# MANDATORY DISCLOSURE Session 2021-22





# IMS ENGINEERING COLLEGE, GHAZIABAD College Code - 143

**B.TECH & MBA COURSE** 

### **MANDATORY DISCLOSURE**

### > NAME OF THE INSTITUTION

### IMS ENGINEERING COLLEGE, GHAZIABAD

#### NAME & ADDRESS OF THE SOCIETY AND THE TRUSTEES

Institute of Management Studies Society IMS Campus, C-238 Lal Quan, G.T. Road, Ghaziabad-201009 Telephone No. 0120-4170600, Fax :0120-2866034

### > NAME & ADDRESS OF THE DIRECTOR

Dr. Vikram Bali Director IMS Engineering College Ghaziabad-201009 Telephone No. 0120-4940000 (fax) 0120-4940094, email: director@imsec.ac.in

### NAME OF THE AFFILIATING UNIVERSITY

Dr. A.P.J. Abdul Kalam Technical University, Lucknow Sector 11, Janki Puram, Vistar Yogna, Lucknow-226031 Uttar Pradesh

Telephone No. 0522-2732193, Fax No.- 0522-2732185, website: www.aktu.ac.in

> Year of Establishment : 2002

#### Board Of Governors

### **Composition of Board of Governors**

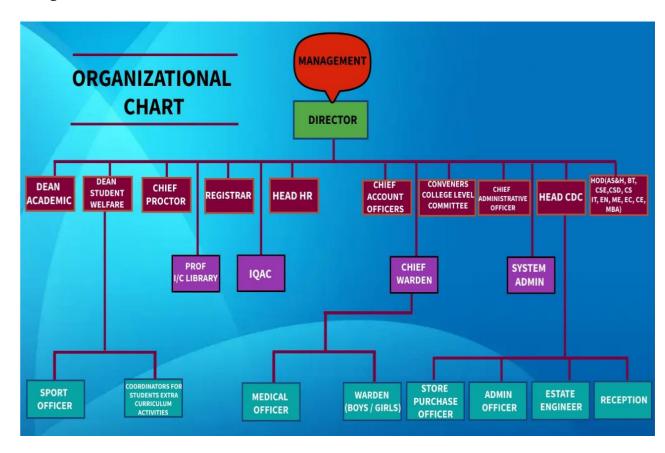
S.No	Name	Nomination Status/Reference
1.	Sh. Naresh Agarwal Chairman, IMS Society	Nominee of Registered Society/Trust
2.	Sh. Rakesh Chharia General Secretary, IMS Society	Nominee of Registered Society/Trust
3.	Smt Anshu Gupta, Joint Secretary, IMS Society	Nominee of Registered Society/Trust
4.	Sh. Sanjay Agarwal Treasurer, IMS Society	Nominee of Registered Society/Trust
5.	Sh. Nitin Agarwal Management Trustee IMS Society	Nominee of Registered Society/Trust
6.	Sh. Pramod Agarwal Executive Member, IMS Society	Nominee of Registered Society/Trust
7.	RO- (Ex-Officio) Kanpur Member	Nominee of AICTE, RO (Ex-Officio), Kanpur

8.	Nominee deputed by AICTE Member	Nominee by AICTE Industrialist/Technologists/Educationist from region nominated by concerned regional committee from a panel approved by Chairman AICTE
9.	Nominee deputed by the University Member	Nominee of the affiliating University Dr. A.P.J. Abdul Kalam Technical University Lucknow
10.	Director of Technical Education, Meerut Member	Nominee of the State Govt. (U.P) Director of Technical Education, Meerut (Exofficio)
11.	Nominee Deputed by State Govt. Member	Nominee of the State Govt. (U.P) Industrialist/Technologists/Educationist from the region nominated by State Govt.
12.	Dr. Avdhesh Gupta Associate Professor, IMSEC Member	Faculty member nominated from Regular staff
13.	Dr. Pankaj Goel Assistant Professor, IMSEC Member	Faculty member nominated from Regular staff
14.	Dr. Vikram Bali Director, IMSEC Member Secretary	Nominee of Registered Society/Trust

### Frequency of the Board Meetings

As per Dr. APJ Abdul Kalam Technical University/AICTE guidelines. Board meetings are held at least two times during the year and proceedings recorded.

### > Organizational Chart and Processes



### Nature and Extend of Involvement of Faculty and Students in Academic Affairs / Improvement

There is ample of scope provided for the involvement of faculty and students in academic affairs of the college. Various committees consisting of student representatives from each class under the guidance of teachers meet at regular intervals and discuss about the coverage of course, mutually decide about holding various class tests, need for extra classes in any subject etc. Specific matters are discussed with the Director and remedial measures are taken. In case of any direction or help from the affiliating University, the same is also done.

### Mechanism / Norms & Procedure for Democratic / Good Governance

Every member of the college staff, student, faculty and supporting staff is encouraged to put forward any suggestions for good governance. Various functions including religious Occasions are celebrated with active participation of staff and students and they are encouraged to put forward their views in a democratic way. At the college level, regular meetings are held.

- (a) Between Director and Heads of the Department & Deans
- **(b)** Between Director and Faculty
- (c) Between Director and Management
- (d) Respective Heads with their Faculty Members
- (e) Students & Counselors.

### > Student Feedback on Institutional Governance/Faculty Performance

Feedback from the students is taken at least twice during one semester by way of confidential computer feedback form or collecting it through individual meetings and also through a common suggestion box.

### "Grievance Redressal Mechanism" for Faculty, Staff and Students

Dean students' welfare takes care of students' grievances, discuss matters with the Director to resolve matters. Besides students, faculty can also meet the Director any time for redressal of their problems. Management Representatives also meet the students and staff members. Administrative office also from time to time invites the students and staff to put their problems, if any.

### **Establishment of Anti Ragging Committee**

The college has Anti Ragging Committee, Anti Ragging Squad as well as Student Counseling Committee as provisioned in AICTE/UGC Regulation 2009. Constitution of the committee and the progress reports are being sent to the University periodical.

### **Establishment of Internal Complaint Committee**

Under the provision of the Sexual Harassment of Women at Prevention, Prohibition and Redressal Act, 2013, the Internal Complaint Committee has been constituted with 10 Members (7 Females and 3 Males).

### Establishment of Committee of SC / ST

The Scheduled Caste (SC) and Scheduled Tribes (ST) Committee are formed to promote the special interest of students in the reserved category and to provide special inputs in areas where the students experience difficulties.

According to the regulations framed by AICTE, the committee must meet at least twice a year and the decisions arrived are mandatorily implemented. The committee functions under the chairmanship of the Director.

