuring** for Computer System Architecture paper in B.Sc.(H) semester-1.
Computer Science program under **NEP scheme**.
2. Actively participated in guidelines formation of the following courses:
 - a. GE4: Information Security and Cyber Laws,
 - b. Computer System Architecture (Old course, CBCS, CBCS-LOCF),
 - c. Internet Technologies (old-course, CBCS, CBCS-LOCF),
 - d. Artificial Intelligence (CBCS-LOCF)

PREVIOUS EMPLOYMENT RECORD

- ❖ Worked as Assistant Professor in MCA Department in **Krishna Engineering College, Mohan Nagar, Ghaziabad** since 1st July 2006.
 - **Departmental Activities:** worked as Coordinator for MCA department, Time

- Table Management, Organizing cultural activities, Discipline Committee member
- **Subjects Taught:** Data Structure using 'C', Computer Concepts and 'C'
 - Programming, OOS with C++, MFCS (Automata + Discrete Mathematics),
 - System Analysis and Design, Operating System, Compiler, Client/Server Computing.
- **Technical Event Management:** Technical Quizzes and Seminars for students, Organizing Workshop.
- **Administrative Role:**
 - Appointed as Center Controller during UPSEE Entrance Exam-2011,
 - Held the role of Proctor for MCA classes in KEC,
 - COORDINATOR OF MCA technical Society in KEC.
- ❖ Worked as Lecturer in Dept. Of computer science, Institute of Basic Science, Dr. B. R. Ambedkar University, Khandari, Agra from 15th November 2002 to Jan' 2004 on contract basis.
 - **Job Profile:** Lectures for BCA, MCA, M Sc (IT), MITM (Master of information technology & mass communications) & M Sc. (Integrated mathematics).
- ❖ Worked as Guest Lecturer in the **Department of computer Science, Institute of Basic Science Khandari, Agra** from 1st November 2001 to 1st November 2002.
 - **Job Profile:** Lectures for BCA, MCA, M Sc (IT), MITM (Master of information technology & mass communications) & M.Sc. (Integrated mathematics).
- ❖ Worked as software engineer with **Progressive Software Pvt (I). Limited**, New Delhi (A subsidiary of Progressive Solution Ltd., Europe U.K.) from January 2001 to September 2001.
 - **Job Profile:** Software development including requirement Analysis, Database designing & application designing, debugging & testing.
 - Exposure to **CRM (eBisGen) application-** A business Generating solution for enterprises, **ERP (MFG/PRO), Progress 4GL & Progress RDBMS.**

ACADEMIC QUALIFICATION

- AISCE(X) from Kendriya Vidyalaya, Mathura Refinery, CBSE board in 1993 with 73% marks.
- AISSCE(XII) from Kendriya Vidyalaya, Mathura Refinery, CBSE board in 1995 with 68% marks
- B. Sc. (PCM) from K.R. Degree College, Dr. B. R. Ambedkar University, Agra in the year 1998 with 58% marks.

TECHNICAL SKILLS

- Language: C, C++, JAVA, MATLAB, VB 10.0, PL/SQL, PROGRESS 4GL, PROGRESS 4GL.
- CRM: eBisGen Ver 4.09, 5.00

RESEARCH WORK:

- Have been working under the guidance of Prof. (Dr.) Virendra P. Vishwakarma in the field of Image processing and Machine Learning since 2018.
- Worked in the field of Natural Language Processing (**Automatic POS Tagging** under the supervision of Prof. (Dr.) Anurag Jain, USIT, Dwarka during M.Tech. (CSE)
- Worked in the field of natural language processing under the supervision of Prof (Dr.) Manu Pratap Singh, Dr. B. R. A. University, Agra. on **SYNTACTIC AND SEMANTIC ANALYSIS OF NATURAL LANGUAGE SENTENCES** during M.Phil .

