Faculty Details

Title	Dr.	First Name	**SHARANJIT**	Last Name	**KAUR**	Photograph
Designation	**PROFESSOR**					
Address	Acharya Narendra Dev College, Gobindpuri, Kalkaji, New Delhi-110019					
Phone No Office	+ 91 11 26412547, 26293224					
Residence	NIL					
Mobile	-					
Email/	sharanjitkaur@andc.du.ac.in					
Web-Page	https://www.andcollege.du.ac.in/departments/computerscience/faculty					

Educational Qualifications

Degree	Institution	Year
B.Sc.(G) Computer Sc.	Government College, Karnal (Kurukshetra University)	1988-1991
Masters of Computer Application	Thapar Institute of Engineering and Technology, Patiala	1991-1994
Ph.D.	Department of Computer Sc, University of Delhi (Title: Leveraging grid-based synopsis for mining data streams)	26 February, 2011

Career Profile

Teaching Experience: 27 years

A Ph.D. from University of Delhi in the area of "Mining Data Streams", my research areas of interest are data mining, stream clustering, graph mining and social network analysis.

I, currently Professor, am teaching at Acharya Narendra Dev College (University of Delhi) since July 1995.

Administrative Assignments (last 10 years)

- College Coordinator for Monthly Research Meeting at Deptt. of Computer Science, DU (2022-2023)
- Member, Committee of courses and studies for under-graduate courses (Deptt. of Computer Science, DU (Nov 2021 – Oct 2023)
- Convenor, Computational domain of Virtual Lab @ANDC (Sept 2021-till date)
- Co-convenor, Workload and Time-Table Committee (2020-2022,2022-2024)
- Member, Examination Committee (2018-2020,2022-2024)
- Course coordinator, Physical Sciences with Computer Science (2020-2022)
- Convener, FOSS Club (2010-2012,2014-2015,2016-2018,2020-2022)
- Member, FOSS Club (2012-2013,2018-2020)
- Member, Departmental Purchase Committee (2018-2020)
- Member (Teacher representative), Governing Body (2018-2019)

- Convener, Core Admission Committee (2017-2019)
- Teacher representative, Internal assessment monitoring Committee (2016-2018)
- Convenor, Attendance Committee (2016-2018)
- Member, Library Committee (2016-2018,2019-2020)
- Member Alumni affairs Committee (2014-2016, 2016-2018)
- Member, IT Committee (2012-2014)
- Teacher-in-Charge, Department of Computer Science (2013-2014)
- Member, Time-table and Workload Committee (2014-2016).

Community Services

• PhD Pre-admissions Preparation Classes for the candidates to under privileged (OBC/SC/ST/EWS) category of the society.	Dept. of Computer Science, DU	Sep 6th	Sep 29th, 2021	
• PhD Pre-admissions Preparation Classes for the candidates to under privileged (OBC/SC/ST/EWS) category of the society.	Dept. of Computer Science, DU	June 25th	July 15th, 2022	

Areas of Interest / Specialization

Stream mining, Data mining, Graph Mining, Epidemic Modelling using Contact Networks, Epidemic Dynamics on Contact Networks

Subjects Taught

Graduate/Post-graduate:
Database Management Systems, Operating System, Advanced Database system, Programming using Python, C and C++, Network Science, Visual Basic, Data analysis and Visualization

Pre-PhD course work for Computer Science:
Research Methodology: Collection and analysis of data during May-July, 2019 at Deptt. Of CSc, University of Delhi.

Moocs Completed with e-certification:

S.No.	Details of MOOC	Subject	Certification providing agency	Date of certification	Level (UG/PG/Other)	Year	E-certification no.
1	Online Specialization on Mathematics for Machine Learning (15 weeks)	Computer Science	Imperial college, London	June 23, 2022	PG	2022	https://www.coursera.org /account/accomplishments/ specialization/2KG46A78E3F

Research Guidance

PhD students: Two students working in the area of network science as detailed below (joint supervisor with Prof. Vasudha Bhatnagar):

