PROFILE

Name	Dr. Neerendra Kumar
Title & Designation	Associate Professor, Department of Computer Science and IT, Central University of Jammu, India
Residence Address	House No.: 467, Sector: E, Sainik Colony Jammu-180011
Mobile Number	+91 9354666851
Residence Phone No.	+91 1917969219
Email	neerendra.csit@cujammu.ac.in

Educational Qualifications:

Degree	Institution
Ph.D.	Óbuda University, Budapest, Hungary
MCA	MDU, Rohtak, Haryana, India
M.Sc. (Informatics)	Dr. Bhimrao Ambedkar University, Agra (Formerly Known as Agra University), UP, India
B.Sc.	Dr. Bhimrao Ambedkar University, Agra (Formerly Known as Agra University), UP, India

Career Profile:

Designation	College/ University	Period from-To
Associate Professor (Dept. of Computer Science & IT)	Central University of Jammu, India	22 March 2023 **Onwards**
Assistant Professor (Dept. of Computer Science & IT)	Central University of Jammu, India	05 July 2013 **To** 21 March 2023
Assistant Professor (MCA)	IIMT College of Engineering, Greater Noida, India	06 Aug. 2007 **To** 04 July 2013
Lecturer (Computer Science & Engineering)	Kali Charan Nigam Institute of Technology, Banda, India	27 Feb. 2006 **To** 05 Aug. 2007
Lecturer (Computer Science)	National College, Bhongaon, Mainpuri, India	23 Nov. 2002 **To** 31 May 2003

Competitive Exams of National Level

- Qualified GATE (Computer Science and Engineering)
- Qualified NET (Computer Science and Applications)

International Fellowship

- Received Stipendium Hungaricum Scholarship for PhD study.

Committee/Administrative Assignments:

- Professor Incharge, B.Tech CSE Programmes, Central University of Jammu
- Assistant Director, Directorate of Physical Education, Central University of Jammu
- Board of Study Member of the Department
- Member of Departmental Purchase Committee
- One of the Members of OBC Cell, Central University of Jammu
- One of the Members of Departmental Admission Committee, Central University of Jammu
- R & D Cell Member, Central University of Jammu
- Academic Audit of Exam.-Wing member, Central University of Jammu
- Coordinator TIFAC Cell
- Nodal Centre Coordinator, Virtual Lab Project, MoE

Areas of Interest / Specialization:

- Robotics
- Computer Programming
- Artificial Intelligence

Subjects Taught:

- Computing Systems for Robotics
- Android and iOS based Application Development
- Programming Methodology and C Language
- Object Oriented Programming using C++
- Internet and JAVA Programming
- Principals of Programming Languages
- OOP using JAVA
- Advanced Software Design, Development and Testing
- Data Mining & Warehousing
- Parallel Processing and Distributed Systems
- AI
- Theory of Automata
- Data Structures
- DBMS
- Introduction to Computers

Research Guidance:

- PhD students under supervision:
  As Supervisor: 03
  As Co-Supervisor: 01
- M.Tech. students:
  As Supervisor: 15
- Guided MCA students in their mini and major project work.

Publications Profile:

a. Research Papers in Journals

1. Neerendra Kumar and Z. Vámossy. "Robot navigation with obstacle avoidance in unknown environment". In: International Journal of Engineering & Technology 7.4 (2018), pp. 2410–2417. issn: 2227-524X. doi: 10.14419/ijet.v7i4.14767. url: https://www.sciencepubco.com/index.php/ijet/article/view/14767/9180. (Scopus)
2. Neerendra Kumar and Z. Vámossy. "Obstacle recognition and avoidance during robot navigation in unknown environment". In: International Journal of Engineering & Technology 7.3 (2018), pp. 1400–1404. issn: 2227-524X. doi: 10.14419/ijet.v7i3.13926. url: https://www.sciencepubco.com/index.php/ijet/article/view/13926/6363. (Scopus)
3. Neerendra Kumar and Z. Vámossy. "Robot navigation in unknown environment with obstacle recognition using laser sensor". In: International Journal of Electrical and Computer Engineering 9.3 (2019), pp. 1773–1779. issn: 2088-8708. doi: 10.11591/ijece.v9i3. url: https://www.iaescore.com/journals/index.php/IJECE/article/view/13723/12005. (Scopus)
4. F. Kosser and Neerendra Kumar. "Robot navigation and path planning techniques challenges: a review". In: International Journal of Electronics Engineering 11.2 (2019), pp. 115–125. issn: 0973-7383. url: http://www.csjournals.com/IJEE/PDF11-2/16.%20Faz.pdf.
5. S. M. Nasti, Z. Vámossy, and Neerendra Kumar. "Obstacle avoidance during robot navigation in dynamic environment using fuzzy controller". In: International Journal of Recent Technology and Engineering 8.2 (2019), pp. 817–822. issn: 2277-3878. doi: 10.35940/ijrte.A1428.078219.

