

About Faculty

Name : Dr. Manish Arora
Designation : Scientist E/Additional Director
and (Training Head)
Department :Training
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No. of Paper Published :32



Area of Expertise

- Multi-agent Technology
- Databases
- Software Engineering
- Cloud Computing and Virtualization
- Big Data Analytics

Academic/Professional Qualification

Degree/ Certificate	University/Board/Institute	Year of Passing
Ph. D. in Computer Science and Applications	Panjab University, Chandigarh	2012
DOEACC C Level	NIELIT	2005
M.C.A	Guru Nanak Dev University	1992
M.B.A. with specialization in Operation Management	IGNOU	2001

Experience

Teaching/ Training	More than 27 years of experience in training and education. During this period, training to the students of long term non-formal NIELIT courses like O, A, B and C level and short term training to various students in technologies like C, DSTC, Software Engineering, Big Data Analytics, Cloud Computing, .Net, SQL Server.
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Software Development/ System Study	<ul style="list-style-type: none"> i. PSEB E-payment ii. Bank's Head Office Modules (Financial Accounting, Share Accounting, Investment, Loan Accounting, Borrowings Module) iii. SRS for Branch of Rajasthan State Co-operative Bank, Jaipur iv. Economical and Statistical Abstract (ESA), Haryana Project v. Industrial Portal, Haryana Project vi. Integrated Financial Accounting System vii. Store Accounting System viii. Legal Cases Software ix. Cash Collection System x. DOEACC Examination and Registration System xi. Recruitment Examination System xii. Payroll System xiii. Invoicing System
Data Digitization/ Processing	<ul style="list-style-type: none"> i. UT Counseling Project ii. `Health and Death Registration for Digitization Punjab

Research Publications

- 1) **"Facial Emotions Recognition System using Hybrid Transfer Learning Models and Optimization Techniques,"**, P. Navdeep, N. Sharma and M. Arora, 2022 2nd International Conference on Innovative Practices in Technology and Management (ICIPTM), 2022, pp. 182-187, doi: 10.1109/ICIPTM54933.2022.9754039.
- 2) **"Computational Learning Based Facial Emotions Recognition: A Review,"**, P. Navdeep, N. Sharma and M. Arora, , 2021 Sixth International Conference on Image Information Processing (ICIIP), 2021, pp. 379-384, doi: 10.1109/ICIIP53038.2021.9702629.
- 3) **"A Wide-Ranging View of Face Emotion Recognition System"**, Preet Navdeep, Dr. Neeraj Sharma, Dr. Manish Arora. (2020). A Wide-Ranging View of Face Emotion Recognition System . International Journal of Control and Automation, 13(02), 309 - 317. Retrieved from <http://sersc.org/journals/index.php/IJCA/article/view/8099>
- 4) **"Design and Implementation of Framework to Apply Big Data Hadoop to Legacy System of Power Sector"**, International Journal of Emerging Technologies and Innovative Research (www.jetir.org | UGC and ISSN Approved), ISSN:2349-5162, Vol.6, Issue 1, page no. pp517-522, January-2019, Available at :<http://www.jetir.org/papers/JETIR1901166.pdf> (Manish Arora)
- 5) **"Design of UID based Online Census System for Electronic Governance Applications"**, International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.6, Issue 5, page no.472-483, May-2019, Available :<http://www.jetir.org/papers/JETIR1905I71.pdf>
- 6) **,"Dynamic System for Performance Analysis of Information Interchange"**,Vikash Kumar Garg, Ashish Oberoi, Manish Arora in Journal of Advancements in Robotics, Vol. 6 , Issue 1 (2019) p. No. 1-17, Indian Science Abstracts (ISA), NISCAIR, CSIR, India the Chemical Abstracts Services (CAS), American Chemical Society (ACS), USA,
- 7) **"e-Census Based Decision Making for Employment Planning"**, Published in International Journal of Computer Sciences and Engineering, Vol.-6, Issue-9, Sept. 2018 (596-600) ((Ajay Dutta, Dr. Symala Devi, Dr. Manish Arora)