### > Internal Quality Assurance Cell

The contribution of IQAC in improving teaching – learning process has been mentioned below:-

- ❖ Development and application of quality benchmarks
- Setting parameters for various academic and administrative activities of the Institutions
- ❖ Facilitating the creation of a learner-centric environment conducive to quality education and faculty development to adopt the required knowledge and technology for participatory teaching and learning process
- Collection and analysis of feedback from all the stakeholders on quality-related institutional processes
- Dissemination of information on various quality parameters to all the stakeholders
- Organization of intra and inter-institutional workshops and seminars on quality-related themes and promotion of quality circles
- ❖ Documentation of various programmes / activities leading to quality improvement
- Acting as a nodal agency of the institution for coordinating quality-related activities, including adoption and dissemination of the best practices
- Development and maintenance of institutional database through MIS for the purpose of maintaining and enhancing institutional quality
- Periodical conduct of Academic and Administrative Audits along with their follow-up activities
- Preparation and submission of the Annual Quality Assurance Report (AQAR) as per the guidelines and parameters of NAAC.

#### **PROGRAMME**

- ➤ Name of the Programme Approved by the AICTE
  - a. B.Tech. Computer Science and Engg.
  - b. B.Tech Computer Science
  - c. B.Tech. Information Technology
  - d. B.Tech. Electronics and Communication Engg.
  - e. B.Tech. Mechanical Engg.
  - f. B.Tech. Computer Science and Design
  - g. B.Tech. Biotechnology
  - h. MBA

### ➤ Name of the Programme accredited by the AICTE.

NBA Accreditation Status	
Name/ List of Programme / Courses	Department of Information Technology (Valid upto 30.06.2024)
Accredited	
Applied for Accreditation	
A. Applied but Visit not happened	
B. Visit happened but result	
awaited	

List of Programme / courses Not	Department of Electronics & Communications Engineering		
Applied	Department of Management		
	Department of Bio-Technology		
	Department of Computer Science & Engineering		
	Department of Mechanical Engineering		

NAAC Accreditation Status	
Accredited	NAAC B+ Accredited (1st February 2022 to 31st January 2027

### For each Programme the following details are to be given:

Name of Course	Course Code	Intake	Duration	Fee (As approved by the State Govt.	Placement Facilities
B.Tech Computer Science and Engg	010	240	4 Years	103919/-	YES
B.Tech Computer Science	012	90	4 Years	103919/-	YES
B.Tech Information Technology	013	120	4 Years	103919/-	YES
B.Tech Electronics and Commn. Engg.	031	60	4 Years	103919/-	YES
B.Tech Mechanical Engg.	040	30	4 Years	103919/-	YES
B.Tech Biotechnology	054	90	4 Years	103919/-	YES
B.Tech Computer Science and	165	60	4 Years	103919/-	YES
Management of Business Administrations (MBA)	70	60	2 Years	103919/-	YES

### Placement Facilities

- Dedicated "Career Development Cell" added with computers, printers, internet facility & phone facility and transportation facility too.
- Auditorium / Seminar Rooms (with projector & LCD) for conducting presentations.
- Dedicated AC rooms for conducting Group Discussions and Personal Interviews.
- Facilities available for conducting online tests for 500 students in a single process.
- Grooming sessions for students as per the current industry needs imitate in the first semester itself.
- Dedicated faculty members for Aptitude Test preparation and company's written examination.
- PDP Coaches for developing Corporate Etiquettes and preparing students for Group Discussions and Personal Interviews
- Excellent hospitality and lounge for visiting companies and HR Teams

### > Faculty

### Branch-wise List, Faculty Members:

Detailed List is available on college website www.imsec.ac.in

### > Profile of Director

Name	Dr. Vikram Bali						
Designation	Director						
Department	Computer Science & Engineering						
Date of Joining	14.02.2022						
Date of Birth	09.02.1978 Unique ID 1-11139977092						
Educational	UG	PG		Ph.D.			
Qualification	B.Tech - Computer	Engg.	M.E. – C	S&E	Ph.D – C	CS&E	
Total Experience	Teaching	Industry	7	Research	1	Others	
	20	01					
No. of Papers	Please See Annexu	re – 1					
Published in Journals							
No. of Papers	Please See Annexu	re – 2					
Presented in							
Conference							
Area of Specialization	Computer Science	and Engir	neering				
Research Guidance	Research Guidanc	<u>e</u>					
	<ul><li>Ph.D (Research Scholars) Enrolled: 04 (In Progress)</li></ul>						
	<ul><li>Ph.D (Research Scholars) completed: 01</li></ul>						
	<ul> <li>M.Tech, Computer Science and Engineering (Degree Awarded): 12</li> </ul>						
	Approved Research Co-supervisor						
	Approved Research Co-supervisor						
	<ul> <li>Visvesvaraya Technological University, Belagavi.</li> </ul>						
	Sharda University, Greater Noida.						
	<ul> <li>Jaipur National University, Jaipur.</li> </ul>						
	Maharaja Agrasen University, Baddi						
	,		•				
No. of Books Published	Please See Annexure – 3						
with details							
Project Carried Out	Please See Annexure – 4						
Patents (Filed and	Granted – 02						
Granted)	Published – 05 - Please See Annexure - 5						
Professional	<ul> <li>Life Time Member of Computer Society of India (Membership No.</li> </ul>				embership No.		
Memberships	ships 00174210)						
	<ul> <li>Senior Men</li> </ul>	nbership o	of IEEE (M	embership	No. 9498	7748)	
	<ul> <li>Life Time Members of ISTE (Membership No. LM58487)</li> </ul>						
	<ul> <li>Annual Member of Computer Science Teachers Association</li> </ul>						
	(Membership No. 198357986680)						
	Life Time Member of International Computer Science and Engineering						
	Society (Membership No. 7336)						
	<ul> <li>Life Time Member of Institute for Engineering Research and</li> </ul>						
Publication (Membership No. PMN19435820)							
Grants Fetched /							
Awards	Awards						

#### > Fee

- Details of Fee, as approved by State Fee Committee, for the Institution B.Tech and MBA Course Fee Rs. 1,03,919/- per year (Fee (As approved by the State Govt.)
- Time schedule for payment of fee for the entire Programme Charged Semester wise
- No. of Fee waiver granted 24

#### > Admission Procedure

Mention the admission test being followed, name and address of the Test Agency and its URL (website).