S.NO.	Candidate	Year (Registration)	Thesis/ Dissertation Submitted	Degree Awarded
1.	Dr. Rakhi Saxena	3rd Mar 2014	19th Feb 2019 (Hierarchical Graph Decomposition for Scalable Network Analysis)	August, 2020
2.	Ms. Kirti Jain	27th Nov 2018	-	-

Supervised MSc Major projects as per given details:

S.No.	Research based Projects title	Students name	Year	Joint Supervisor
1.	Data Mining Algorithms in Startosphere	Tripti Gupta, Dhriti Khanna	Jan-June, 2012	Prof. Vasudha Bhatnagar
2.	Scalable Clustering using MapReduce Programming Model	Abhishek Santra Anurag Agarwal	Jan-June 2013	Prof. Naveen Kumar
3.	Evolution of Author communities in DBLP.	Chavi Jindal, Madhur Maurya	Jan-June, 2014	Prof. Vasudha Bhatnagar
4.	Label Propagation in Large Graphs.	Yashaswi Jindal, Yashika Ahuja	Jan-June, 2014	Prof. Vasudha Bhatnagar
5.	Network Evolution in Co-author networks	Nikita Chopra, Neelam Rohilla	Jan-June, 2015	Prof. Vasudha Bhatnagar

Research Projects Completed:

S. No	Title	PI/ Co-PI*	Duration (in months)	Period (From-to) Dates to be given	Total Grant/Funding received (Rs.)	Name of Sponsoring/ Funding Agency	Outcome of the Project
1	Astronomy using archival data (ANDC-203)	Co-PI	12	Aug 2013-July 2014	4,50,000/	University of Delhi	Paper Publication

Publications Profile

a) **Research papers published in Refereed/Peer Reviewed Journals**

1. Kirti Jain, Vasudha Bhatnagar, Sharanjit Kaur: Epidemic dynamics in Census-calibrated Modular Contact Network. Network Modeling and Analysis in Health Informatics and Bioinformatics, 2023, 12(1), 14. https://doi.org/10.1007/s13721-022-00402-1

2. Harita Ahuja, Sunita Narang, Sharanjit Kaur and Rakhi Saxena: Entropy for Item Inclination in Sub-community based Recommender System. International Journal of Advanced Technology and Engineering Exploration, 9(93), 1-23 (2022), ISSN (Print): 2394-5443 ISSN (Online): 2394-7454.

3. Kirti Jain Vasudha Bhatnagar, Sadanand Prasad, Sharanjit Kaur: Coupling Fear and Contagion for Modeling Epidemic Dynamics. IEEE Transactions on Network Science and Engineering, 2022 pp. 1-14. doi: 10.1109/TNSE.2022.3187775.

4. Sharanjit Kaur, Ayushi Gupta, Rakhi Saxena: Identifying Central Nodes in Directed and Weighted Networks. International Journal of Advanced Computer Science and Applications, 905-914 (2021). ISSN:2158107X

5. Rakhi Saxena, Sharanjit Kaur, Vasudha Bhatnagar: Identifying similar networks using structural hierarchy. Physica A: Statistical Mechanics and its Applications, 536, art. no. 121029 (2019). 10.1016/j.physa.2019.04.265.

6. Rakhi Saxena, Sharanjit Kaur, Vasudha Bhatnagar: Social centrality using network hierarchy and community structure. Data Mining and Knowledge Discovery, 32(5): 1421-1443 (2018)

7. Vasudha Bhatnagar, Sharanjit Kaur, Rakhi Saxena, and Dhriti Khanna , DASC: Data Aware Algorithm for Scalable Clustering, Knowledge and Information System, 50 (3), 851-881 (2021).

8. Vasudha Bhatnagar, Sangeeta Ahujha and Sharanjit Kaur, Discriminant Analysis-based Cluster Ensemble, International Journal of Data Mining, Modeling and Management, 7(2), 2015. doi: 10.1504/IJDMMM.2015.069248.

9. Aniruddha Dey, Sukanta Deb, Subhash Kumar, Hrishabh Bharadwaj, Barnmoy Bhattacharya, Richa, Angad Sharma, Akshyata Chauhan, Neha Tiwari, Sharanjit Kaur, Suman Kumar, Abhishek : Light curve modeling of eclipsing binaries towards the constellation of Carina, DU Journal of Undergraduate Research and Innovation, 1, 60-78 (2015).