   url: https://www.ijrte.org/wp-content/uploads/papers/v8i2/A1428058119.pdf. (Scopus)

6. Neerendra Kumar and P. Jamwal. "Analysis of Modern Communication Protocols for IoT applications". In: Karbala International Journal of Modern Science 7.4 (2021), pp. 390–404. issn: 2405-609X (Print), 2405-6103 (Online). doi: 10.33640/2405- 609X.3165. url: https://doi.org/10.33640/2405-609X.3165. (Scopus)
7. S. J. Nasti, Ed Gowhar, S. M. Nasti, and Neerendra Kumar. "Automatic Structured Data Extraction from a Webpage". In: Design Engineering 8 (2021), pp. 1097–1110. issn: 0011-9342. url: http://thedesignengineering.com/index.php/DE/article/view/5008.
8. Neerendra Kumar, Devanand, A. Gupta, and S. M. Nasti. "Security analysis of vulnerabilities in robots". In: Design Engineering 8 (2021), pp. 4689–4700. issn: 0011-9342. url: http://thedesignengineering.com/index.php/DE/article/view/5422.
9. G. C. Sharma, M. Jain and Neerendra Kumar, "Analysis of Solute Drugs' Proscribed

Discharge from recyclable Implants". In: IIMT Engineering Review 1 (2010), pp. 62-65, issn: 0976-7088.

10. S. Mushtaq, Neerendra Kumar, P. K. Singh, Y. Singh. "Vision and Audio-Based Methods for First Impression Recognition Using Machine Learning Algorithms: A Review". International Journal on Artificial Intelligence Tools (2021), Accepted. (SCI IF-1.2)

11. Z. B. Mushtaq, S. M. Nasti, C. Verma, M. S. Raboca, Neerendra Kumar, and S. J. Nasti. "Super Resolution for Noisy Images Using Convolutional Neural Networks". In: Mathematics 10.5 (2022). issn: 2227-7390. doi: 10.3390/math10050777. url: https://www.mdpi.com/2227-7390/10/5/777. (SCI IF-2.258 (Q1))

12. M. H. Dar and Neerendra Kumar. "Using Machine Learning Methods to Forecast Credit Card Approvals". In: International Journal of Innovative Science and Research Technology 7.7 (2022), pp. 1164–1169.

13. A. Sayeed, C. Verma, Neerendra Kumar, N. Koul, and Zoltán Illés. "Approaches and Challenges in Internet of Robotic Things". In: Future Internet 14.9 (2022). issn: 1999-5903. doi: 10.3390/fi14090265. url: https://www.mdpi.com/1999-5903/14/9/265. (ESCI IF-Tracked)

14. N. Koul, Neerendra Kumar, A. Sayeed, C. Verma, and Maria Simona Raboaca. "Data Exchange Techniques for Internet of Robotic Things: Recent Developments". In: IEEE Access 10 (2022), pp. 102087–102106. doi: 10.1109/ACCESS.2022.3209376. (SCI IF-3.367 (Q1))

15. P. N. Lone, D. Singh, Veronika Stoffová, D. C. Mishra, U. H. Mir, and Neerendra Kumar. "Cryptanalysis and Improved Image Encryption Scheme Using Elliptic Curve and Affine Hill Cipher". In: Mathematics 10.20 (2022). issn: 2227-7390. doi: 10.3390/math10203878. url: https://www.mdpi.com/2227-7390/10/20/3878. (SCI IF-2.258 (Q1))