- 8) **"Mining Social Media Network using Big Data Analytics to Support Decisions in Educational Organization"**, International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.5, Issue 12, page no.611-616, December-2018, Available :<http://www.jetir.org/papers/JETIR1812779.pdf>
- 9) **"Dynamic Systems for Performance Analysis of Information Interchange"**, Proceeding of 2nd International Conference on Innovations in Computing, Dec, 2018,CGC Landran, Mohali (Vikash Kumar Garg, Ashish Oberoi and Manish Arora)
- 10) **"A novel approach for performance analysis on dynamic information integration"**, Proceeding of 2nd International Conference on Innovations in Computing, Dec, 2018,CGC Landran, Mohali (Vikash Kumar Garg, Ashish Oberoi and Manish Arora)
- 11) **"e-Census Based Decision Making for e-Governance Applications"**, Published in Proceedings of Punjab Science Academy, E-PO13 paper ID, February 2017, (Ajay Dutta, Dr. Symala Devi, Dr. Manish Arora)
- 12) **"Online Census-based Information Sharing for Delivery of e-Governance Services"** in the ICEGOV '17: Proceedings of the Special Collection on e-Government Innovations in India(Ajay Dutta, Dr. Symala Devi, Dr. Manish Arora)
- 13) **"Census Web Service Architecture of e-Governance Services"** in the ICEGOV '17: Proceedings of the Special Collection on e-Government Innovations in India(Ajay Dutta, Dr. Symala Devi, Dr. Manish Arora)
- 14) **"Big Data Analytics in Higher Education"** in International Journal of Advanced Research in Computer and Communication Engineering (JARCCE), December 2017, (Preet Navdeep, Dr. Neeraj Sharma, Dr. Manish Arora)
- 15) **"Unique Identification Number based Online Census System under e-Governance Initiatives"**, International Journal of Computer Science and Network, Volume 5, Issue 1, February 2016 ISSN (Online) : 2277-5420. (Ajay Dutta, Dr. Manish Arora, Dr. Symala Devi)
- 16), **"Role of Big Data Analytics in Analyzing e-Governance Projects"**, 10th International Conference on New Trends in Business Management : An International Perspective and published in Gian Jyoti E-Journal, ISSN 2250-348X. (Preet Navdeep, Dr. Manish Arora, Dr. Neeraj Sharma)
- 17) **"Design of Agent Based System For Monitoring and Controlling SLA in Cloud Environment"** , International Journal of Advanced Technology in Engineering and Science (IJATES), Volume 3, Special Issue No. 01, March 2015, pp1470-1476, ISSN (online): 2348 – 7550. By Sarwan Singh, Manish Arora,
- 18) **"Implementation of Agent Based System for Monitoring and Controlling SLA in Cloud Environment"**, International Journal of Engineering, Business and Enterprise Applications (IJEBA) 13(1), June-August, 2015, pp. 58-62 ISSN (Online): 2279-0039 . By Sarwan Singh, Manish Arora,
- 19) **"Verification of Agent Based System for Monitoring and Controlling SLA in CloudSim"**, International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE), Volume 5, Issue 8, August 2015, pp926-931, ISSN: 2277 128X. By Sarwan Singh, Manish Arora,
- 20) **"Increasing Quality of Education Using Educational Data Mining"**, IEEE conference on Information Management in the Knowledge Economy (IMKE 2013), Pratiyush Guleria, Dr. Manish Arora, Dr. Manu Sood December 2013, PP 118-122. Available at <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6915084>
- 21) **"Monitoring and Controlling Multi Level SLA in Cloud Environment using Agent"**, International Journal of Advanced Research in computer Science and Software