10. Vasudha Bhatnagar, Sharanjit Kaur and Sharma Chakravarth: Clustering Data Streams using Grid-based Synopsis, Knowledge and Information System , 41(1), 127-152 (2014)

11. Vasudha Bhatnagar, Sharanjit Kaur, Laurent Mignet, A Parameterized Framework for Stream Clustering Algorithms, Int'l Journal for Data Warehousing and Mining, 5(1), 36-56 (2009).

12. Vasudha Bhatnagar, Sharanjit Kaur, Ajit Chaturvedi, Gradation Framework for Anomaly Detection in Streams, ISAST Transactions on Intelligent Systems, 1(1), 55-63 (2008).

b) Research papers published in Refereed/Peer Reviewed Conferences

1. Kirti Jain, Harsh Bamotra, Sakshi Garg, Sharanjit Kaur, and Gunjan Rani: Role of Node Centrality for Information Dissemination in Delhi Metro Network, The International Conference on Advances in IoT and Security with AI (ICAISA-2023), Delhi, India, 24.03.2023-25.03.2023, Accepted for publications in LNNS (Springer).

2. Kirti Jain, Vasudha Bhatnagar and Sharanjit Kaur: Collective Behavior in Community-Structured Network and Epidemic Dynamic, Proceedings of the International Health Informatics Conference 2022, Sri Sri University, Cuttack, Odisha, India. Lecture Notes in Electrical Engineering (990), Springer. ISBN: ISBN 978-981-19-9089-2

3. Sharanjit Kaur, Rakhi Saxena and Vasudha Bhatnagar: Leveraging Hierarchy and Community Structure for Determining Influencers in Networks, 19th International Conference, DaWaK 2017, Lyon, France, 28.08.2017-31.08.2017. ISBN: 978-3-319-64283-3.

4. Rakhi Saxena, Sharanjit Kaur, Debasis Dash and Vasudha Bhatnagar: Leveraging Structural Hierarchy for Scalable Network Comparison, 27th International Conference DEXA 2016, Porto, Portugal, 05.09.2016-08.09.2016. ISBN: 978-3-319-44402-4.

5. Sharanjit Kaur, Rakhi Saxena, Dhriti Khanna and Vasudha Bhatnagar: Comparing Data Processing Frameworks for Scalable Clustering, FLAIRS 2014, Association for the Advancement of Artificial Intelligence (Florida) 21.05.2014 – 23.05.2014, isbn: 978-1-57735-658-5.

6. Sharanjit Kaur, Dhriti Khanna, Tripti Gupta and Vasudha Bhatnagar: Scalable Clustering Using PACT Programming Model. ICDM Workshops 2012 (Brussels, Belgium), 424-430. 10.10.2012, doi:10.1109/ICDMW.2012.78. 978-1-4673-5164-5. 2375-9232.

7. Sharanjit Kaur, Vasudha Bhatnagar, Sameep Mehta and Sudheer Kapoor, Categorizing Concepts for Detecting Drifts in Stream, In Proceedings of 15th International Conference on Management of Data (Mysore, India), 9.12.2012-12.12.2009.

8. Vasudha Bhatnagar, Sharanjit Kaur, Neelima Gupta, Identifying Informative Dimensions in Streaming Clusters, In Proceedings of IEEE ICIS'09 (China), 1.06.2009 – 3.06.2009. doi: 10.1109/ICIS.2009.95. 978-0-7695-3641-5

9. Vasudha Bhatnagar, Sharanjit Kaur, Exclusive and Complete Clustering of Streaming Data, In Proceedings of Int'l Conference on Database and Expert System Applications, (DEXA'2007), Sept 3 – 7, 2007 Regensburg, Germany, pp 629-638. © LNCS 4653 . doi: 10.1007/978-3-540-74469-6_61.