16. D. Singh, A. Paul, Neerendra Kumar, Veronika Stoffová, and C. Verma. "Resiliency and Nonlinearity Profiles of Some Cryptographic Functions". In: Mathematics 10.23 (2022). issn: 2227-7390. doi: 10.3390/math10234473. url: https://www.mdpi.com/2227-7390/10/23/4473. (SCI IF-2.258 (Q1))

17. A. Jain, C. Verma, Neerendra Kumar, M. S. Raboaca, J. N. Baliya, and George Suciu. "Image Geo-Site Estimation Using Convolutional Auto-Encoder and Multi-Label Support Vector Machine". In: Information 14.1 (2023). issn: 2078-2489. doi: 10.3390/info14010029. url: https://www.mdpi.com/2078-2489/14/1/29. (ESCI IF-Tracked)

18. A. Kumar, M. Chopra, Y. Singh, and Neerendra Kumar. "Neoteric Trends of Unmanned Aerial Vehicle UAV Research: A Scientometric Analysis". In: Journal of Scientometric Research (2023). Accepted. (ESCI IF-Tracked)

b. Articles/Research Paper in Books

1. Neerendra Kumar and Z. Vámossy. "Laser scan matching based simultaneous localization and mapping in robot navigation using fuzzy logic". In: 13th Miklós Iványi International PhD & DLA Symposium. Abstract book. University of Pecs, Hungary, Nov. 2017, p. 135. isbn: 978-963-642-780-1. url: https://phdsymp.mik.pte.hu/abstract-book-1.

2. Y. Bathla, C. Verma, and Neerendra Kumar. "Smart Approach for Real-Time Gender Prediction of European School's Principal Using Machine Learning". In: Proceedings of ICRIC 2019. Cham: Springer International Publishing, 2020, pp. 159–175. isbn: 978-3-030-29407-6.

3. Y. Paul and Neerendra Kumar. "A Comparative Study of Famous Classification

Techniques and Data Mining Tools". In: Proceedings of ICRIC 2019. Cham: Springer International Publishing, 2020, pp. 627–644. isbn: 978-3-030-29407-6.

4. Neerendra Kumar and Zoltán Vámossy. "Obstacle avoidance in robot navigation using two-sample t-test based obstacle-recognition". In: Proceedings of 3rd International Conference on Recent Innovations in Computing (ICRIC-2020). June 2020. Springer International Publishing, 2021, pp. 455–461. isbn: 978-981-15-8297-4.

5. S. Verma and Neerendra Kumar. "Path Planning for Autonomous Robot Navigation: Present Approaches". In: Futuristic Trends in Network and Communication Technologies (Proceedings of FTNCT 2020). Singapore: Springer, 2021, pp. 276–286. isbn: 978-981-16-1483-5.

6. M. Bijli and Neerendra Kumar. "Autonomous Navigation of Mobile Robot with Obstacle Avoidance: A Review". In: Futuristic Trends in Network and Communication Technologies (Proceedings of FTNCT 2020). Singapore: Springer, 2021, pp. 305–316. isbn: 978-981-16-1483-5.

7. R. Manzoor and Neerendra Kumar. "Mobile Robot Path Planning Approaches: Recent Developments". In: Innovations in Information and Communication Technologies (IICT-2020). Cham.: Springer, 2021, pp. 301–308. isbn: 978-3-030-66217-2 (print), 978-3-030-66218-9 (online). doi: https://doi.org/10.1007/978-3-030-66218-9_35.

8. A. Kumar, Y. Singh, and Neerendra Kumar. "Blockchain Technology: Challenges & Solution Perspective". In: Proceedings of 17th International Conference on Multimedia Information Technology and Applications (MITA2021). Korea: Korea Multimedia Society (KMMS), 2021, pp. 305–307.

9. A. Kumar, Y. Singh, and Neerendra Kumar. "Secure Unmanned Aerial Vehicle (UAV) Communication using Blockchain Technology". In: Recent Innovations in Computing. Singapore: Springer , 2022, pp. 201–211. isbn: 978-981-16-8248-3. url: https://doi.org/10.1007/978-981-16-8248-3_17.

10. P. Parihar, Devanand, and Neerendra Kumar. "Fake Profile Detection from the Social Dataset for Movie Promotion". In: 2021 IEEE Sixth International Conference on Image Information Processing (ICIIP). Nov. 2021, pp. 495–498. doi: 10.1109/ICIIP53038.2021.9702684.