Through Uttar Pradesh State Entrance Examination (UPSEE) conducted by Dr. A.P.J Abdul Kalam Technical University, Lucknow

Address: Sector 11, Janki Puram, Vistar Yogna, Lucknow-226031

Website: <a href="https://upcet.nta.nic.in/WebinfoCms/Page/Page?PageId=1&LangId=P">https://upcet.nta.nic.in/WebinfoCms/Page/Page?PageId=1&LangId=P</a> and www.aktu.ac.in

**❖** Number of seats allotted to different Test Qualified candidates separately [AIEEE/CET (State conducted test/University tests)/Association conducted test]

As per AKTU/UPCET/State Govt. Notification and guidelines

### **!** Information on Infrastructure and other Resources available

### Library Facility:

No. of Title of Books	7952
No. of Volume of Books	76782
Journals	147
E-journals	10186

### Computing Facility

Number of PCs	882
Legal System Software	94
Legal Application Software	57
Printers	53
Internet speed in Mbps	200

## Details of Instructional /Academic Area Instructional Area for the existing programme(s)

Particulars	Course	No. of Rooms	Area Available in the Institution (Sq.M)
CLASS ROOM	B.TECH MBA	56	3942
TUTORIAL HALL	B.TECH MBA	12	481
DRAWING HALL	В.ТЕСН	2	282
COMPUTER CENTER	B.TECH MBA	1	192
LIBRARY	B.TECH MBA	2	1290
LABORATORY & WORKSHOP	B.TECH MBA	81	6854

### **List of facilities available.**

Games and Sports Facilities : Excellent Facility Available

Extra Curriculum Activities : Available

Soft Skill Development Facilities : Available including Language Lab and

**PDP Trainers** 

Curricula and syllabi for each of the programmes as approved by the University: **Kindly see http://www.aktu.ac.in/** 

- Academic Calendar of the University: Kindly see <a href="http://www.aktu.ac.in/">http://www.aktu.ac.in/</a>
- Academic Calendar of the College:
   Kindly see <a href="http://imsec.ac.in/academics/academic-calendar">http://imsec.ac.in/academics/academic-calendar</a>
- > Internal Continuous Evaluation System and place: Yes
- > Students' assessment of Faculty, System in place: Intranet based online system in place

### Research Publication (Refereed Journal) International -43

- Khanna, T., Nand, P. and Bali, V. (2021), "FruitBlock: A Layered Approach to Implement Blockchain based Traceability System for Agri Supply Chain", International Journal of Business Information Systems, Inderscience, (in Press) DOI: 10.1504/IJBIS.2020.10035479, ISSN: 1746-0980 (Indexed: Scopus, ABDC)
- Singh, S., Bhatnagar, V., Bali, V.and Bali, S. (2022), "Optimization of Intrusion Detection Systems Determined by Ameliorated HNADAM-SGD Algorithm", *Electronics*, Vol. 11, No. 4: 507. https://doi.org/10.3390/electronics11040507(Indexed: Scopus, SCIE)
- Banerjee, K., **Bali, V.**, Nawaz, N., Bali, S., Mathur, S., Mishra, R.K., Rani, S. (2022)"A Machine-Learning Approach for Prediction of Water Contamination Using Latitude, Longitude, and Elevation", *Water*, Vol. 14, No.5, pp.728, <a href="https://doi.org/10.3390/w14050728">https://doi.org/10.3390/w14050728</a>(Indexed: Scopus, SCIE)
- Bali, V., Khanna, T., Soni, P., Gupta, S., Chauhan, S., Gupta, S. (2021), "Blockchain Application Design and Algorithms for Traceability in Pharmaceutical Supply Chain", *International Journal of Healthcare Information Systems and Informatics (IJHISI)*, Vol. 16, Issue 4, pp. 1-18, DOI: 10.4018/IJHISI.289460,SSN: 1555-3396 | EISSN: 1555-340X(Indexed: Scopus, WoS (ESCI), ABDC, UGC Care List).
- Khan, S., Thirunavukkarasu, K., Hammad, R., Bali, V. and Qadar, M-R (2021), "Convolutional Neural Network Based SARS-CoV-2 Patients Detection Model Using CT Images", *International Journal of Intelligent Engineering Informatics*, Vol. 9, No. 2, pp. 211-228, DOI: 10.1504/IJIEI.2021.117061, E-ISSN:1758-8723(Indexed: WoS (ESCI))
- Khan, S., Dmour, A. A., , Bali, V., Rabbani, M. R. andThirunavukkarasu K. (2021), "Cloud Computing based Futuristic Educational Model for Virtual Learning", *Journal of Statistics & Management Systems*, Vol. 24, Issue 2, pp. 357-385-30,PISSN 0972-0510 | OISSN 2169-0014,https://doi.org/10.1080/09720510.2021.1879468. (Indexed: WoS (ESCI), ABDC)
- Bali, V., Khanna, T., Soni, P., Gupta, S., Chauhan, S., Gupta, S. (2021), "Combating Drug Counterfeiting by Tracing Ownership Transfer using Blockchain Technology", *International Journal of E-Health and Medical Communications (IJEHMC)*, Vol. 13, Issue 3, Article 1, ISSN: 1947-315X|EISSN: 1947-3168.(Indexed: Scopus, WoS (ESCI), UGC Care List).
- Aggarwal, D., Mittal, S. and Bali, V. (2021), "Significance of Non-Academic Parameters for Predicting Student Performance Using Ensemble Learning Techniques", International Journal of System Dynamics Applications (IJSDA), Vol. 10, Issue 3, Article 3, pp. 38-49,ISSN: 2160-9772 EISSN: 2160-9799,DOI: 10.4018/IJSDA.2021070103. (Indexed: WoS (ESCI))
- Aggarwal, D.,Bali, V., Agarwal, A., Poswal, K., Gupta, M. and Gupta, A. (2021), "Sentiment Analysis of Tweets Using Supervised Machine Learning Techniques Based on Term Frequency", *Journal of Information Technology Management*, Vol. 13, Issue. 1, pp. 119-141, PISSN: 2008-5893 | EISSN: 2423-5059, DOI: 10.22059/jitm.2021.80028(Indexed: Scopus)
- Aggarwal, D., Mittal, S. and Bali, V. (2021), "Identifying Non-Performing Students in Higher Educational Institutions Using Data Mining Techniques", International Journal of Information System Modeling and Design(IJISMD), Vol. 12, Issue 1, pp. 92-110, ISSN: 1947-8186 | EISSN: 1947-8194.DOI: 10.4018/IJISMD.2021010105 (Indexed: Scopus, WoS (ESCI)).
- Juneja, A., Juneja, S., Bali, V. and Mahajan, S. (2021), "Multi-Criterion Decision Making for Wireless Communication Technologies Adoption in IoT", *International Journal of System Dynamics Applications* (*IJSDA*), Vol. 10, Issue 1, pp. 1-15., DOI: 10.4018/IJSDA.2021010101, ISSN: 2160-9772|EISSN: 2160-9799 (Indexed: WoS (ESCI), UGC Care List)
- Dhankhar, A., Juneja, S., Juneja, A. and Bali, V. (2021), "Kernel Parameter Tuning to Tweak the Performance of Classifier for Identification of Heart Diseases", *International Journal of E-Health and Medical Communications*, Vol. 12, Issue 4, Article 1, pp.1-16, ISSN: 1947-315X|EISSN: 1947-3168, DOI: 10.4018/IJEHMC.20210701.oa1 (Indexed: Scopus, WoS (ESCI)).

