Dr. Neeraj Kumar Sharma
Professor
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SUMMARY

Motivating and inspiring Professor of Computer Science with an inherent quest to excel in teaching and encourages students to strive for excellence in academics and research. A good track record of teaching students at undergraduate as well as postgraduate levels.

HIGHLIGHTS

- Inspiring Teacher
- Curriculum Development
- Innovative Thinker
- Student Mentor
- Personable and approachable
- Interpersonal Skills

ACCOMPLISHMENTS

- Research supervisor in the Department of Computer Science, University of Delhi since 2019 currently having two research scholars. One of the Ph.D. student has just submitted thesis and the other has completed coursework and is in the process of writing an article.
- Member, selection committee for appointment of Assistant Professors (Permanent) in the Department of Computer Science, Ram Lal Anand College in January 2023.
- Nodal Officer, Skill Development Centre (Under NEP, UGCF 2022) for Ram Lal Anand College (Prepared the SDC proposal and defended it in the University for its allocation)
- Convener, Laptop Distribution Committee of the college since July 2021 – till now
- Convener, E-waste management committee of the college in 2022-23
- Convener, Admission Committee of the Computer Sc. Department in 2022-23 and 2020-21
- Co-convener, Student Union Advisory Committee in 2022-23
- Member, Department Research Committee (DRC) in the Department of Computer Science from Oct 2020 to Oct 2022.
- Presented a paper "NEP: A realizable approach to higher education" during National Conference on National Education at Deshbandhu College University of Delhi
- Keynote Speaker for a talk on Machine Learning at a Workshop/Seminar conducted at Ideal Institute of Management & Tech. of GGSIP University 2020
- Resource Person (five lectures) and Coordinator of 1 week FDP on "Introduction to Machine Learning in Research" under Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) from 10th Oct. 2020 to 18th Oct. 2020.
- Invited lecture in the HRDC, JNU in the 2nd Refresher Course in E-Learning & E-Governance on 27th August 2019.
- Taught during Ph.D. coursework in the Department of Computer Science in 2020 and 2021

- Certified by the Department of Computer Science, University of Delhi for my major contribution in the curriculum/syllabus design under UGCF-NEP, LOCF and CBCS:
    - Dec 2022 – Mar 2023: UGCF-2022 curriculum Design of NEP (designed 10 courses): Contributed in designing the structure and syllabus of 1 core course in B.Sc(H) Comp. Sc., 3 GE courses, and 6 DSE courses
    - Oct 2021 - May 22 UGCF-2022 curriculum Design of NEP (11 courses): Designing the structure/syllabus of 3 core and 2 DSEs in B.Sc(H) CS, 1 core and 2 GE in Multidisciplinary Courses (3 Cores), 2 GE for Non-CS Hons, 1 core for Multidisciplinary (2 Core Disciplines)
    - Nov. 2018 – July 2019: LOCF-2019 curriculum Design (20 courses): Contributed to designing the structure and syllabus of 20 courses for B.Sc(H) Comp. Sc., B.Sc. Program, B.A. Program, SECs and Generic Electives
    - Oct. 2017 – June 2018: CBCS curriculum Design (10 courses): Contributed to designing the structure and syllabus of 10 courses/subjects for B.Sc(H) Comp. Sc., B.Sc. Program, B.A. Program with Computer Applications, SECs and GEs
    - Sept. 2015 – July 2016: CBCS curriculum Design (22 courses): Contributed to designing the structure and syllabus of 11 SEC and GE courses of B.Sc.(H) Comp. Sc. (CBCS), 6 SEC and GE. of B.Sc. Program, 5 SEC and G.E. courses of B.A. Program
    - April 2015 – July 2015: CBCS curriculum Design (27 courses): Contributed in designing the Overall Structure and Syllabus of 10 subjects/courses of B.Sc.(H) Comp. Sc., 13 courses of B.Sc. Program and 4 courses of B.A Program
- Designed the syllabus of 2 M.C.A. papers (Algorithms and Artificial Intelligence) of I.G.N.O.U. between 2004 to 2006.
- Selection committee member for admission of Ph.D. students in the Department of Computer Science, University of Delhi in September 2019 and January 2021.
- Selection committee member for admission of M.Sc. students in the Department of Computer Science, University of Delhi in August 2019.
- Selection committee member for promotion of Scientist Grade B to Grade C in National Informatics Centre (NIC), Delhi in December 2018.
- Conducted a skill test for selection of Sr. Technical Assistant (computer) on permanent basis in Shaheed Bhagat Singh College.
- Member of "Committee of Post-Graduate and Honours Courses" in the Department of Computer Science, University of Delhi, Delhi from January 2014 to September 2016.
- Special invitee to "Committee of Courses & Studies for Under-Graduate Courses" on a number of occasions in the Department of Computer Science, University of Delhi, from 2014 to 2016.
- Member of Governing Body of Ram Lal Anand College from April 2014 to April 2015 as teacher representative
- Convener/coordinator in a number of FDPs/workshops and seminars conducted by the Department of Computer Science in Ram Lal Anand College from 2016 to 2019.
- Member of the MCA course design committee of IGNOU, constituted in 2005 for the subject MCS-031: Design and Analysis of Algorithms.
- Member of the MCA course design committee of IGNOU, constituted in January 2006 for the subject MCS-003: Artificial Intelligence.

