

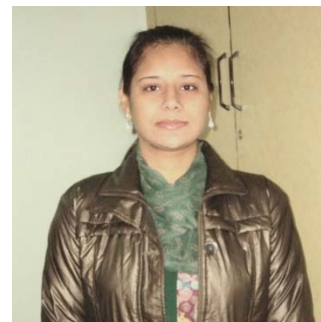
Curriculum Vitae

Dr. Nirmal Kaur

**Assistant Professor (STAGE-2), Dept. of Computer Sc. & Engg.,
U.I.E.T., Sector 25, Panjab University, Chandigarh.**

E-mail: nirmaljul19@gmail.com

Mob: 8146522779



Research Interests:

- Parallel and Distributed Computing.
- Energy Aware Scheduling.
- Video Forensics systems
- Reviewer of many reputed International journals such as IEEE access, Wiley, IEEE- VLSI etc.
- Awarded with Best research award from CSE dept., UIET in the year 2017.

Projects:

Ongoing Research Project on “Cyber Security-Challenges under Cyber Space Specially for women users- Investigating Cyber Initiated Crimes against Women Users in the Punjab State” for the financial year 2020-21. The project is sanctioned by National Commission For Women, Govt. of India, New Delhi with total project cost of 14, 02,200/-

Qualification

Ph.D. in Computer Sc. & Engg. from **I.K. Gujral Punjab Technical University, Jalandhar**, India in November, 2017.

Title: Energy Efficient Scheduling Techniques in Distributed Computing systems.

Supervisor: Prof. and Dean (R&D) Dr. Savina Bansal, MRSPTU, Bathinda.

Complete thesis is available online on shodhganga repository at

<https://shodhganga.inflibnet.ac.in/handle/10603/194841>

M.Tech (Computer Sc. & Engg.) with 75.4% (Distinction and Topper) from Baba Banda Singh Bahadur Engg. College Fatehgarh Sahib, **PTU**, India in 2009.

B.Tech (Computer Sc. & Engg.) with 73.5% from Dept. of CSE, **Punjabi University Campus, Patiala**, India in 2003.

Teaching Experience

- Presently Assistant Professor (Stage 2), Dept of Computer Sc. & Engg., University Institute of Engg. & Technology, Panjab University, Chandigarh from 24th August 2011-till date.
- Assistant Professor, Bhai Gurdas Institute of Engg. & Tech, Sangrur from 20th Jan 2005-22st August 2011.
- Assistant Professor, Swami Vivekanad Institute of Engg. and Tech from 2nd June 2004 to 19th Jan 2005.

Research Guidance

Ph.D students registered: 02

Broad research areas are: 1. Energy Efficient Scheduling in Distributed Systems.

2. Digital Video Forensic Systems.

M.E. students completed degree: 08

M.E. students ongoing: 02

Google scholar citations at: <https://scholar.google.com/citations?user=r3rbMsoAAAAJ&hl=en>

Journal Publications:

Nirmal Kaur, Savina Bansal, and Rakesh Bansal (2017), “Duplication Controlled Static Energy Efficient Scheduling on Multiprocessor Computing System,” Concurrency and Computation: Practice and Experience, 29(12): e4124. (SCI , IF: 1.447, Wiley Journal).

Nirmal Kaur, Savina Bansal, and Rakesh Bansal (2017), “Energy Conscious Scheduling with Controlled Threshold for Precedence Constrained Tasks on Heterogeneous Clusters,” Concurrent Engineering: Research And Applications, 25(3), pp. 276-286. (SCI, IF: 1.456, Sage Journal)

Nirmal Kaur, Savina Bansal, and Rakesh Bansal (2016), “Energy Efficient Duplication Based Scheduling For Precedence Constrained Tasks on Heterogeneous Computing

Cluster,” Multiagent and Grid Systems, 12(3), pp. 239-252. (**SCOPUS and Web of Science, IF:0.2, IOS Press Journal**).

Nirmal Kaur and Raman Bhinder (2019), “Energy Aware Clustering Scheduling of Parallel Applications on Heterogeneous Computing Systems,” Multiagent and Grid Systems, An International Journal of Cloud Computing and Artificial Intelligence, 15(1), pp. 1-18. (**SCOPUS and Web of Science, IF:0.2, IOS Press Journal**).

Navdeep Kumar, **Nirmal Kaur**, Deepti Gupta (2020), “Red Green Blue Depth Image Classification Using Pre-Trained Deep Convolutional Neural Network,” Pattern Recognition and Image Analysis, Springer Journal of the Russian Academy of Sciences, 30(3), pp. 382-390. (**SCOPUS and Web of Science, IF: 0.93, Springer Journal**).

Mehak Aggarwal and **Nirmal Kaur** (2016), “Heterogeneous Scheduling Using Controlled Duplications on Multiprocessor System,” International Journal of Control Theory and Applications, 9(45), pp. 155-165. (**SCOPUS, IF:0.8**).

Sumandeep Kaur, Ravreet Kaur, and **Nirmal Kaur** (2018), “Modified Genetic Algorithm Based Solution For Task Scheduling in Cloud Environment,” Indian Journal of Computer Science and Engineering, 9(2), pp. 61-68.

Krishan Kumar, Deepti Gupta, **Nirmal Kaur** (2018), “Energy Efficient Communication Protocol for Chain-based Clustered WSNs,” International Journal of Grid and Distributed Systems, 11(9), pp.81-92 (**SCOPUS**).

Nirmal Kaur (2016), “Power Management Techniques: Power Simulators and Dynamic Power Management”, Recent Trends in Parallel Computing, 3(2), pp. 1-7.

