विश्वजीवनामृतं ज्ञानम्

ANNUAL REPORT 2020-21

ATAL BIHARI VAJPAYEE-
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY AND MANAGEMENT, GWALIOR

ANNUAL REPORT
2020-21

विश्वजीवनामृतं ज्ञानम्

ATAL BIHARI VAJPAYEE-
INDIAN INSTITUTE OF INFORMATION
TECHNOLOGY & MANAGEMENT, GWALIOR

CONTENTS

Chairman's Message

ABV-IIITM Gwalior, an institute of national importance is dedicated to teaching, research and training in the cusp areas of IT and Management, contributing towards nation building through skill development.

Inspite of unfortunate pandemic in the whole session, I am happy to note the following specific developments of ABV-IIITM Gwalior:

- The faculty members of the institute got Research and Development Projects from various agencies.
- Ranking of institute in top 100 in NIRF 2020 in "Engineering" as well as "Management" category.
- Scientific publications by faculties are remarkable.

The closing rank of the institute in various academic programmes confirms that the institute continuously attracting quality students, faculty and staff that includes the overseas students from neighbouring countries too. I am sure that this trend will continue in future too.

The institute has made efforts to disseminate its knowledge base through Management Development Programmes/Faculty Development Programmes/International conference / Seminars & Workshops. This has helped in gaining professional recognition.

There seems to be an increase in number of visitors connected through online mode from India and abroad. I am sure this will certainly help in gaining global acceptance and recognition. I am also happy to learn about the improvement in our NIRF ranking. However, there is enough scope to improve it further. It is noteworthy that our campus has been consistently rated as green campus.

The Board members, Ministry of Human Resource Development officials and distinguished professionals serving on various statutory committees of the institute have made valuable contribution towards the growth and evolution of the institute.

I compliment students, faculty and staff of the institute for their contributions in making the institute a vibrant and organic entity.

I wish the institute a grand success in its pursuit of excellence.

Vinay Kumar Modi
Chairman, BoG

Director's Report

It's a matter of great pride, welcoming you to the annual report of the institute for the year 2020-21. ABV- Indian Institute of Information Technology & Management (ABV-IIITM) was established by the Ministry of Human Resource Development, Government of India with the primary objective to promote education, research and outreach activities in the cusp areas of IT and Management, very well backed up by applied sciences. This report is an account of various activities during 2020-21.

Academics

The new curriculum has been implemented since July 2018, where B Tech (CSE) program has been started since 2017. The IPG programme has been streamed into IPG (MTech) and IPG (MBA) at the entry stage itself. The lab courses have been introduced separately in the new curriculum, with an objective to improvise the hands on skill of students and understanding the theoretical concept better.

During this academic session, 74 UG, 117 IMT,67 IMG , 41 M Tech, 16 MBA and 18 Ph D students were admitted. In the reported period 40 B.Tech, 110 IMT, 09 IMG, 28 M.Tech and 27 MBA students passed out and we have awarded 12 Ph.D. degrees.

Research, Sponsored Projects, and Extension

ABV-IIITM gives high priority to research and development projects sponsored by national agencies, along with academic research leading to doctoral degree. The research funding received from MHRD, ICSSR and DST, SERB has helped in supporting and enhancing academic research and quality of teaching.

The institute continues to lead in Scopus listed publications amongst centrally funded IIITs with 1200+ publications

As in the past, our faculty members have got interesting and competitive project funding from various agencies.

S.No.	Title	Amount (Rs Lakhs)	Sponsoring Agency	PI
1	Agent based spatial modeling of Covid-19 pandemic for urban areas	5.50	SERB ,NEW DELHI	Dr. Wilfred Godfrey Wilson
2	Design and Modeling of Ultra-Scaled Copper-Graphene Hybrid On-Chip Interconnects for Low Power and High –Speed IC Applications with Machine Learning	15.20	SERB ,NEW DELHI	Dr. Somesh Kumar
3	Graph Theoretic Approach in Large scale Epidemic and Ecological Models	6.60	SERB ,NEW DELHI	Dr. Anuraj Singh
4	Agri Business and Smart Village Incubation Centre	100.00	MSME , New Delhi	Prof Rajendra Sahu

Conference/workshops/FDPs/MDPs

As in the past, the institute has hosted following conferences during the year as a part of our mandate.