- 22) **Development and Usage of Software as a Service for a Cloud and non-Cloud based Environment – An Empirical Study in International Journal of Cloud Computing and Service Science** by Pratiyush Guleria, Vikas Sharma and Manish Arora. Vol 2, No 1, 2013. Available at <http://iaesjournal.com/online/index.php/IJ-CLOSER/article/view/1687>
- 23) **“Comparison of Requirements Elicitation Techniques” in INTERNATIONAL JOURNAL OF ADVANCES IN COMPUTING AND INFORMATION TECHNOLOGY** by Manish Arora and Vasundra Rani Sood. Available at <http://www.ijacit.com/articles/twelve/vol1issue4/vol1issue4/EIJACIT120049.pdf>, Volume 1 Issue 4, 2012 - August Issue.
- 24) **Knowledge and Information Management: Effective System for Organizational Growth in International Journal of Research in Education Methodology** by Pratiyush Guleria and Manish Arora. Vol 2, No 1, 2012, Available at <http://www.cirworld.com/index.php/IJREM/article/view/590/pdf>.
- 25) **“Design of Multi Agent System for Resource Allocation and Monitoring”**, International Journal of Agent Technologies and System, International Journal of Agent Technologies and System, Vol. 3, Issue 1, pp 1-10, 2011. The paper is available at <http://www.igi-global.com/bookstore/article.aspx?titleid=52090>.
- 26) **“Role of Database in Multi Agent Resource Allocation Problem”**, International Journal of Computer Science and Information Technology, Vol. 2, Issue 2, pp 668-672, 2011 and available at <http://www.ijcsit.com/docs/Volume%202/vol2issue2/ijcsit2011020214.pdf>.
- 27) **“Distributed Algorithm for Multi-agent Environment”**, International Journal of Information Technology and Knowledge Management, Vol. 4, No 2, pp 519-525, 2011. Available at http://www.csjournals.com/IJITKM/PDF%204-2/Article_36.pdf
- 28) **“A Fuzzy-AHP Approach to Solve Multi Criteria Budget Allocation Problem”**, International Journal of Computer Science Engineering and Technology, Vol. 1, Issue 6, pp 284-289, 2011. Available at <http://www.ijcset.net/docs/Volumes/volume1issue6/ijcset2011010605.pdf>.
- 29) **“Ontology Based Agent Communication in Resource Allocation and Monitoring”**, IJCSI International Journal of Computer Science Issues, Vol. 7, Issue 6, November 2010, ISSN (Online): 1694-0814 (<http://www.ijcsi.org/papers/7-6-28-32.pdf>).
- 30) **“Implementation of Web Based Multi Agent Resource Allocation System”**, International Journal of Information Sciences and Application, ISSN 0974-2255, Volume 2, number 2, 2010.
- 31) **“Weight Based Funds Allocation Algorithm”** Advanced Computing Conference 2009, IACC 09, IEEE International, March 2009, PP 413-417 and available at http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=4809046.
- 32) **“Multi agent System for Resource Allocation and Monitoring”**, African Journal of Mathematics and Computer Science Research Vol. 1(2), pp. 020-027, September, 2008 Available online at <http://www.academicjournals.org/AJMCSR> © 2008 Academic Journals.

Expert Lecture Delivered (outside NIELIT)-Major

Topic	Institute/College
Management Information System	Students of MBA of University School of Management Panjab University.
Big Data Analytics and Cloud Computing	NABI Mohali
Cloud Computing	Murthal Engg. College (now Deemed Uni.)
Cloud Computing	GCG-42, Chandigarh
Cloud Computing For e-Gov.	Himachal Pradesh Institute of Public Administration
Data Analytics using Advanced Excel	2-week refresher course on ICT UGC Human Resource Development Centre, HPU, Shimla
In-memory Databases	Student of B.Tech HPU, Shimla

Others

Programmes Attended

- Attended programme on Certified Internal Quality Auditor for ISO 9001: 2000
- Attended programme on Documentation for Implementing ISO 9001: 2000
- Attended programme on Awareness Programme on ISO 9001: 2000
- Attended 3-day workshop on Distributed Network Architecture conducted by Micro
- Attended 3-day workshop on VB.Net conducted by Microsoft
- Attended training on Cloud Computing and Virtualization at Bangalore
- Attended training on Analytics with Big Data at Noida.

Member Syllabus Committee

- Presently, I am member of Syllabus Committee of NIELIT Courses
- Earlier, I was Chairman of Sub-Committee for non-formal courses (O, A, B and C levels)