10. Deepali Aggarwal, Pankaj Singhal , Sharanjit Kaur, Vasudha Bhatnagar, PDOD: Tree based Algorithm for Outlier Detection, In Proceedings of International Conference on Advances in Computer Vision and Information Technology (ACVIT-07), November 28th - 30th, 2007, Aurangabad, India, pp-576-581, 978-81-89866-74-6.

c) Book Chapters

1. Sharanjit Kaur, Vasudha Bhatnagar, and Sharma Chakravarthy: Stream Clustering Algorithms: A Primer, BIG DATA in Complex systems: Challenges and opportunities, 2015 , Springer . Doi: 10.1007/978-3-319-11056-1_4.
2. Sharanjit Kaur, Outlier Detection, Encyclopedia of Data Warehousing and Mining, 2009,1476-1482, IGI Global.

d) Tutorial given

1. Vasudha Bhatnagar, Sharanjit Kaur on Clustering Data Streams: A Second Look, COMAD 2011, 19-21 Dec 2011, Bangalore, India (in-person).
2. Vasudha Bhatnagar, Sharanjit Kaur, Kirti Jain on Modeling Epidemic Dynamics thru Contact Networks at International Health Informatics Conference, 17th May to 19th May, 2022, organised by Faculty of Emerging Technologies and Faculty of Science, Sri Sri University, Cuttack, Odisha (virtual mode).

e) Books authored as a member of development team

S.No.	Title of Edited Book	Authorship*	Publisher (with city/country & year of Publication	ISBN	Whether Refereed
1.	Textbook for XI Computer Science	Joint Author*	NCERT, 2019	978-93-5292-117-1	Textbook CBSE
2.	Textbook for XI Informatics Practices	Joint Author*	NCERT, 2019	978-93-5292-148-5	Textbook CBSE
3.	Textbook for XII Computer Science	Joint Author*	NCERT, 2020	978-93-5292-338-0	Textbook CBSE
4.	Textbook for XII Informatics Practices	Joint Author*	NCERT, 2020	978-93-5292-361-8	Textbook CBSE

Conference / Presentations /Workshops

Paper presentation/Lectures/Talks delivered as a resource person (in FDP/RC/Workshop/Conferences):

- Improving Effectiveness of E-learning Videos by Capitalizing Eye-tracking Data on 13.05.2022 in National Conference on National Education Policy: Implementation, Challenges, Opportunities and Probable Outcomes at Deshbandhu College, DU (Virtual mode)
- Data exploration and visualization using Python on 28.20.2021 during FDP (25th Oct to 29th Oct , 2021) conducted by Department of Information Technology, NSUT, Dwarka, Delhi. (Virtual mode)
- A technical talk on 'Basics of Python' (11th oct, 2020) organized by Thapar Mathematical Society at Thapar Institute of Engineering & Technology, Patiala, Punjab (Virtual mode)