RESEARCH PAPER PUBLICATIONS

International Journals:

1. Sunita Chand and Virendra. P. Vishwakarma, "A Novel Deep Learning Framework (DLF) for classification of Acute Lymphoblastic Leukemia.", *Multimedia Tools and Applications*, vol. 81, Issue 26, pp:37243-62, ISSN:1573-7721 (**Indexing: SCIE, Impact factor - 2.757**).
2. Sunita Chand and Virendra. P. Vishwakarma, "Application of Quadratic Discriminant Analysis Algorithm For The Classification Of Acute Leukemia Using Microscopic Image Data," *Advances and Applications in Mathematical Sciences*, vol. 21, no. 5, pp. 2737–2750, 2022. (**Indexing: ESCI**).
3. Sunita Chand and Virendra. P. Vishwakarma "Detection of Acute Lymphoblastic Leukemia Using Extreme Learning Machine based on Deep Features from Microscopic Blood Cell Images", to *International Journal of Biomedical Engineering and Technology*, Inderscience Publication. (**Indexing: ESCI, SCOPUS, Impact Factor: 1.015**).(Under Publication Phase).
4. S. Chand, T. Chaudhary, and M. Kumar, "Extended RR-scheduling algorithm," (IJCSIS) *International Journal of Computer Science and Information Security*, Vol. 9, No. 5, May 2011. <http://sites.google.com/site/ijcsis/> ISSN 1947-5500, vol. 9, no. 5, pp. 109–113, 2011.
5. S. Chand and A. Varshney, "APPLICATION OF FACE RECOGNITION SYSTEM," *JOURNAL OF COMPUTING*, vol. 3, 2011.

6. S. Chand et.al., T. Chaudhary, and R. Parveen, "Upgraded Selection Sort," *International Journal on Computer Science and Engineering*, vol. 3, no. 4, pp. 1633–1637, 2011.
7. "Connectionist Network and its Application for Optimization," *Indian Journal of Computer Science and Engineering*, vol. 2, no. 2, pp. 166–169, 2011.

International Conferences:

1. Sunita Chand, Virendra P. Vishwakarma; Applications of deep learning in acute leukemia detection-a review presented in *Recent Advances In Sciences, Engineering, Information Technology & Management (RASEITM-2022)*, organized by Poornima Institute of Engineering and Technology, Jaipur on 6-7 May 2022, *AIP Conference Proceedings*, 15 June 2023; 2782: 020079. <https://doi.org/10.1063/5.0154823>
2. Sunita Chand and Virendra. P. Vishwakarma, "Acute Leukaemia Diagnosis Using Transfer Learning on Resnet-50", presented in *4th International Conference on Information Management & Machine Intelligence (ICIMMI '22)*, organized by Poornima Institute of Engineering and Technology, Jaipur on December 23 - 24, 2022. Association for Computing Machinery, New York, NY, USA, Article 2, 1–7. <https://doi.org/10.1145/3590837.3590839>
3. Sunita Chand and Virendra. P. Vishwakarma, "Comparison of Segmentation Algorithms for Leukemia Classification," Feb. 2020, in proceedings of Proceedings of the *First International Conference on Advanced Scientific Innovation in Science, Engineering and Technology, ICASISSET 2020, 16-17 May 2020, Chennai, India*, organized by Bharath Institute of Higher Education and Research, Chennai, Tamil Nādu, India. DOI: 10.4108/EAI.16-5-2020.2303967.
4. Sunita Chand and Virendra. P. Vishwakarma, "Leukemia Diagnosis using Computational Intelligence," in proceedings of *2019 IEEE International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT)*, organized by Krishna Institute of Engineering & Technology (KIET), GHAZIABAD, India., 2019, pp. 1–7. DOI: 10.1109/ICICT46931.2019.8977709. **(Indexing: Scopus)**.
5. S. Chand, "Empirical survey of machine translation tools," 2016 Second International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN), 2016, pp. 181-185, doi: 10.1109/ICRCICN.2016.7813653.
6. Chand, S. (2017). Sanskrit as Inter-Lingua Language in Machine Translation. In: Attele, K., Kumar, A., Sankar, V., Rao, N., Sarma, T. (eds) *Emerging Trends in Electrical, Communications and Information Technologies. Lecture Notes in Electrical Engineering*, vol 394. Springer, Singapore. https://doi.org/10.1007/978-981-10-1540-3_3.