TEACHING EXPERIENCE

Full Time

Nov. 2003 to Present	**Lecturer**: 27th Nov. 2003 to 31st Dec. 2005
	Assistant Professor: 1st Jan 2006 to 26th Aug. 2017
	Associate Professor: 27th Aug. 2017 to 21st April 2023
	Professor: 22nd April 2023 to Present
	
	• Over the years, taught the following subjects to students of B.Tech. Computer Sc., B.Sc.(H) Computer Sc. and B.A. Program with Computer Applications
	    ▪ Computer Networks
	    ▪ Artificial Intelligence
	    ▪ Theory of Computation
	    ▪ Algorithms
	    ▪ Computer Fundamentals
	• Supervised undergraduate student projects
	• Convener/Co-Convener of Department Admissions Committee from 2004 till now.
	• Teacher In-Charge of the department in 2005-06, 2007-08, 2009-10, Jan 2011-April 2011, 2014-15, Nov. 2015-16, 2016-17, 2018-19, 2020-21.

Aug. 2003 to Nov. 2003	Lecturer (Temporary), 27th Aug. 2003 to 27 Nov. 2003
	• Taught following subjects to students of B.I.T. and B.Sc.(H) Computer Sc
	    ▪ Artificial Intelligence
	    ▪ Computer Networks

Visiting Faculty

2021	Taught part of coursework to Ph.D. students in the Department of Computer Science, University of Delhi on an honorary basis.
2020	Taught part of the coursework to Ph.D. students in the Department of Computer Science, University of Delhi on an honorary basis.
2004-05 to 2008-09	Taught "Programming Language Concepts" paper to MCA IVth semester students in the Department of Computer Science, University of Delhi

EDUCATION

Ph.D. in Computer Science, August 2014
Department of Computer Science, University of Delhi
Dissertation Title: Agent-Mediated Attack-resilient Reputation System for e-Commerce

UGC, NET in Computer Applications, 2000

Masters in Computer Applications, 1999
Department of Computer Science, Indira Gandhi National Open University, Delhi

B.Sc. (H) Mathematics, 1992
Shivaji College, University of Delhi

BOOKS AUTHORED

The two books/booklets that I have authored for IGNOU, MCA are:

1. "MCS-031: Design and Analysis of Algorithms (Design Techniques - 1)", ISBN: 81-266-2081-1, 2005.

2. "MCS-003: Artificial Intelligence and Knowledge Management (Applications of Artificial Intelligence)", ISBN: 978-81-266-2866-7, 2006.

Note: To the best of my knowledge, the above books have been part of the syllabus of the M.C.A. students of IGNOU from 2005-2006 to till date throughout INDIA and abroad.

RESEARCH INTERESTS

My research interests include Artificial Intelligence, Machine Learning, Trust and Reputation Systems and Digital Watermarking.

PUBLICATION DETAILS

I have published four papers in International Conferences and twelve papers in International Journals.