Raman Bhinder and **Nirmal Kaur** (2016), “Survey on Energy Aware Scheduling Algorithms of DAG Applications for Multiprocessor Computing System,” IJARCSSE, 6(4), pp. 334-340.

Pankaj Goyal and **Nirmal Kaur** (2015), “Genetic Algorithm Based Optimization Technique for Power Management in Heterogeneous Multi-tier Web Clusters”, International Journal of Application or Innovation in Engineering & Management, 4(1), pp. 156-162.

Pankaj Goyal and **Nirmal Kaur** (2015), “An Optimization Technique Based On Genetic Algorithm For Power Management In Heterogeneous Multi-tier Web Clusters, International Journal of Computer Application, 115(17), pp. 26-31.

Nirmal Kaur (2014), “Impact of Duplication Scheduling and Dynamic Voltage Scaling on Power-Performance of Parallel Applications on Computing Systems,” International Journal In Applied Studies And Production Management, 1(1), pp. 75-84.

Nirmal Kaur, Savina Bansal, and Rakesh Bansal (2013), “Task Scheduling and Energy Conservation Techniques for Multiprocessor Computing Systems,” International Journal of Networks and Systems, 2(2), pp. 5-8.

Nirmal Kaur, Savina Bansal, and Rakesh Bansal (2013), “Energy aware Scheduling Strategies for Distributed Computing System”, International Research in Journal Of Advanced Computer Science and Software Engineering, 3(10), pp.280-283.

Sukhjeet Singh and **Nirmal Kaur** (2016), “A Heterogeneous Static Hierarchical Expected Completion Time Based Scheduling Algorithm in Multiprocessor System,” International Research Journal of Engineering and Technology (IRJET), 3(2), pp. 95-956.

Anupam Garg and **Nirmal Kaur** (2009), “Quality Analysis of Different Types of Noise Removal Filters”, Coimbatore Institute of Information Technology, Print: ISSN 0974 – 9691 & Online: ISSN 0974 – 9586.

National/ International Conferences:

Navdeep Kumar, **Nirmal Kaur**, et al. (2020), “Major Convolutional Neural Networks in Image Classification: A Survey,” Proceedings of International Conference on IoT Inclusive Life (ICIIL 2019), NITTTR Chandigarh, India. Lecture Notes in Networks and Systems, vol 116. Springer, Singapore, pp. 243-258.

Nirmal Kaur, Savina Bansal, and Rakesh Bansal (2015), “Towards Energy Efficient Scheduling with DVFS for Precedence Constrained Tasks on Heterogeneous Cluster System,” In: *2nd International Conference on Recent Advances in Engineering and Computational Sciences*, Chandigarh, 21-22 December, pp.1-6. India: IEEE.(SCOPUS).

Nirmal Kaur and Gurleen Kaur (2009), “Efficient Image Watermarking Technique to Improve Payload and Robustness Without Affecting Perceptual Quality of Image Data,” Proc.International Conference indo-global colleges , Abhipur.

Nirmal Kaur (2010) “Imperceptibility and Robustness of Digital Image Watermarking in the Discrete Wavelet Transform Domain” Proc. PCTE Journal of Computer Sciences, Bi-Annual Journal, pp. 96-102.

ISTE sponsored National Paper Published on “Hybrid Image compression using LZW method” in 2007.

ISTE National Paper Published on “Virtual Private Network” in 2008.

ISTE National Paper Published on “Comparison of image compression algorithms” in 2008.

ISTE National Paper Published on “Robustness of image Watermarking Techniques” in 2009

ISTE National Paper Published on “Region based image fusion algorithms” in 2009.

Academic Responsibilities:

- Member of Board of Studies (BOS), Panjab University Chandigarh.

- Member of Research Degree Committee (RDC), Panjab University Chandigarh.
- Member of Academic and Administrative Committee, UIET, Panjab University Chandigarh.
- Member of Institution's Innovation Council (IIC) sponsored by MHRD.
- Member of UTECHNOS committee.

Short Term Courses attended:

- Attended five days AICTE ATTAL fdp on 'Internet of Things (IoT)' from 20-04-2020 to 24-04-2020 organized by NITTTR, Chandigarh .
- Participated in two weeks online workshop on "Advance Concepts for Learning MOOCs" by MHRD from 2-7-2020 to 17-7-2020.
- Attended one day programme on "Book and Article Publishing and SpringerLink Platform Demonstration" organized by GNDU Amritsar.
- Attended two days workshop on "IBM Rational Robot" sponsored by IBM.
- Attended the one day seminar on "Patent Awareness" sponsored by PIC, Chandigarh.
- Attended the five days workshop on "Generic Skill Development" sponsored by NITTR & MHRD.
- Attended the two days Workshop on "Rational Robot as a Software Testing Tool" conducted by IBM.
- Attended 6th Chandigarh Science Congress held at Panjab University, Chandigarh dated on 26-28 February 2012.
- Attended orientation programme from 14-5-2013 to 10-6-2013.
- Participation in Faculty development Program "Achieving Excellence in Technical Education", Organized in collaboration with Infosys dated on 16-19th July 2013.
- Participated in NPTEL workshop held at ICSSR complex, Panjab University Chandigarh dated on 5th August 2013.
- Attended 9th Chandigarh Science Congress held at Panjab University, Chandigarh dated on 25-27 February, 2015.
- Attended oracle sponsored faculty development program on database design using SQL programming dated 04.05.2015 to 08.05.2015.
- Attended refresher programme on Research Methodologies from 3-7-2014 to 23-7-2014.
- Organized and attended TEQIP sponsored one week workshop on Image processing and machine learning for pattern recognition held at UIET, PU, Chandigarh from 11-16th July, 2016.