- Online lecture and hands on session on 'Introduction to Pandas and Hands-on' in On-line Workshop on Data Analysis and Visualization of Covid-19 Data using Python (22-26 June,2021) at Acharya Narendra Dev College on June 24th, 2021
- FDP on 'Emerging Trends in Machine Learning Technologies' (20-25th January,2020) conducted by Department of Computer Science and Engineering, Guru Jambheshwar University of Science and Technology, Hisar on 23rd Jan, 2020
- FDP on 'Recent Advances in Research Methodology' (17-28th January,2020) conducted by Teaching Learning Centre, Ramanujan College (under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme) on 27th Jan, 2020.
- Delivered lecture on 'Python Programming' in In-service course for PGTs (CS) of Kendriya Vidyalaya on 24th Dec, 2018 at KVS-no. 2, Delhi Cantt. Delhi.
- Delivered lectures in FDP on Network Science: Foundation of Social Network Analysis (3-8th Dec, 2018) on days 4th Dec and 6th Dec, 2018 organized by TEACHING LEARNING CENTRE of Ramanujan College & Department of Computer Science, (University of Delhi) .
- Taught 3-days course on "Network Science: Foundation of Social Network Analysis" during period 13.12.2018 to 15.12.2018 at Epitech University, PARIS .
- Clustering and Association rule Mining in Workshop on "R Programming" conducted by Department of Computer Science, (University of Delhi) on Monday, 12th Feb, 2018.
- Two Week AICTE approved and funded Faculty Development Program (FDP) on Big Data Analytics from 20-Nov-2017 to 02-Dec-2017 on the topic of Graph analytics on 28th Nov,2017 during at Department of CSE-Geethanjali College of Engineering and Technology Cheeryal (V), Keesara (M) Medchal (Dist), Hyderabad -Telangana.
- 3-days workshop on "Research Methodology and Scientific Writing" (RMSW2017) from 15th March 2017 to 17th March 2017 held at NSIT, Delhi on the topic of Data analytics using R on 17th, Mar 2017.
- 1-week FDP on Big data Analytics at ITS Engineering College, Greater Noida (9-13 Jan 2017) talk delivered on 12th Jan, 2017
- Delivered expert lecture on Graph Analytics using R in one-week FDP on innovation and Recent trends in Data Analytics on 31st, Dec, 2016 (26-31 Dec ,2016) at Deptt of Computer Sc, Banasthali Vidyapeeth Univ, Jaipur
- Conducted two sessions on "Data Sciences and Machine learning" in 6 days FDP at Bharti Vidyapeeth College of Engineering, Paschim vihar on 9th Nov 2016
- Delivered two expert lectures at Manav Rachna International University ,Faridabad) during FDP on Big data analytics on June 9th,2016 (6-17 June,2016)
- Research poster on stream clustering on 26.10.2009 at IBM-IRL Collaborative academia research Exchange, Delhi, India.
- Weka tool on data mining on 23.11.2009 in Refresher Course in Computer Science conducted by CPDHE (DU), Delhi, Nov-Dec 2009.

Awards and Distinctions

-

Association With Professional Bodies

- Lifetime Membership of CSI

Reviewer:
- On the editorial board of International Journal of Data Mining, Modelling and Management, Inderscience (2012-2016)
- Reviewed papers for international conference TECHON 2019
- Reviewed papers for international journal Knowledge and Information Systems, Springer in 2017,2018, 2019,2020,2021
- Reviewed papers for international journal IEEE Access 2018,2019
- International Conference on Information, communication & computing Technology (ICICCT 2017) held on May 13, 2017 conducted by JIMS Rohini, Delhi
- Reviewer for IEEE Access 2018-2019
- For the manuscript on Advance Database Management System in June 2017 for SAGE Publishing
- International conference IEEE SETIT 2022 (19 to 21 March 2022)
- International conference ICICCT (held on 16th July 2022)
- SubReviewer, International conference DEXA (20-24 August 2022)
- Reviewer for the 9th International Conference on Fuzzy Systems and Data Mining (FSDM 2023) Chongqing, China

Other Activities

- Core Committee member for the development of curricula of BSc(H) computer Science, Multidisciplinary courses of study for three core disciplines, Multidisciplinary courses of study for two core disciplines and Discipline specific electives under Undergraduate Curriculum Framework-2022 at Department of Computer Science, University of Delhi.
- Member, Committee for course designing and setting guidelines for papers of B.Sc.(H) Computer Sc, Applied Physical Science and PGDCA as a member of Academic Committee of Undergraduate Courses" (2002-2006) and "Committee of Post-Graduate and Honors Courses & Research" (2004-2006) in Department of Computer Science, University of Delhi.
- Member, Curriculum Development of Bachelor of Science (Hons.) Computer Science (LOCF 2019)
- Member, Curriculum Development of B. Sc. (Physical Sciences) Computer Science (LOCF 2019)
- Member, Curriculum Development of Bachelor of Science (Hons.) Computer Science (CBCS 2019)
- Member, Curriculum Development of B. Sc. (Physical Sciences) Computer Science (CBCS 2019)
- Member, Curriculum Development of Bachelor of Science (Hons.) Computer Science (LOCF 2019)
- Member, Curriculum Development of Bachelor of Science (Hons.) Computer Science Computer Science (FYUP 2013)
- Part of different meetings organized by National Institute of Electronics and Information Technology, National Testing agency, Delhi
- Organized and attended different training programmes/ workshops.