S. No.	Date	Title	Coordinator	No. of Participants
01	21.06.2021-25.06.2021	Wireless Communication Technologies	Prof. Aditya Trivedi	150
02	8-12 October 2021'	Faculty Coordinator, Faculty Development Programme on Application of Econometrics in Management and Social Science Research funded by ATAL AICTE New Delhi	Dr Manoj Kumar Dash	93

S. No.	Date	Title	Coordinator	No. of Participants
03	December 11, 2021	National Webinar on Agriculture 4.0 Jointly Organized By MSME, New Delhi & TBI Centre ABV-IIITM, Gwalior	Prof Rajendra Sahu and Dr Manoj Kumar Dash	200
04	25th December 2021	National workshop on Block chain Technology & Its Application, organised by TIIIC, ABV IIITM Gwalior	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
05	21-21 May 2021	National conference on Open Innovation on ICT and IT product for COVID 19 Management, organized by TIIC, Indian Institute of Information Technology and Management Gwalior	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
06	21st April 2021	National Business Plan conference organized by TIIC , Indian Institute of Information Technology and Management Gwalior,	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
07	27-28 February 2021	National Conference on Entrepreneurship and Innovation organized by TIIC, Indian Institute of Information Technology and Management Gwalior funded by MEITY Government of India, 27-28 February 2021	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
08	4-8 Oct. 2021	ATAL-FDP on "Quantum Computing", ABV-IIITM, Gwalior	Prof. Pankaj Srivastava	58
09	6-10 November 2020	FDP on Technology Management	Prof Gyan Prakash	92
10	23-27 November 2020	FDP on Machine Learning and Applications (MLA-2020)	Prof P K Singh	99
11	20-24 December 2020	FDP on Multivariate Data Analysis for Engineering, Science and Management	Dr Ajay Kumar	106
12	16-20 February 2021	FDP on Research Methodology and Scientific writing for Engineering and Management	Dr Gaurav Agarwal	127

Student Activities

Along with academic excellence, ABV-IIITM, Gwalior promotes extra-curricular activities by the students to ensure all round development of personality. The institute has created superior infrastructure for a variety of co-curricular and extra-curricular activities such as sports, student publications, as well as cultural and welfare programmes. The Student groups plan, organize and manage various student activities throughout the year. However, due to Covid 19 pandemic the institute could not organize the extra curricular activities like previous years.

Certain events organized during the year as under:

S No.	Particulars	Coordinator
1	Release of Abhisar	Prof. JoydipDhar

AASF (Abhigyam Abhikaushalam Students Forum) has become an icon of peer-to-peer learning forum for the students at ABV-IIITM and has attracted huge student participation. Several activities have been organized during the reported period under the aegis of AASF. Abhishar, annual magazine of AASF, continued to attract quality articles related to different sectors.

Training & Placement

A total of 70 companies visited the institute for placements of B.Tech, Dual M.Tech and MBA batches. The highest package bagged by this year students is of 100.13LPA with the average package of IPG M.Tech is 19.99 LPA and the overall average package of this batch including all the courses is 16.85 LPA. Total 186 students appeared for campus placement process and 240 offers were received by the students. Students have participated in many reputed coding challenges viz: ACM World Finals, Google Summer of Code (GSOC), CodeVita, HackWithInfyetc and was among the finalist of such coding challenges. Some of the students did not take part in corporate placement process as they were keen to make their careers in the field of Academics/ Civil Services/ PSUs.

Infrastructure

The institute has made consistent efforts in building quality infrastructure to cater the needs of its envisaged plans and for better amenities for the campus residents. The infrastructure includes the administrative block, academic blocks, residential area both for the faculty/staff and students.