- Sharma, T., Banerjee, K., Mathur, S. and **Bali, V.** (2020), "Stress Analysis Using Machine Learning Techniques", *International Journal of Advanced Science and Technology*, Vol. 29, No. 3, pp. 14654 14665, ISSN: 2005-4238, http://sersc.org/journals/index.php/IJAST/article/view/31952 (Indexed: Scopus)
- Yadav, N., Banerjee, K. and **Bali**, (2020), "A Survey on Fatigue Detection of Workers using Machine Learning", *International Journal of E-Health and Medical Communications (IJEHMC)*, Vol. 11, Issue 3, pp. 1-8, ISSN: 1947-315X|EISSN: 1947-3168, DOI: 10.4018/IJEHMC.2020070101. (Index: WoS(ESCI)& Scopus)
- Nagar, R., Aggarwal, D., Saxena, U. R. and Bali, V. (2020), "Cancer Prediction Using Machine Learning Techniques Based onClinical & Non-Clinical Parameters", International Journal of Advanced Science and Technology, Vol. 29, No.4, pp.8281 –8293, ISSN: 2005-4238 (Print), ISSN: 2207-6360 (Online), http://sersc.org/journals/index.php/IJAST/issue/view/263.(Indexed: Scopus)
- Bhardwaj, P., Bali, V. and Kaur, J. (2020), "Improving the Efficiency of Load Balancing and Site Selection of Electric Vehicle Charging Station using Dijkstra Algorithm", *Journal of Critical Reviews,Vol. 7, Issue. 19, pp.7367-7376.* ISSN- 2394-5125, http://www.jcreview.com/index.php?iid=2020-7-19.000&&jid=197&Ing=.(Indexed: Scopus)
- Bhardwaj, P., Bali, V. and Kaur, J. (2020), "A Review on Load Balancing and Site Selection of Electric Vehicle Charging Station", Test Engineering and Management, Vol. 83, May-June 2020, pp.12437-12448, ISSN 0193-4120, http://testmagzine.biz/index.php/testmagzine/issue/view/9. (Indexed: Scopus)
- Nagar, R., Aggarwal, D., Saxena, U. R. and Bali, V. (2020), "Early Prediction and Diagnosis for Cancer Based on Clinical and Non-Clinical Parameters: A Review", International Journal of Grid and Distributed Computing, Vol. 13, No. 1, pp. 548-557, ISSN: 2005-4262 , http://sersc.org/journals/index.php/IJGDC/article/view/9127/5043 .(Indexed: WoS (ESCI))
- Kumar, A., Toorang, P. and Bali, V. (2020), "User Based Load Visualization of Categorical Forecasted Smart Meter Data using LSTM Network", International Journal of Multimedia Data Engineering and Management (IJMDEM), Volume 11, Issue 1, pp.30-50, ISSN: 1947-8534|EISSN: 1947-8542 DOI: 10.4018/IJMDEM.2020010103, .(Indexed: WoS (ESCI))
- Bali, V., Kumar, A. and Gangwar, S. (2020), "A Novel Approach for Wind Speed Forecasting Using LSTM-ARIMA Deep Learning Models", *International Journal of Agricultural and Environmental Information Systems* (*IJAEIS*), Volume 11, Issue 3, pp. 13-30, ISSN: 1947-3192, EISSN: 1947-3206, DOI: 10.4018/IJAEIS.2020070102 (Indexed: WoS (ESCI))
- Khanna, T., Nand, P. and **Bali, V.** (2020), "Permissioned Blockchain Modelfor End-to-End Trackability in Supply Chain Management", *International Journal of E-Collaboration (IJeC)*, Vol. 16, Issue 1, pp. 45-58, ISSN No. 1548-3681, EISSN No. 1548-3681, doi.org/10.4018/IJeC.2020010104(Indexed: Scopus, WoS (ESCI)).
- Banerjee, K. and Bali, V. (2019), "Design and Development of Bioinformatics Feature Based DNA Sequence Data Compression Algorithm", EAI Endorsed Transactions on Pervasive Health and Technology, Vol. 5, Issue 20(5), pp.1-10,ISSN2411-7145,doi: 10.4108/eai.13-7-2018.164097 (Indexed: Scopus)
- Aggarwal, D.,Bali, V. and Mittal, S. (2019), "An Insight into Machine Learning Techniques for Predictive Analysis and Feature Selection", International Journal of Innovative Technology and Exploring Engineering (IJITEE), Vol. 8, Issue 9S, pp. 342-349, ISSN No. 2278-3075, DOI: 10.35940/ijitee.I1055.0789S19. Indexed: Scopus, UGC CARE List (Serial No. 194, Group A).
- Mathur, S., Bali, V., Gupta, S.L., Pahwa, P., (2019), "Data Warehouse Testing And Security: A Conspectus", International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-8, Issue-9S, pp. 843-850, ISSN No. 2278-3075, DOI: 10.35940/ijitee.I1136.0789S19.Indexed: Scopus, UGC CARE List (Serial No. 194, Group A).
- Aggarwal, D., Mittal, S. and Bali, V. (2019), "Prediction Model for Classifying Students Based on Performance using Machine Learning Techniques", International Journal of Recent Technology and Engineering (IJRTE), Volume-8, Issue-2S7, pp. 496-503, ISSN: 2277-3878, DOI: 10.35940/ijrte.B1093.0782S719. (Indexed: Scopus)