Book Chapter

S. Chand and S. Mehta, “**COMMUNITY DETECTION USING NATURE INSPIRED ALGORITHM,**” in Hybrid Intelligence for Social Networks, Springer International Publishing, 2017, pp. 47–76. doi: 10.1007/978-3-319-65139-2_3.

FDP/ WORKSHOPS ORGANIZED:

1. Convener, one-week interdisciplinary online Faculty Development Programme on "**Data Science and Machine Learning using Python**" organized by Mahatma Hansraj Faculty Development Centre during **September 24-30, 2021**
2. Member, Organizing Committee”, One Week (Online) Faculty Development Programme on “Roadmap for Building New India with New Education Policy” held during July 21 – July 25, 2021.
3. Course Coordinator for add-on course "10 Days Online Certificate Course: SLC-05 on Cyber Security & Ethical Hacking " Number of participants: 40, held during 10th Aug- 21st Aug'2020, with total Duration-30 Hours.
4. Course Coordinator for 6-month Certificate Course in Artificial Intelligence” for session Jan- June 2021
5. Course Coordinator for 1-Year Diploma Course in Artificial Intelligence” for session Jan- Dec 2021

RECORD OF FDP/ WORKSHOPS ATTENDED

1. Participated in One week (Online) Faculty Development Programme on “Digital Image Processing and Analysis: Applications with Practical” (25th April – 30th April, 2022) organized by Department of Computer Science Shaheed Sukhdev College of Business Studies, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi
2. Successfully completed One week (Online) Interdisciplinary Faculty Development Programme on “Designing and Development of MOOCs and Applications of Research on Digital Platform” (5th March – 11th March, 2022) organized by Department of Commerce, Hansraj College in collaboration with MHRFDC, Hansraj College, University of Delhi.
3. Participated in Three Days Lecture Series on “NEP 2020 : Delhi University Undergraduate Curriculum Framework 2022” (27th -29th January, 2022) organized by Institute of Lifelong Learning, University of Delhi in collaboration with MHRFDC, Hansraj College, University of Delhi
4. Participated in One Day Symposium on “Road ahead for HEI’s Accreditation under NEP” (07th April, 2022) organized by IQAC, Hansraj College in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi
5. Participated and supported the organization of a webinar on “Provisions for SC/ST rights in the Constitution .of India” on account of 72nd Constitution Day of India organized by SC/ST Cell of Hansraj College on 26th November 2021.
6. Attended 4 Days Online Workshop: SLC-01 on "Data Analysis and Visualization using R" 5th Oct 2021-8th Oct 2021 under Student Learning Centre, IQAC Hansraj College University of Delhi.