Other Activities

a) Independence Day was celebrated with fervour on 15th Aug, 2020.

b) Gandhi Jayanti was celebrated on 02nd Oct 2020.

c) Celebration of Rashtriya Ekta Diwas (National Unity Day) on 31st Oct 2020.

d) Celebration of National Education Day on 11thNov, 2020.

e) Celebration of "Constitution Day" on 26th Nov, 2020.

f) Various activities were organized under "Ek Bharat -Shrestha Bharat".

g) The institute boasts of a green campus.

Awards & Recognition

The contribution of our graduates to the community has been our strength. The most pleasing experience is that we are being recognized by both international and national agencies for our scientific and social contributions aligned with the vision and mission of institute. The institute was ranked in top 100 in NIRF 2020 in "Engineering" as well as "Management" category.

Acknowledgement

I personally acknowledge the support and encouragement from the Chairman, Shri V K Modi Ji and would also like to record my special thanks to the Members of the Board of Governors.

I am grateful to MHRD and its officials for their full-fledged support and encouragement to the institute and its activities.

The entire set of activities of the institute takes place with the whole-hearted participation and support of all the stakeholders—our faculty, students, staff, funding agencies, professionals and experts who assist us in various capacities and our alumni. In particular, I would like to thank office-bearers such as Registrar, Wardens, and faculty-in-charge of various committees for their valuable contributions.

The annual report committee deserves appreciation for bringing out this annual report.

Prof. Rajendra Sahu
Interim Director

About ABV-IIITM Gwalior

ABV-IIITM, Gwalior, is an autonomous institute of national importance, established by the Ministry of Human Resource Development, Government of India in 1997 to nurture information technology (IT) and management education in the country.

It strives to become a brand name as a world class institution. The institute has a vision to achieve this goal through research and teaching so as to shape students innovative, entrepreneurial,internationally acceptable and confident individuals, thereby play role of leaders in various domains at national as well as International level. Here, the curriculum has been designed in such way, so as to have both information technology tools and management concepts integrated to create a synergetic approach for rendering techno economic solutions to the various problems at local as well as global level. The institute awards degrees at, Graduate, Master's and Doctorate levels in the field of Computer Science, IT and Management. The doctoral program has been opened to Applied Sciences, Management, IT, CS and Electronics. The Institute is a residential campus that includes the specific blocks for administration, academics, library, hostel for girls and boys and family quarters for faculty, officers and staff. The whole green campus is built on a 150-acres, accommodates competent faculty and state-of- the-art labs. The campus is self-contained with all the basic amenities, needed for students, staff and faculty.

In pursuance of **vision of'global excellence in knowledge economy'**, the institute's **missions** are:

- Teaching and research with focus on emerging technologies, business process and high-tech solutions in low tech environment;
- Integrating technologies and management in cross-culture environment;
- Shaping students to be innovative, entrepreneurial, supportive, assured and international.

The institute believes in collaborative and entrepreneurial environment, which facilitates people to join together in multiple ways and contribute to the nation building.

Organization of the Institute

ABV-Indian Institute of Information Technology & Management (ABV-IIITM), Gwalior is an apex institute setup by Ministry of HRD, Government of India, established for providing education, research and training in the cusp areas of IT and Management.The primary objectives of the institute are to:

- ❖ Create an environment of learning and training that enhances knowledge and inculcates a continuous process of self-evaluation;
- ❖ Develop innovative study programs and customized support services in keeping with current demands of the market;
- ❖ Channelize information technology enabled solutions towards offering business solutions, achieving economic growth and establishing social parity;
- ❖ Undertake outreach activities and extension programmes that contribute to societal needs.

For achieving our objectives we follow a **value-based education system** that impinges on:

- ❖ Freedom of thought and expression;
- ❖ Human values and ethical practices;
- ❖ Excellence in learning and research;
- ❖ Creative and interactive teaching;
- ❖ Sustainable livelihood and growth.