11. S. Mushtaq and Neerendra Kumar. "Text-Based Automatic Personality Recognition: Recent Developments". In: Lecture Notes in Networks and Systems, Proceedings of Third International Conference on Computing, Communications, and Cyber-Security (IC4S). Springer Nature Singapore, 2022, pp. 537–549. isbn: 978-981-19-1142-2. url: https://doi.org/10.1007/978-981-19-1142-2_43.

c. International Conferences Attended Abroad

1. Neerendra Kumar, Z. Vámossy, and Z. M. Szabó-Resch. "Robot obstacle avoidance using bumper event". In: 2016 IEEE 11th International Symposium on Applied Computational Intelligence and Informatics (SACI). Timişoara, Romania, May 2016, pp. 485–490. doi: 10.1109/SACI.2016.7507426.

2. Neerendra Kumar, Z. Vámossy, and Z. M. Szabó-Resch. "Heuristic approaches in robot navigation". In: 2016 IEEE 20th Jubilee International Conference on Intelligent Engineering Systems (INES). Budapest, Hungary, June 2016, pp. 219–222. doi: 10.1109/INES.2016.7555123.

3. Neerendra Kumar, Z. Vámossy, and Z. M. Szabó-Resch. “Robot path pursuit using probabilistic roadmap”. In: 2016 IEEE 17th International Symposium on Computational Intelligence and Informatics (CINTI). Budapest, Hungary, Nov. 2016, pp. 000139–000144. doi: 10.1109/CINTI.2016.7846393.

4. Neerendra Kumar, M. Takács, and Z. Vámossy. “Robot navigation in unknown environment using fuzzy logic”. In: 2017 IEEE 15th International Symposium on Applied Machine Intelligence and Informatics (SAMI). Herl’any, Slovakia, Jan. 2017, pp. 279–284. doi: 10.1109/SAMI.2017.7880317.

5. Neerendra Kumar and Z. Vamossy. “Laser Scan Matching in Robot Navigation”. In: 2018 IEEE 12th International Symposium on Applied Computational Intelligence and Informatics (SACI). Timişoara, Romania, May 2018, pp. 000241–000246. doi: 10.1109/SACI.2018.8440969.

Conference / Workshops/Training Organized:

1. 2nd International Conference on Recent Innovations in Computing (ICRIC-2019). March 2019, Central University of Jammu, India.
2. 3rd International Conference on Recent Innovations in Computing (ICRIC-2020). June 2020, Central University of Jammu, India.
3. 4th International Conference on Recent Innovations in Computing (ICRIC-2021). June 2021, Central University of Jammu, India.
4. 5th International Conference on Recent Innovations in Computing (ICRIC-2022). May 2022, Central University of Jammu, India.

Creation of ICT Mediated Teaching Learning Pedagogy and Content:

Development of new courses and curricula for 13 different subjects.
Details of the developed courses are available at the following weblink:
https://www.cujammu.ac.in//5084/5084_media/courses/curr_courses.pdf

Conference/Workshops/Training attended as Faculty Member:

Recent Conferences:

[1] IEEE 11th International Symposium on Applied Computational Intelligence and Informatics (SACI). May 2016, *Timisoara, Romania.*

[2] IEEE 20th Jubilee International Conference on Intelligent Engineering Systems (INES). June 2016, Budapest, Hungary.

[3] IEEE 17th International Symposium on Computational Intelligence and Informatics (CINTI). Nov. 2016, Budapest, Hungary.

[4] IEEE 15th International Symposium on Applied Machine Intelligence and Informatics (SAMI). Jan. 2017, Herl'any, Slovakia.

[5] IEEE 12th International Symposium on Applied Computational Intelligence and Informatics

(SACI). May 2018, Timisoara, Romania.

[6] 2nd International Conference on Recent Innovations in Computing (ICRIC-2019). March 2019, Central University of Jammu, India.

[7] 3rd International Conference on Recent Innovations in Computing (ICRIC-2020). June 2020, Central University of Jammu, India.

[8] 4th International Conference on Recent Innovations in Computing (ICRIC-2020). June 2021, Central University of Jammu, India.

[9] 5th International Conference on Recent Innovations in Computing (ICRIC-2022). May 2022, Central University of Jammu, India.