- Gangwar, S., Bali, V. and Kumar, A. (2019), "Comparative Analysis of Wind Speed Forecasting Using LSTM and SVM", EAI Endorsed Transactions on Scalable Information Systems, Vol. 7, Issue 25(1), pp.1-9, ISSN:2032-9407, doi: 10.4108/eai.13-7-2018.159407. (Indexed WoS (ESCI))
- Yadav, N., Banerjee, K. and **Bali,** (2019), "Fatigue Detection of Workers using Supervised Learning", *Biological Forum- International Journal*, Vol. 11, No. 1, pp. 236-242, ISSN No. (Online): 2249-3239, Print: 0975-11300, https://www.researchtrend.net/bfij/pdf/Fatigue%20Detection%20of%20Workers%20using%20Supervised %20Learning%20DR%20KAKOLI%20BANERJEE.pdf .(Indexed: WoS)
- Singh, S. and Bali, V. (2017), "Storage and Retrieval of Software Component using Hadoop and MapReduce", International Journal of Engineering and Technology (IJET), Vol. 9, No.4, pp. 2941-2944, ISSN (Print): 2319-8613, ISSN (Online): 0975-4024, doi.org/10.21817/ijet/2017/v9i4/170904061
- Arora, K., Singh, S. and Bali, V. (2017), "A Novel GSA-GVM Attribute Selection Algorithm for Movie Recommendation", International Journal of Scientific Research Engineering & Technology, Vol. 6, Issue 10, pp. 1032-1038, ISSN 2278-0882, http://www.ijsret.org/pdf/121982.pdf
- Juneja, S., Singh, S. and Bali V. (2017), "Detection of Attacks in Static Wireless Sensor Networks", International Journal of Advanced Research in Computer Science, Vol. 8, No.7,pp. 225-231, ISSN No.0976-5697, doi.org/10.26483/ijarcs.v8i7.4194(ICV 2015: 65.64, SJIF: 5.845, ISRAJIF: 3.727, RGIF: 0.29, GIF:0761)
- Gupta, S., Dhingra, D., Gupta, S.C. and **Bali V**. (2017), "Multi-Level Security Mechanism for Audio Steganography", *International Journal of Advanced Research in Education & Technology (IJARET*), Vol. 4, Issue 1, pp. 92-96, ISSN: 2394-2975(Online), ISSN: 2394-6814(Print), http://ijaret.com/wp-content/themes/felicity/issues/vol4issue1/sakshi.pdf(**IF: 1.568, GIF:0.768**)
- Anjali, Bali, V. and Singh, S., (2017), "Pragmatic Analysis on Malware Classification", International Journal of Research in Applied Science in Engineering and Technology, Vol. 5, Issue VIII, pp. 32-38 ISSN: 2321-9653, DOI: http://doi.org/10.22214/ijraset.2017.8006. (UGC Indexed, SJIF: 6.887, ISRA Journal IF: 3.166, ICV: 45.98, ISI: 1.451)
- Arora, K., Bali, V. and Singh, S. (2017), "Recommendation System: A Review Report", International Journal of Advanced Research in Computer Science, Vol. 8, No.7, pp. 503- 507, ISSN: 0976-5697, https://doi.org/10.26483/ijarcs.v8i7.4194 (ICV 2015: 65.64, SJIF: 5.845, ISRAJIF: 3.727, RGIF: 0.29, GIF:0761)
- Arora, I. and Bali, V. (2015), "A Brief Survey on Web Application Performance Testing Tools Literature Review", International Journal of Latest Trends in Engineering and Technology (IJLTET), Vol. 5, Issue 3, pp. 367-375, ISSN: 2278-621X, http://www.ijltet.org/wp-content/uploads/2015/05/50.pdf(ICV: 77.02/100, CIF: 4.49/10, ICV: 7.39/10, GIF: 0.685)
- Kaur, D. and Bali, V. (2015), "Generating Test Cases from UML Class and Sequence Diagrams", International Journal of Research in Computer Science and Electronics, Vol. 4, Issue 1, pp.1-5 ISSN 2319-376X.(ICV: 44.74)
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- *sciences, Elsevier*, Vol. 5, pp 233-242, ISSN: 1877-7503, https://doi.org/10.1016/j.jocs.2013.07.003( SCIE Impact Factor: 1.748, SCOPUS: 0.481)
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- Jha, P.C. and **Bali, V.** (2012), "Goal Programming Approach for Selection of COTS Components in Designing a Fault Tolerant Modular Software System under Consensus Recovery Block Scheme", *International Journal of Computer and Communication Technology(IJCCT)*, Vol. 3, No. 1, pp. 1-8, ISSN (Online) 2231-0371, (Print) 0975-7449.
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### Research Publication (Referred Journal) National - 01

■ Bali V.,Rathore R.S., Sirohi A. and Verma P. (2009), "Key Distribution in Mobile Heterogeneous Sensor Networks", PIMT Journal of Research, Punjab Institute of Management and Technology,MandiGobindgarh, Punjab, Vol.2, No.1, pp. 77-84, ISBN:1-4020-7883-8.

### Research Papers Presented at National/International Conferences - 06

- Vikram Bali, (2012) "A Chance Constraint Goal Programming Approach for COTS Component Selection in Design of a Fault Tolerant Modular Software System Under Recovery Block", presented at 6<sup>th</sup> National Conference on Computing For Nation Development, Bharti Vidyapeeth's Institute of Computer Applications and Management, New Delhi, 23<sup>rd</sup>-24<sup>th</sup>February 2012.
- VikramBali,(2012),"Optimal Component Selection based on Cohesion & Coupling", presented at 2<sup>nd</sup>International Conference on Soft Computing for Problem Solving (Socpros-2012), JK Lakshmipat University, Jaipur, 28<sup>th</sup>-30<sup>th</sup> December 2012.
- VikramBali,(2009), "Experience with ATM Switch Performance Testing", presented at National Seminar on Information Security: Emerging Threats and Innovations in 21<sup>st</sup>Century, Institute of Technology & Science, Mohan Nagar, Ghaziabad, 04<sup>th</sup> April 2009.
- VikramBali,(2009),"Key Distribution in Mobile Heterogeneous Sensor Network", presented at 3<sup>rd</sup> National Conference on Recent Advances and Future Trends in IT (RAFIT-2009), Punjabi University, Patiala, Punjab, 09<sup>th</sup>-10<sup>th</sup> April 2009.
- VikramBali,(2009), "Clustering Techniques Approach to Detect the Special Patterns for Medical Video Mining", presented at 2<sup>nd</sup> International Conference on Data Management (ICDM-2009), Institute of Management Technology, Ghaziabad, 11<sup>th</sup>-12<sup>th</sup> February 2009.
- VikramBali,(2009), "Clustering Techniques Approach to Detect the Special Patterns for Medical Video Mining", presented at 2<sup>nd</sup> International Conference on Data Management (ICDM-2009), Institute of Management Technology, Ghaziabad, 11<sup>th</sup>-12<sup>th</sup> February 2009.

### Research Paper Published in National Conferences & Proceedings - 02

- Kumar A., Bali V., Pandey S. and Gupta R. (2020), "Plant Disease Detection Using Convolutional Neural Network: A Review", Proceedings of AICTE Sponsored 2 Days National Conference on Next Generation Computing Technologies and their role in Nation Development (NGCTND 2020), organised by Institute of Technology & Science, Ghaziabad, pp. 105-109, ISBN 978-81-928555-7-8.
- Jha P. C. and **Bali V.** (2012), "A Chance Constraint Goal Programming Approach for COTS Component Selection in Design of a Fault Tolerant Modular Software System under Recovery Block", 6th National Conference on Computing for Nation Development INDIA Com-2012, M.N Hoda (Eds.), pp. 293-298, ISBN 978-93-80544-03-8.