The institute governance structure constitutes of Board of Governors, Finance Committee and Academic Senate. The institute functions through this governance structure in all aspects of academics, finances and planning for the institute. The Board of Governors is responsible for overseeing the administrative and business affairs of the

institute, include issues such as tuition policy, the institute budget & finances and campus buildings. The Academic Senate is responsible for all the activities related to academic at the institute.

Managing Institute

The institute activities are managed through a Board of Governors (BOG) headed by the Chairman. The BOG provides directions and is assisted by various committees for specific issues of finance, building and works, research etc. Academic senate includes the members from inside as well as outside the campus, chaired by Director of the institute, decides academic policy of the institute with respect to curriculum, courses and examination results etc. Director is responsible for running day to day affairs of the institute, strengthening the core facilities, ensuring smooth running of classes, providing basic facilities for faculty, staff and students etc. Director is Chairman of Building &Works Committee (B&WC) as well as Academic Senate.

All efforts are being made to create an academic friendly environment in the institute. Director in particular, takes care of providing all the necessary facilities including excellent infrastructure for sports and other recreational activities.

Meetings conducted during the year 2020-21

Meetings of Board of Governors : Nil
Meetings of Finance Committee : Nil
Meetings of Senate:Nil
Meetings of Building Works Committee (BWC): Nil

Board of Governors

The present composition of the Board of Governors is as follows:

SNo	Name	Designation
1	**Shri Vinay Kumar Modi** Chairman, BoG ABV-IIITM Gwalior	Chairman
2	**Prof Rajendra Sahu** Interim Director, ABV-IIITM Gwalior (w.e.f. 01.08.2019)	Member
3	**Mr Prashant Agrawal** Director (IIIT), Room No. 210, "C" Wing, Ministry of Human Resource Development, Shastri Bhavan, New Delhi - 110 015	Member
4	**Mr Jaideep Kumar Mishra** Joint Secreatary and Group Coordinator, Ministry of Electronics and Information Technology Room No. 4070, Electronics Niketan, 6, CGO Complex, New Delhi - 110 003	Member
5	**Principal Secretary,** Department of Information Technology, M P Govt., Ballabh Bhawan, Bhopal.	Member
6	**Prof Subhasis Chaudhuri** Director, Indian Institute of Technology, Bombay. Powai, Mumbai 400 076	Member
7	**Prof Saibal Chattopadhyay** Director, Indian Institute of Management Calcutta Diamond Harbour Road Joka, Kolkata (Calcutta) - 700104	Member
8	**Prof Anil D Sahasrabudhe** **Chairman** All India Council for Technical Education (AICTE) 7th Floor, Chander Lok Building, Janpath, New Delhi-110001	Member
9	**Ms Vidya Natampally** Sr. Director – Strategy, Microsoft Research India, 9, Lavelle Road, Bangalore-560 001	Member
10	**Prof Rajendra Sahu** Professor, ABV-IIITM, Gwalior	Member
11	**Prof Shashikala Tapaswi** Professor, ABV-IIITM, Gwalior	Member
12	**Mr Ram Phal Dwivedi** **Registrar** ABV-IIITM, Gwalior	Secretary