Journals

Published

1. Subodh Kumar, Neeraj Kumar Sharma*, and Naveen Kumar. "WSOmark: An Adaptive Dual-purpose Color Image Watermarking using White Shark Optimizer and Levenberg-Marquardt BPNN". Expert Systems with Applications 226 (**2023**): 120137.

   Indexed: **Web of Science & Scopus**, **IF: 8.67**, SCIE, Scopus Cite Score: 12.6

2. Neeraj Kumar Sharma, Subodh Kumar*, and Naveen Kumar. "HGSmark: An efficient ECG watermarking scheme using hunger games search and Bayesian regularization BPNN". Biomedical Signal Processing and Control 83 (**2023**): 104633.

   Indexed: **Web of Science & Scopus**, **IF: 5.1**, SCIE, Scopus Cite Score: 8.

3. Ankit Rajpal, Subodh Kumar, Neeraj Kumar Sharma*, Ajith Abraham, Anurag Mishra, and Naveen Kumar. "CXRmark: A Watermarking Scheme for Chest X-Rays using Online Sequential Reduced Kernel ELM ". Circuits Systems and Signal Processing (**2023**). DOI: https://doi.org/10.1007/s00034-023-02491-3

   Indexed: **Web of Science & Scopus**, **IF: 2.3**, SCIE, Scopus Cite Score: 4.8.

4. Subodh Kumar, Ankit Rajpal, Neeraj Kumar Sharma*, Sheetal Rajpal, Anand Nayyar, and Naveen Kumar. "ROSEmark: Robust semi-blind ECG watermarking scheme using SWT-DCT framework". Digital Signal Processing 129 (**2022**): 103648.

   Indexed: **Web of Science & Scopus**, **IF: 3.1**, SCIE, Scopus

5. Neeraj Kumar Sharma, Subodh Kumar, Ankit Rajpal, & Naveen Kumar. (2022). "MantaRayWmark: An image adaptive multiple embedding strength optimization based watermarking using Manta Ray Foraging and bi-directional ELM". Expert Systems with Applications, Vol. 200 **(2022)**, Article No. 116860, ISSN: 0957-4174, DOI: https://doi.org/10.1016/j.eswa.2022.116860.

   Indexed: **Web of Science & Scopus**, **IF: 8.67**, SCIE, Scopus Cite Score: 12.6

6. Neeraj Kumar Sharma, Vibha Gaur, & Punam Bedi. (2016). Safeguarding Buyers with Attack-Resilient Reputation Parameters. Journal of Theoretical and Applied Electronic Commerce Research, 11(1), 46-66, ISSN: 0718-1876 (Electronic Version).

   Indexed: **Web of Science & Scopus**, **IF: 5.32**, Scopus Cite Score: 3.1

7. Neeraj Kumar Sharma, Vibha Gaur, & Punam Bedi. (Sept. 2014). "Improving Trustworthiness in E-Market Using Attack Resilient Reputation Modeling". International Journal of Intelligent Information Technologies (IJIIT), 10(3), 57-82, Publisher: IGI Global, ISSN: 1548-3657 (print), 1548-3665 (online).

   Indexed: **Web of Science and Scopus**, **IF: 0.244**, Scopus Cite Score: 1.8

8. Neeraj Kumar Sharma, Vibha Gaur, & Punam Bedi. (Jan. 2014). "A Dynamic Personalised Product pricing Strategy using Multiple Attributes in Agent mediated e-market - A Neural Approach". International Journal of Information and Decision Sciences (IJIDS), 6(1), 46-69, ISSN: 1756-7025 (online), 1756-7017 (print).

   Indexed: **Web of Science and Scopus**, **IF: 0.181**, Scopus Cite Score: 1.2

9. Neeraj Kumar Sharma, Vibha Gaur, & S. K. Muttoo. (2012). A Dynamic Reputation System with Built-in Attack Resilience to Safeguard Buyers in e-market. ACM SIGSOFT, Software Engineering Notes, 37(4), 1-19, ISSN: 0163-5948.

   Indexed: ACM Digital Library, DBLP Computer, Google Scholar, among others.