FDPs/Workshops:

Theme of Seminars/ Workshops /FDP Attended	**Type**	**Dates**	**Organizer**
"eSuraksha" A practical Approach on Network & Web Application Security	Training	10 Dec., 2018 to 14 Dec, 2018.	Department of Computer Science & IT, Central University of Jammu, (In Collaboration with C-DAC , Mohali)
Entrepreneurship Development	FDP	20 May 2019 to 3 June 2019	UBIC & FIDC, Central University of Jammu (In collaboration with Entrepreneurship Development Institute of India)
SIP based on Universal Human Values	FDP	04 June 2019 to 10 June 2019	Panjab University, Chandigarh (AICTE)
AICTE ATAL Workshop on "Internet of Things".	FDP	14-18 October 2019	Dept. of Computer Science & IT, Central University of Jammu, and ATAL AICTE
AICTE ATAL Workshop on "Artificial Intelligence"	FDP	18-22 November 2019	Dept. of Computer Science & IT, Central University of Jammu, and ATAL AICTE
AICTE Training And Learning (ATAL) Academy Online FDP on "Leadership & Excellence"	FDP	12-16 October 2020	Dept. of Computer Science & IT, Central University of Jammu, and ATAL AICTE
AICTE ATAL Workshop on "Artificial Intelligence/Artificial Wisdom-A Drive for Improving Behavioral and Mental Health Care"	FDP	06-10 September 2021	Dept. of Computer Science & IT, Central University of Jammu, and ATAL AICTE

General Orientation Course	Orientation	24 Dec. 2018-22 Jan. 2019	UGC HRDC, University of Jammu

Invited Lectures/Resource Persons:

1. Invited lecture at MIER College of Education, Jammu on "Research paper citation and referencing", 2019-03-02.
2. Paper "Effect of Automation on Education & Employment" presented at National Conference on Education, Employment and Empowerment: Issues and Challenges, 2019-03-18.
3. Paper "Using ICT for Revolutionizing Teacher Education in India" presented at National Seminar on Priorities and Directions in Teacher Education, 2014-02-10.
4. Paper "Environment Friendly Robots: An Introduction presented at National Symposium on Energy, Environment and Sustainable Development (EESD-2019) , Department of Environmental Sciences, Central University of Jammu, India, 2019-07-31.
5. Paper "A Transient Analysis of the Oxygen Supply During Epidermal Wound Healing" presented at National Conference on Information Technology, Operations Research and Computing (Interdisciplinary Trends in Performance Modeling), 2004-04-11.
6. Paper "A mathematical model for oxygen supply during epidermal wound healing" Ninth Annual Conference of Gwalior Academy of Mathematical Sciences and All India Workshop on Mathematical Modelling and Computer Simulation, 2004-01-18.
7. Resource Person for "Hands on Practice on Hosting/G-meet/Zoom, Designing Brochure/Flyer/pamphlet" at FDP (1-7 February 2021) on 'ICT Tools in Education', School of Education (PMMMNMTT), Central University of Jammu, India, 2021-02-05.
8. Resource Person for "Google Form/ Attendance sheet /e-certificates" FDP (1-7 February 2021) on 'ICT Tools in Education', School of Education (PMMMNMTT), Central University of Jammu, India, 2021-02-03.
9. Resource Person for "Hosting G-Meet/Zoom, Designing Brochure/Flyer/pamphlet" at FDP (1-7 February 2021) on 'ICT Tools in Education', School of Education (PMMMNMTT), Central University of Jammu, India, 2021-02-05.

Research Projects (Major Grants/Research Collaboration):

Research Project Ongoing on the topic entitled as "Design and development of testbed and vulnerability analysis framework for cyber physical systems".
Funding Agency: DRDO, Duration: 2 Years, Amount of Grant: Rs. 994.6193 Lakhs

Awards and Distinctions:

Stipendium Hungaricum International Scholarship holder (for PhD studies in Hungary) from September 2015 till August 2018.

Other Activities:

UDAAN (Annual Cultural Fest of the University) Committee Member, Examination and Evaluation of the Students of the Department, Workshops by the Department, Mentor Placement, Alumni Cell.

Dated: 03rd / April / 2023 Dr. Neerendra Kumar