Academic Senate (2020-21): Members and Invitees

SNo	Name
1	**Prof. Rajendra Sahu** Interim Director & Chairman Senate, ABV-IIITM Gwalior (w.e.f. 01.08.2019)
2	**Prof. Karmeshu** JNU, New Delhi
3	**Prof. Kripa Shanker** Ex Professor, Indian Institute of Technology, Kanpur
4	**Prof. G C Nandi** IIIT, Allahabad
5	**Shri Kuntal Dey** IBM
6	**Dr. Hemant Anand** Ex Professor, IIHMR Jaipur
7	**Prof. Satish Chand** Professor JNU, New Delhi
8	**Prof. G K Sharma** ABV-IIITM Gwalior
9	**Prof. S Tapaswi** ABV-IIITM Gwalior
10	**Prof. Anupam Shukla** ABV-IIITM, Gwalior
11	**Prof. Rajendra Sahu** ABV-IIITM, Gwalior
12	**Prof. Aditya Trivedi** ABV-IIITM, Gwalior
13	**Prof.Mahua Bhattacharya** ABV-IIITM, Gwalior
14	**Prof. Manisha Pattanaik** ABV-IIITM, Gwalior
15	**Prof.P K Singh** ABV-IIITM, Gwalior
16	**Prof. Anurag Srivastava** ABV-IIITM, Gwalior
17	**Prof. Joydip Dhar** ABV-IIITM, Gwalior
18	**Prof. Manoj Patwardhan** ABV-IIITM, Gwalior
19	**Prof. Pankaj Srivastava** ABV-IIITM, Gwalior
20	**Prof.Gyan Prakash** ABV-IIITM, Gwalior
21	**Prof.Naval Bajpai** ABV-IIITM, Gwalior
22	**Dr. Gaurav Agrawal** Associate Professor, ABV-IIITM, Gwalior
23	**Dr. Ajay Kumar** Associate Professor, ABV-IIITM, Gwalior
24	**Dr. Ritu Tiwari** Associate Professor, ABV-IIITM, Gwalior
25	**Dr. Vishal Vyas** Assistant Professor, ABV-IIITM, Gwalior
26	**Dr W W Godfrey** Assistant Professor, ABV-IIITM, Gwalior
27	**Dr. Prasenjit Chanak** Assistant Professor, ABV-IIITM, Gwalior
28	**Mr. Ram Phal Dwivedi** Registrar& Secretary Senate ABV-IIITM, Gwalior

Institute Infrastructure

Institute has a quality infrastructure in terms of buildings, equipments and other IT facilities, spreading over 150 acres, this includes about 5 acre constructed and rest green land.Some relevant information is briefly detailed in the following sub topics:

24 x 7 Internet facilities

24 x 7 security

24 x 7 electricity

Offline and online library: Access to research journals and magazines

Assets/Building Resources

Boys Hostels	4	Open Air Theatre	1
Girls Hostel	1	Seminar Hall	1
Recreation	1	Convention Centre	1
Sports Complex	1	Institute Canteen	1

Barrier Free Roads

The institute is sensitive to the needs of Persons with disabilities (PWD). As a part of our commitment, institute has attempted to make the campus as barrier-free roads. Table below exhibits details of provisions for barrier free environment for PWD:

Details of provisions for barrier free environment for PWD

Name of Building	Ramp	Rail	Toilet
Admin. Building	Yes	Yes	Yes
Deptl. Block A	Yes	Yes	Yes
Block–B (LT.-I)	Yes	Yes	Yes
Block –B (LT II)	Yes	Yes	Yes
Deptl. Block–C	Yes	Yes	Yes
Deptl. Block–D	Yes	Yes	Yes
Deptl. Block –E	Yes	Yes	Yes
Deptl Block-5	Yes	Yes	Yes
Boys Hostel-1	Yes	Yes	Yes
Boys Hostel-2	Yes	Yes	Yes
Boys Hostel-3	Yes	Yes	Yes
Girls Hostel	Yes	Yes	Yes
Cafeteria	Yes	Yes	Yes
Sports Complex	Yes	Yes	Yes
Open Air Theatre	Not needed	Not needed	Yes
Inrenational Visitors' Hostel	Yes	Yes	Yes
MDP Centre	Yes	Yes	Yes
Seminar Hall	Yes (From outside)	Yes	No

Other Available Facilities

In addition to the above mentioned facilities, institute provides other facilities also detailed as below:

1) Battery operated, Two Golf Carts for easy movement of visitors and campus residents

2) Wheel Chairs in Hostels and in Dispensary

Ramps are available at

i) Learning Resource Center (LRC)

ii) ATM

iii) Entry to Seminar hall

iv) Dispensary

Institute also provides lifts in Library Resource Centre and in new academic block.