### Research Papers Published in International Conferences & Proceedings -17

- **Bali, V.**, Aggarwal, D. Singh, S. and Shukla, A. (2021) "Life Expectancy: Prediction & Analysis using ML," IEEE 9<sup>th</sup> International Conference on Reliability, Infocom Technologies and Optimization: Trends and Future Directions (ICRITO-2021), September 3-4, 2021, Amity University, Noida, pp. 1-8, EISBN: :978-1-6654-1703-7,doi: 10.1109/ICRITO51393.2021.9596123.
- Raj, M., Singh, V. and Bali, V. (2021) "Brain Tumor Detection Using Fish Schooling Genetic Algorithm" IEEE 9<sup>th</sup> International Conference on Reliability, Infocom Technologies and Optimization: Trends and Future Directions (ICRITO-2021), September 3-4, 2021, Amity University, Noida, pp. 1-6, EISBN: :978-1-6654-1703-7,doi:10.1109/ICRITO51393.2021.9596094
- Khanna, T., Nand, P., Bali, V. (2021) "BEVDS: A Blockchain Model for Multi-partyAuthentication of COVID-19 Vaccine Beneficiary" 3<sup>rd</sup> International Conference on Innovative Data Communication Technologies and Application (ICIDCA 2021), August 20-21, 2021, RVS College of Engineering and Technology, Coimbatore,

- Tamil Nadu, India , Proceedings of the conference inSpringer Lecture Notes in Data Engineering and Communication Technologies.
- Bali, V., Mathur, S., Sharma, V. and Gaur, D. (2020) "Smart Traffic Management System using IoT Enabled Technology", IEEE 2<sup>nd</sup> International Conference on Advances in Computing, Communication Control and Networking (ICACCCN), December 18-19, 2020, Galgotias College of Engineering and Technology, Greater Noida, Uttar Pradesh, India, pp. 565-568EISBN:978-1-7281-8337-4,DOI: 10.1109/ICACCCN51052.2020.9362753.
- Bali, V., Kumar, A. and Gangwar, S. (2019) "Deep Learning based wind speed forecasting- A Review", IEEE 9<sup>th</sup> International Conference, Confluence on Cloud Computing, Data Science & Engineering, January 10-11, 2019, Amity University Noida, Uttar Pradesh, India, PP. 426-431, EISBN 978-1-5386-5933-5, https://doi.org/10.1109/CONFLUENCE.2019.8776923.
- Bali, V., Bali, S. and Madan, S. (2018), "IFSOM: A Two Phase Framework for COTS Evaluation and Selection", presented at International Conference on Communication, Computing and Networking (ICCCN-2018), Organized by Department of Computer Science & Engineering, NITTTR, Chandigarh, 29-30 March 2018.C. R. Krishna et al. (eds.), Proceedings of 2nd International Conference on Communication, Computing and Networking, Lecture Notes in Networksand Systems 46, Springer Nature Singapore Pte. Ltd, pp. 871-888, https://doi.org/10.1007/978-981-13-1217-5\_86.
- Grover, A., Bali, V. and Singh, S. (2018), "Channel Selection and Switching in Cognitive Radio Networks: Challenges and Approaches", IEEE 8th International Conference Confluence on Cloud Computing, Data Science and Engineering, Confluence, Amity University Noida, Uttar Pradesh, India, pp. 426-431.
- Grover, A. and Bali, V. (2018), "An Efficient Best Fit Channel Switching (BFCS) Scheme for Cognitive Radio Networks", International Conference on Application of Computing and Communication Technologies (ICACCT 2018) Delhi, Ganesh Chandra Deka, OmprakashKaiwartya, PoojaVashisth, PriyankaRathee (Eds.),pp. 173-186, Springer Nature Singapore Pte Ltd., EISBN978-981-13-2035-4,https://doi.org/10.1007/978-981-13-2035-4\_16
- Kumar, N., Mishra, B., and Bali, V. (2018), "A Novel Approach for Blastit-Induced Fly Rock Predication Based on Particle Swarm Optimization and Artificial Neural Network", B.Tiwari et al. (Eds.), Proceedings of International Conference on Recent Advancement in Computers and Communication, Organised in Bhopal, Madhya Pardesh, 26-27 May 2017, Lecture Notes in Networks and Systems, Vol. 34, pp. 19-27, Springer Nature Singapore Pte. Ltd, Chapter 3, Book Id: 448040\_1\_En, ISBN: 978-981-10-8197-2. https://doi.org/10.1007/978-981-10-8198-9\_3
- Gupta, S., Pandey, A. and Bali, V. (2017), "A Review on Sentiment Analysis", International Conference on Communication, Computing and Networking (ICCCN-2017), C. Rama Krishna, Maitreyee Dutta, Rakesh Kumar, Shano Solanki, Amit Doegar and Mala Kalra (Eds.) Organized by Department of Computer Science & Engineering, NITTTR, Chandigarh, 23-24 March 2017, pp. 715-720, ISBN: 978-8-193-38970-6.
- Malhotra, S., Bali, V. and Paliwal, K.K. (2017), "Genetic Programming and K-Nearest Neighbour Classifier based Intrusion Detection Model", IEEE 7th International Conference on Cloud Computing, Data Science and Engineering", Amity University Noida, Uttar Pradesh, India, pp. 42-46, E-ISBN: 978-1-5090-3519-9, CD-ROM ISBN: 978-1-5090-3518-2, P-ISBN: 978-1-5090-3520-5.
- Kumar, N., Mishra, B., Bali, V. and Paliwal, K.K. (2017), "A Brief Review of Methods for Predication of Flyrock in Blasting", International Conference on Communication, Computing and Networking (ICCCN-2017), C. Rama Krishna, Maitreyee Dutta, Rakesh Kumar, Shano Solanki, Amit Doegar and Mala Kalra (Eds.) Organized by Department of Computer Science & Engineering, NITTTR, Chandigarh, 23-24 March 2017, pp. 416-420, ISBN: 978-8-193-38970-6.
- Jha, P.C., Bali, V., Narula, S. and Kalra, M. (2014), "Optimal Component Selection Based on Cohesion and Coupling for Component based Software System", B.V Babu ,Kusum Deep, Atulya Nagar, Millie Pant, Jagdish Chand Bansal, Kunal Roy and Umesh Gupta (Eds.), Proceedings of the Second International Conference on Soft Computing for Problem Solving (SocProS 2012), December 28–30,

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- Jha, P.C., Bali, V., Narula, S. and Kalra, M. (2013), "Multi-criteria Optimization Approach for Component Selection in COTS Based Software System", *International Conference on Leveraging Operations and IT for Sustainable Development (ICOIT- 2013)*, Om Prakash and SaiVenkata Krishnan (Eds.), Niruta Publications, Organised by CMR Institute of Management Studies, Vol. 1, pp. 1-11, ISBN: 978-81-923424-6-7.
- Jha, P.C., Bali, V., Narula, S. and Kalra, M. (2012), "Multi-criteria Optimization Approach for Component Selection Incorporating ICD and Reliability for Component Based Software System", International Conference on Optimization Modeling and Applications (OPTIMA- 2012), Organized by Department of Operational Research, University of Delhi, Delhi, ISSN: 2249-9342.
- Jha, P.C., **Bali, V.**, Narula, S. and Kalra, M. (2012), "Optimal Component Selection Based on Cohesion and Coupling for Component based Software System incorporating Build-or-Buy Strategy", 21<sup>st</sup> International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2012-FIM XXI), Organized by Department of Statistics, Panjab University, Chandigarh, 15<sup>th</sup> 17<sup>th</sup> December 2012.
- Jha, P.C., Bali, V. and Malik, S.C. (2010), "A Chance Constraint Goal Programming Approach to Component Selection for a Fault Tolerant Modular Software System under Consensus Recovery Block Scheme", International conference on "Operational Research for Urban and Rural Development (ORURD)" Organized by Thiagarajar College of Engineering, Madurai.