7. Attended Two Week Online Interdisciplinary Refresher Course on **“THE QUINTESSENTIAL EDUCATOR - CHALLENGES AND OPPORTUNITIES IN THE CHANGING WORLD organised** by IQAC, ARSD College under Ministry Of Education, Pandit Madan Mohan Malviya National Mission On Teachers And Teaching from 23rd Aug- 6th September 2021.
8. Participated in a webinar on “Biopiracy and IPR: Concepts and Causes” Organized by Society of General Awareness on 28th August 2021.
9. Participated in an “Awareness session on Prevention of Sexual Harassment at Workplace” organized by Internal Complaint Committee, HRC on 13th August 2021.
10. Attended Online Workshop on Effective Mechanisms to conduct Research using EBSCO Resources Organized by Guru Gobind Singh Indraprastha University, New Delhi, and EBSCO Information Services on 29th August 2020
11. Online course on Role of Flow Cytometry in Analysis of Minimal Residual Disease (MRD) conducted by Flowcytometry Solutions Pvt. Ltd. from 23rd- 29th August 2020
12. Webinar on Blockchain – Technological Perspective, organized by BVICAM, New Delhi on 18th July, 2020
13. Completed Self-Paced training course on Deep Learning on Ramp by Matlab Training Services on 12th July 2020
14. Participated in one-week FDP "Business 4.0 - Embracing Digital Technology" organized by Skill Faculty of Engineering and Technology, Shri Vishwakarma Skill University, Palwal, Haryana from 6th July- 10th July 2020.
15. Participated in one-week STTP on '**Data Science & Learning system**' during June 24-30, 2020, jointly organized by NIT Kurukshetra & ECB Bikaner from 24-30 June 2020 under TEQIP-III.
16. Participated in One Week Faculty Development Program on AI & Machine Learning" jointly organized by Electronics and ICT Academies through National Knowledge Network from 23 Dec- 27 Dec 2019.
17. Participated in Summer School on AI-Assisted Data Analytics at IIIT-Delhi from 11th July-14th July 2019.
18. Attended the FDP on "Data Analytics with R" held at KEC Ghaziabad held from 26th June to 1st July 2018 organized by EICT & IIT Roorkee.
19. Attended 2nd International Workshop on Big Data Analytics (WBDA-2017) on March 17-18, 2017.
20. Participated in International Research Workshop on Cloud Computing RWCC-2016, organized by School of Computer and System Sciences, JNU on 22-23 December 2016.
21. Attended International Workshop on Big Data Analytics organized by School of Computer and Systems Sciences, JNU on 30th March 2016.
22. Conducted and felicitated a four-day workshop on Computer Awareness " for non-teaching staff of Hansraj College from 12th Dec- 16th Dec 2016.
23. Attended 2-days workshop on "Data Analytics and its Security issues" at Jaypee Institute of Information Technology, JP University, Noida on December 4 – 5, 2015

24. Attended One day National Seminar on “Cyber threats” held at IPEC, Ghaziabad on 21 -22 May’ 2007.
25. Participated in 5- Days Mission 10X workshop conducted by Wipro in collaboration with ISTE at KIET, Gzb from 14-18 Dec 2009
26. Attended One day National Seminar on Emerging trends in Computational Science and Engg. On 27 - 28 March’2010 at KEC.
27. Presented paper in 2-days National Seminar on Information & Communication Technology (Challenges & Business Opportunities) at IMR on 22-23 Apr’2011.
28. Presented paper in 2-days 2nd National Conference on Innovation and Entrepreneurship in IT & Communication Technology, at MTU on 14-15 May’2011.
29. Organized one day workshop on ERP at KEC, on 2nd April 2011 for students, Under SoCEC (MCA Technical Society).
30. Attended 2 Days FDP on Natural Language Processing held at MTU from 23-24 Nov. 2011.
31. Attended National Symposium and Technical Awards Distribution at Vigyan Bhavan, organized by Ministry of Science on 23 June 2011.
32. Presented research work in “3rd Doctoral Conference on emerging trends in IT and Management” held at Hindustan Institute of Management and Computer Science (HIMCS), FARAH, MATHURA and received 2nd prize on 19th MAY 2012.

PROJECTS:

- ❖ Developed a “**Library Automation system in VB 6.0 & Oracle 8i**” during 6 weeks training in IOCL Mathura during June 2000- July 2000.
- ❖ Developed an “**eTimesheet application – a time & Project Management application for enterprises**” in PROGRESS 9.1b 4GL & PROGRESS RDBMS at Progressive s/w Pvt.(I) Ltd., Janakpuri, New Delhi. This application analyses employee’s clocking, extensive reporting facilities to report on flexible time, shifts , early/ late arrivals, bonus entitlement , project management etc.

DATE:

SUNITA CHAND