Network Infrastructure- Enhancement during 2020-21

In order to maintain a hassle free network system, institute initiated few additions to network infrastructure detailed as below:

S.No	Work done
1	AMC for the institute network infrastructure and wi-fi through STPI
2	Procurement and Configuration of D-Link Wi-Fi range extenders
3	Procurement of Wacom Graphics Pen Tablet , Portable USB speaker, Logitech HD Webcam for faculties to support online classes
4	Procurement and Configuration of Wi-Jungle Firewall
5	Procurement and Configuration of Video conferencing (Cisco) and Web conferencing system (Logitech Rally Plus)
6	Procurement of Cisco Webex subscription to support online classes

Academic Programs

A good academic environment prevails in this institute that encourages learning at every level. A more interactive and analytical teaching method is pursued instead of conventional processes. At institute, the teaching methods encourage learners to think and act more proactively and take up even the most challenging assignments with confidence. Students in this institute not only have the best faculty to guide them in their academic endeavours but also are provided with the best infrastructure in form of latest generation equipments and an all-facility campus.

Academic programmes are not compartmentalised at ABV-IIITM. Here, students pursuing M Tech are offered lessons in management; while those studying MBA are provided adequate teachings in use and applications of information technology. Student assessment is a continuous process that involves home assignments, classroom tests, laboratory tasks, presentations, projects, and quizzes. The principal idea behind such an approach is to make students self-reliant and confident to face challenging situations.

B Tech (CSE)

A four years, Bachelor's in Technology degree course in Computer Science branch has been started from July 2017. The last batch was admitted with an intake of 74 students and the closing rank for this programme (for General candidates) was 12477.

Integrated Post Graduate (IPG)

Since, 2008, Institute has started a 5-year integrated post graduate program to offer a synchronized curriculum covering facets of IT and Management. Keeping in line with market demand and societal needs, it is essential to groom professionals who are capable of handling the challenges emerged in the last few years and various

unresolved problems of community and can be solved through IT enabled products and services. This course has been particularly designed to address the situations that demand a comprehensive solution synchronizing management and IT. Candidates after successful completion of this course are expected to tackle specific requirements in resource optimization and integration of existing and new technologies.

This is a 5-year or 10 semester course IPG-MT (Information Technology); IPG-MBA. Where, the first 6-semesters cover the B.Tech curriculum while the remaining 4 semesters could be focused on either MTech or MBA. Candidates opting for M.Tech are entitled to stipends.

Admissions

The admission to BTech (CSE) and IPG-MBA and IPG-MTech programme is through CSAB (Central Seat Allocation Board) counselling. The closing Ranks of JEE (mains)for the last three years, for General candidates is shown in the table below:

Year	Closing Rank for General Candidates	Year	Closing Rank for General Candidates	Year	Closing Rank for General Candidates
2018	IMG – 25355 IMT – 17490 BCS – 11165	2019	IMG – 29426 IMT – 26683 BCS – 15255	2020	IMG – 27777 IMT – 22247 BCS – 12477

Post Graduate – M Tech (Master in Technology)

This is a 4-semester program ideally completed in two years leading to M Tech degree in Computer Science and Engineering. The objective of this post graduate course is to create experts and professionals in information technology with a view on developing skills that are able to match the demands of the complexities of present generation in IT industry. Under present circumstances, it is essential to have technologies that are sharp and purposeful. The M Tech program is aimed at developing experts with foci on technical capabilities and managerial abilities.

The M Tech program has areas of specializations, like, Digital Communication, Advance Networks,Very Large Scale Integration and Information Security. The first two semesters are dedicated for course work while the remaining two semesters are meant for research based project/dissertation.

M Tech Admissions

The admissions are through merit of GATE score, followed by written and/or personal interview.

Post Graduate – MBA (Master of Business Administration)

This is a 4-semester program leading to MBA degree. The course has been designed keeping in mind the requirements of present day business trends and industrial outlook. The objective of program is to create innovative professionals for functional areas like marketing, finance, human resources, and business operations. Current generation applications are as include SCM (Supply Chain Management), ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), and e-Commerce.Students are selected through valid CAT/MAT/ CMAT scores followed by group discussion and personal interview.