### Text Books / Edited Books - 10

- Vikram Bali, Kakoli Banerjee, Narender Kumar, Sanjay Gour, Sunil Kumar Chawla, "Industry 4.0: Research Trends, Challenges and Future of Al in Data Science", 2021, CRC Press, Taylor & Francis Group.HB ISBN# 978-0-367-56285-4, EB ISBN# 978-1-003-09718-1, PB ISBN# 978-0-367-56291-5.
- AbhinavJuneja, Vikram Bali, SapnaJuneja, Vishal Jain, PrashantTyagi, 2021, "Enabling Healthcare 4.0 for Pandemics: A Roadmap Using Al, Machine Learning, IoT and Cognitive Technologies", Wiley-Scrivender Publishing, Print ISBN: 9781119768791, Online ISBN: 971119769088, DOI: 10.1002/9781119769088.
- Vikram Bali, Vishal Bhatnagar, Sapna Sinha, and PrashantJohri, "Disruptive Technologies for Society 5.0: Exploration of New Ideas, Techniques, and Tools", CRC Press, Taylor & Francis Group. HB ISBN: 978-0-367-72407-8, EB ISBN: 978-1-003-15468-6, PB ISBN: 978-0-367-72409-2
- Vikram Bali, Vishal Bhatnagar, Joan Lu, Kakoli Banerjee, "Decision Analytics for Sustainable Development in Smart Society 5.0 - Issues, Challenges and Opportunities", Springer Nature Singapore Pte Ltd. (Under Publication)
- Vikram Bali, Vishal Bhatnagar, Deepti Aggarwal, Shivani Bali, Mario Jose Divan, "Cyber-Physical, IoT and Autonomous Systems in Industry 4.0", CRC Press, Taylor & Francis Group. (Under Publication) ISBN# 978-0-367-70515-2.
- Vikram Bali, RajniMohana, Ahmed A. Einger, Sunil Kumar Chawla, Gurpreet Singh, "Handbook on Sustainable Development through Green Engineering and Technology", CRC Press, Taylor & Francis Group. (Under Publication)HB ISBN: 978-0-367-65092-6, EB ISBN: 978-1-003-12781-9, PB ISBN: 978-0-367-65095-7.
- Vishnu Sharma, Vikram Bali, Vineet Sharma, "Fundamental of Cyber Security and Laws", StarEdu Solutions India Pvt. Ltd., 2018, ISBN: 978-93-86765-43-7.
- Vikram Bali, Shivani Bali, "Software Engineering", S.K. Kataria& Sons, 2008. ISBN 978-93-80027-19-7 (2008, First Edition) (2009, Second Edition) (2011, Third Edition)
- Vikram Bali, Shivani Bali, "Fundamentals of Software Engineering", S.K. Kataria& Sons, 2009, ISBN 978-93-80027-76-0
- Vikram Bali, Rajkumar Singh Rathore, "Operating System", Paragon International Publishers, 2009, ISBN: 978-81-89253-32-5.

### **Project Carried Out**

### **Sponsored Projects / Funding Schemes**

- PI for Sanctioned project "Alcohol Detection System (ADS) to Prevent Road Accidents" under VRPS Research Scheme, AKTU, Lucknowon 16.07.2019 for Rs. 5,00,000/-
- PI for Sanctioned Research Project "Smart Dustbin" under Unnat Bharat Abhiyaan by MHRD, Gol for Rs. 1,50,000/-
- Sanctioned Project "Blockchain Based Real Time Tractability and Traceability System in Pharmaceutical Supply Chains" under Council of Science and Technology (CST), UP Engineering Students Project Grant Scheme 2019-20 for grant of Rs. 20,000/-.
- PI for Sanctioned Project" Automated Green Corridor for Life Saving Vehicles" under Collaborative Research and Innovation Program (CRIP) funded under TEQIP-III AKTU, Lucknow on 24.07.2019 forRs.3,00,000/-
- Submitted proposal "Automatic Extraction of River Networks from Satellite Images" under Respond Basket-2021, Indian Space Research Organisation (ISRO), Gol on 13.03.2021 for Rs. 38,10,000/-.
- Submitted proposal "To Develop a Framework for Identifying, Analyzing and Suggesting Remedies under Dynamic Conditions of Pandemic" under MATRICS Short-term special call on COVID-19 to Science and Engineering Research Board (SERB), Department of Science & Technology, New Delhi on 30.04.2020 for Rs. 5,00,000/-
- Submitted Research Proposal Scheme (AQIS-RPS) on "Design of Helmet for Preventing Road Accidents using Machine Learning and Electroencephalography Sensors" to AICTE, New Delhi on 30.12.2019 for grant of Rs. 25,00,000/-
- Submitted research proposal on "Extension of smart Dustbin" to MHRD, New Delhi Under Unnat Abhiyan Phase-II Scheme, on 17.01.2020 for Rs. 2,00,000/-
- Submitted Proposal for "Setting up of IoT Innovation Lab" Under Modernisation & Removal of Obsolescence (MODROB) Scheme to AICTE, New Delhi on 11.12.2019 for grant of Rs. 20,00,000/-
- Submitted Proposal for "R&D and Project Lab" Under Modernisation& Removal of Obsolescence (MODROB) Scheme to AICTE, New Delhi on 11.12.2018 for grant of Rs. 20,00,000/-

### Patents Granted - 02

- Patent granted on "Blockchain based Drug Traceability System for Pharmaceutical Supply Chain". (Application No. 202011054439; Date of Filing: 15.12.2021; Publication Date: 08.01.2021; Patent No. 386266; Granting Date: 07.01.2022)
  - Patent granted on "Reduce, Re-Cycle and Reuse (RRR) IoT Intelligence Waste Management System ". (Application No. 202111001043; Date of Filing: 09.01.2021; Publication Date: 15.01.2021; Patent No. 375180; Granting Date: 24.08.2021)