10. Vibha Gaur, Neeraj Kumar Sharma, & Punam Bedi. (2011b). A Dynamic Model for Sharing Reputation of Sellers among Buyers for Enhancing Trust in Agent Mediated e-market. International Journal of Computer Science Issues 8(6), 1-10.

Indexed: Scribd, CiteSeer, DOAJ, SciRate.com, Docstoc, Google Scholar, DBLP, arXiv.org, SCIRUS

11. Vibha Gaur, & Neeraj Kumar Sharma. (2011b). A Dynamic Framework of Reputation Systems for an Agent Mediated e-market. *International Journal of Computer Science Issues 8(4)*, 77-89.

    Indexed: Scribd, CiteSeer, DOAJ, SciRate.com, Docstoc, Google Scholar, DBLP, arXiv.org, SCIRUS

12. Vibha Gaur, Neeraj Kumar Sharma, & Punam Bedi. (2011a). A Dynamic Reinforcement Learning Strategy for Seller Agents in e-market. *International Journal on Recent Trends in Engineering & Technology 5(1)*, 25-31.

Conferences

Published

1. Neeraj Kumar Sharma, Sakeena Shahid, Subodh Kumar, Sanjeev Sharma, Rakesh Kumar Gupta, Naveen Kumar, Predicting Depth of Anesthesia using EEG Signals and Deep Convolution Network, 3rd International Conference on AI-ML Systems, ACM conference (25-27 Oct. 2023 Bengaluru, India). ACM Digital Library.

2. Neeraj Kumar Sharma, Subodh Kumar*, Ankit Rajpal, and Naveen Kumar. "DWT and Quantization Based Digital Watermarking Scheme Using Kernel OS-ELM." In Soft Computing and Optimization: SCOTA 2021, Ranchi, India, March 26–27, pp. 313-328, Proceedings in Mathematics & Statistics. Singapore: Springer Nature Singapore, 2023. (**Scopus Indexed**)

3. Neeraj Kumar Sharma, Vibha Gaur and Punam Bedi (2013). "Distributed Multi-agent Reputation Framework for Interactions in e-market". IEEE International Conference on Fuzzy Systems (FUZZ-IEEE, 2013). Hyderabad (**Scopus Indexed**)

4. Vibha Gaur, & Neeraj Kumar Sharma. (2011a). "A Dynamic Seller Selection Model for Agent Mediated e-market". In International Conference on Advances in Computing and Communication, Part II, CCIS 191 (pp. 284-295). Kochi, India: Springer Berlin Heidelberg. (**Scopus Indexed**)

5. Vibha Gaur, Neeraj Kumar Sharma, & Punam Bedi. (2010). "Evaluating Reputation Systems for Agent Mediated e-Commerce". International Conference on Advances in Computer Science (ACS 2010) (pp. 220-224). Kerala, India: Engineers Network, Conference Publishing System (CPS) ACEEE.

Patents

S.No.	Title	Date of Award/ Publication	Level (National / International)
1.	IOT BASED BLOOD OXYGEN SATURATION METER (Design No. 382818-001)	26th May 2023	National: Government of India
2.	BLEEDING RECOGNITION TECHNIQUE IN WIRELESS CAPSULE ENDOSCOPY IMAGES USING FUZZY LOGIC AND PRINCIPAL COMPONENT ANALYSIS	30th Dec. 2022	National: Government of India

Projects

NAME OF THE FACULTY	PROJECT TITLE	Duration	Amount	FUNDING AGENCY
Dr. Prerna Diwan, Dr. Salome John, Dr. Neeraj Kumar Sharma	Prospecting biologically active antibacterial compounds from plant extracts against Multi-drug resistant strains	1 Year (2015-16)	5.5 Lakh	University of Delhi
Neeraj Kumar Sharma (P.I.), Dr. Sanjeev Sharma (Co-PI, RML Hospital), Prof. Rakesh Kr. Gupta (Co-PI)	Assessment and Monitoring of Anesthesia using Explainable AI	1.5 Years (Feb 2023 onwards)	19.5 Lakh	Indian Council of Medical Research (ICMR)

(Prof. Neeraj Kumar Sharma)