Doctoral Program – Ph D

Every year, ABV-IIITM awards an impressive range of doctoral degrees-the most advanced and prestigious degrees that universities confer. The doctoral program gives students unparallel expertise in the related area of research. Candidates work under the supervision of distinguished faculty of campus, learning side by side with varied and accomplished scholars. The institute offers doctoral programs in areas of Applied Science, Electronics, IT and management. Though, there is no time restriction for doctoral programs, mostly it gets completed within 3-5 years. Candidates pursuing Ph D programs are entitled to stipends depending on norms set by MHRD (Ministry of Human Resources Development) and subject to fulfilment of academic prerequisites asset by the institute from time to time.

Students for this program are selected through written test, presentation, and personal interview conducted by the institute based on best practices followed for admissions. The admission process is transparent, and objective.

Ph D Admissions

The admission is based on the performance of student in written test and personal interaction, presentation of any potential area of research, in his/her proposed area. An expert committee involving faculty from the institute and faculty drawn from IITs/IIMs is constituted for the selection process. Admissions are done twice a year (as in IITs). The following is the relevant statistics of last three admission process;

Semester	Applications Received	Number of Candidates Shortlisted	Number of Candidates Selected
July 2018	112	72	13
July 2019	70	64	12
July 2020	—	—	18

Award of Doctoral Degree (during the year 2020-21)

S.N.	Name of Ph.D. Scholar	Supervisor(s)	Thesis Title	Viva-Voce held on
1	**Rahul Kumar Verma**	Dr. K.K. Pattanaik	Towards Efficient Resource Utilization in Multi-Application Sharing IoT Sensory Environment	19.05.2020
2	**Ashutosh Pandey**	Prof. R. Sahu	Designing Service Blueprint for Heritage Tourism using Fuzzy Kano Analysis: A Case of India	15.06.2020
3	**Praveen Pawar**	Prof. A. Trivedi	Resource Management for Device-to-Device Communication Underlaying Cellular Network	26.06.2020
4	**Shubhra Jain**	Dr. K.K. Pattanaik Prof. A. Shukla	Efficient Routing Protocols for Mobile Sink Based Wireless Sensor Network	29.06.2020
5	**Vijaypal Singh Rathor**	Prof. G.K. Sharma	Energy Efficient Design-for-Trust Techniques for Trustworthy System	15.07.2020
6	**Upma Jain**	Dr. R. Tiwari Dr. W.W. Godfrey	Multi-Robot Target Searching in an Unknown Environment using Nature Inspired Methods	10.08.2020
7	**Ram KishanDewangan**	Prof. A. Shukla Dr. W. Wilfred Godfrey	Priority-Based Multi-Robot and Multi-UAV Path Planning using Nature-Inspired Algorithms	19.10.2020
8	**Shweta Rajoriya**	Prof. A. Trivedi Dr. Wilfred Godfrey	Performance Analysis of Massive MIMO Enabled Heterogeneous Network with Wireless Backhauling	18.11.2020
9	**SaumilMaheshwari**	Prof. A. Shukla Dr. R. Tiwari	Development of Recurrent Neural Network Based Deep Learning Model for Healthcare	17.12.2020
10	**Priyanka Verma**	Dr. W. W. Godfrey Prof. S. Tapaswi	A Study on the Effects of DDoS Attack on Cloud Environment and Reduction of Collateral Damages to Non-Targets	18.05.2021
11	**AnjulaMehto**	Prof. S. Tapaswi Dr. D.K. Pattanaik	Energy Efficient Data Acquisition Methods in Mobile Sink Based Wireless Sensor Networks	28.06.2021
12	**Ravi Shanker**	Prof. M. Bhattacharya	Development of Computer Assisted Diagnostic System for Detection and Classification of Space Occupying Lesion in Brain using Multimodal Medical Imaging	07.09.2021