### Patents Published - 05

- Patent published on "An IoT Based All Size Fit Shoe Assembly". (Application No. 202211005290; Date of Filing: 31.01.2022; Publication Date: 04.02.2022)
- Patent published on "IoT Based Water Flow Regulator And Distributor for Auto Controlled Irrigation".
   (Application No. 202011043364; Date of Filing: 06.10.2020; Publication Date: 23.10.2020)
- Patent published on "Prediction Model for Assessing Performance of Academic Students". (Application No. 202011043363; Date of Filing: 06.10.2020; Publication Date: 23.10.2020)
- Patent published on "Automated Green Corridor For Life Saving Vehicles". (Application No. 202011038836; Date of Filing: 09.09.2020; Publication Date: 09.10.2020)
- Patent published on "Smart Dustbin- Sanitation & Solid-Liquid Waste Management". (Application No. 202011000793;Date of Filing: 08.01.2020 Publication Date: 03.02.2020)

### **Grants Fetched / Awards**

- Sanctioned Short Term Training Program (STTP) on "Computer Forensics & Cyber Crime" from AICTE, New Delhi on 12.12.2019 for grant of Rs. 4,38,000/-
- Submitted FDP Proposal "Role of Smart Cities in Society 5.0" under ATAL Academy, AICTE New Delhi on 05.03.2021 for Rs. 1,90,000/-
- Sanctioned (TEQIP-III) 5-Day Faculty Development Program (FDP) on "Soft-Computing: Techniques, Tools
   Applications" in coloboration with Dr. A.P.J. Abdul KalamTechnicalUniversity, Lucknow, UP from 11.06.2018 to 15.06.2018 forRs. 2,50,000/-
- Submitted proposal for AQIS- Short Term Training Program(STTP) on "Data Science for Engineers" to AICTE, New Delhi, on 30.12.2019 for Rs. 4,65,000/-
- Submitted Proposal for "Data Management" under FDP Proposal schemes to AKTU (TEQIP-III), on 10.03.2019 for grant of Rs. 2,50.000/-

### <u>Certification Courses / NPTEL Courses - 06</u>

- Completed course on "The key to successful academic collaborations" from Researcher Academy, Elsevier.
- Completed course on "How to produce highly visible research: Useful tips for researchers" from Researcher Academy, Elsevier.
- Completed course on "Software Processes and Agile Practices" from Coursera, University of Alberta.
- Completed NPTEL course on "Software Engineering" from IIT, Kharagpur in September 2020-December 2020.
- Completed NPTEL course on "Software Testing" from IIT, Kharagpur in January 2020 February 2020.
- Completed NPTEL course on "Introduction to Automata, Languages and Computation" from IIT, Kharagpur in January 2019 April 2019.

### Seminars/Workshops/Trainings/Summer School/FDP Attended- 23

- Participated in Online Faculty Development Program on "UHV Refresher 1" from 30.11.2020 to 04.12.2020 organised by All India Council forTechnical Education(AICTE), New Delhi.
- Participated in Online Faculty Development Program on "Recent Advances in Computer Science and Allied Domains" from 08.08.2020 to 12.08.2020 organised by Sharda University, Greater Noida.
- Attended 5-day Global E-Symposium on "Global Pandemic Outbreak: Role of Technology& Automation" from 01.06.2020 to 05.06.2020 organised by Computer Science and Engineering Department JSS Academy of Technical Education, Noida.
- Participated in Online Faculty Development Program on "Cyber Security & Malware Analysis" from 25.05.2020 to 26.05.2020 organised by CMR Engineering College, Hyderabad.
- Attended 3-day International Webinar on "Qualitative Research, Blogs Writing &Neuro Science in the Outbreak of COVID-19" from 20.05.2020 to 22.05.2020 organised by JSS Academy of Technical Education, Noida.
- Participated in Online Faculty Development Program on "NBA" on 19.05.2020organised by Dr. D. Y. Patil School of Engineering &Technology , Pune.
- Participated in Faculty Development Program on "Student Induction" from 17.06.2019 to 19.06.2019 organised by AICTE, New Delhi at Graphic Era Hill University, Bhimtal Campus, Nainital, Uttrakhand.
- Participated in TEQIP Faculty Development Program on "Soft-Computing: Techniques, Tools & Applications" organised by Department of CSE, JSS Academy of Technical Education, Noida in collaboration with Dr. A.P.J. Abdul KalamTechnical University, Lucknow, UP from 11.06.2018 to 15.06.2018.

- Participated in Short Term Course on "Optimization using MATLAB through ICT" Conducted by NITTTR Chandigarh from 17.07.2017 to 21.07.2017.
- Participated in State level workshop on "Virtual Labs" held at Panipat Institute of Engineering and Technology, Panipat in collaboration with IIT-Delhi on 29.03.2017.
- Participated in Short Term Course on "Cyber Crime & Forensic Tools" Conducted by NITTTR Chandigarh from 06.02.2017 to 10.02.2017.
- Participated in Short Term Course on "Cloud Computing Through ICT" Conducted by NITTTR Chandigarh from 05.12.2016 to 09.12.2016.
- Participated in Short Term Course on "Data Repository and Storage Management" Conducted by NITTTR Chandigarh from 01.08.2016 to 05.08.2016.
- Participated in Short Term Course on "Total Quality Management, ISO 9000 and Basics of NBA Accreditation in Technical Institutions" Conducted by NITTTR Chandigarh, from 05.05.2014 to 09.05.2014.
- Participated in Short Term Course on "Cyber Crime and Forensic Tools" Conducted by NITTTR Chandigarh from 27.01.2014 to 31.01.2014.
- Participated in Short Term Course on "Cloud Computing" Conducted by NITTTR Chandigarh from 12.08.2013 to 16.08.2013.
- Participated in one day Training-cum-workshop on "Software Testing" Organized by PDM College of Engineering, Bahadurgarh, Haryana in Collaboration with IEEE – IMS/EMBS (Delhi) on 30.03.2010.
- Participated in Summer School on "Expert Systems and Their Application (ESTA)" Organized by Northern Regional Centre for Training of Teachers, Mentors and Knowledge Workers at Indian Institute of Information Technology, Allahabad, Sponsored by Department of IT, Ministry of Communication and IT, Government of India, New Delhi from 10.06.2009 to 14.06.2009.
- Participated in one day workshop on "Explore Data Mining Using SPSS" organized by SPSS South Asia & Department of Computer Science & Engineering, Ambedkar Institute of Technology, Delhi on 27.02.2009.
- Participated in one day workshop on "Anxiety and Stress Management" organized by Western International University, New Delhi on 20.12.2008.
- Participated in One day workshop on "Agile Software Development Methodology" organized by RKGIT Ghaziabad in collaboration with Computer Society of India on 03.05.2008.
- Participated in Three days Faculty Development Program "Adhyayan" organised at IMS Engineering College, Ghaziabad under the Aegis of NASSCOM IT Work Force Development in collaboration with SATYAM COMPUTERS Ltd. from 14.10.2006 to 16.10.2006.
- Participated in Faculty Enablement Program on "Foundational Computer Science Courses An Industry Perspective" CAMPUS CONNECT PROGRAM held at INFOSYS Technologies Limited Bhubaneshwar from 20.02.2005 to 04.03.2005.