Admissions 2020-21 / Student Strength

Year	Course	Duration	General		EWS		OBC		SC		ST		PH		Total
			Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
2020	B.Tech	4 Years	23	04	09	02	17	03	09	02	04	01	0	0	74
2020	IMT	5 Years	33	07	15	02	26	06	15	03	07	01	02	0	117
2020	IPG IMG	5 Years	30	04	0	0	15	02	09	01	04	01	01	0	67
2020	M Tech	2 Years	11	8	2	3	7	3	6	1	0	0	0	0	41
2020	MBA	2 Years	7	6	0	0	0	0	2	0	0	1	0	0	16
2020	Ph D	–	08	06			00	02	02	00	0	0	0	0	18

Students Admitted in 2020-21	
Ph D	18
M Tech	41
MBA	16
IPG-MTech	117
IPG-MBA	67
B Tech (CSE)	74
Total	333

Total Students in 2020-21	
PhD	49
M Tech	78
MBA	43
IPG	687
B Tech (CSE)	262
Total	1119

Scholarship to Students (2020-2021)

The institute follows the guideline issued by MHRD, GOI for monthly payment of financial assistanceship to the students enrolled in Post Graduate and PhD programmes.

Duration: Masters level Rs. 12400/- for 2 Years,

Ph.D. level Rs. 31000 First 2 Years and Rs. 35000 for the remaining 3 Years

The Assistantship was disbursed to the following students:

S.No.	Programme	Number of students getting assistantship
1	IPG 5th Year	59
2	M Tech (2019-20)	37
3	M Tech (2020-21)	41
4	PhD	49

In addition to above, tables below provide information pertaining to merit-cum-means scholarship disbursed during the year 2020-21 and details of state scholarship for the period 2020-21:

Merit-cum-Means Scholarship Disbursed during the Year 2020-21

S.No.	Name of Students(IPG-Batch)	Student Roll Number
1	Pranjal Pratyush	2020BCS-058
2	Gaurav Kishor Sukhramani	2020BCS-033
3	Kartik Singh	2020BCS-046
4	Ayush Garg	2020IMT-019
5	Prince Mann	2020IMT-073
6	Shubhang Gupta	2020IMT-098
7	Charagondla Sai Chidvi	2020IMT-023
8	Ananya Mishra	2020IMT-009
9	Manish Mahala	2020IMT-053
10	Aryan Sharma	2020IMG-012
11	Mayur Gajanan Rathod	2020IMG-052
12	Ankit	2020IMG-009
13	Adarsh Aryan	2020IMG-003

Details of State (Madhya Pradesh) Scholarship for the Period 2020-21

S.No.	Name of Student	Roll Number	Scholarship
1	Ashish Dadoriya	2017IMG-13	Post Matric Scholarship
2	Rajesh Prajapati	2016IPG-80	Post Matric Scholarship
3	Jeetendra Singh Patel	2019MBA-12	Post Matric Scholarship
4	Nikhil Choudhary	2018IMT-058	Post Matric Scholarship
5	Jatin Kasera	2018IMT-042	Post Matric Scholarship
6	Deepak Kumrawat	2016IPG-33	Post Matric Scholarship
7	Umang Gharve	2017BCS-036	Post Matric Scholarship
8	Avi Kumrawat	2019IMT-025	Post Matric Scholarship

Details of State (Madhya Pradesh) MMVY Scholarship for the Period 2020-21

S. No.	Name of Student	Roll Number	Scholarship
1	Abhay Chaturvedi	2017BCS-003	Mukhya Mantri Meghavi Vidhayarthi Yogana
2	Abhishek Pandey	2017IMG-004	Mukhya Mantri Meghavi Vidhayarthi Yogana
3	Ashish Gawhade	2017IMG-014	Mukhya Mantri Meghavi Vidhayarthi Yogana
4	Mohit Agrawal	2017IMG-032	Mukhya Mantri Meghavi Vidhayarthi Yogana
5	Yashwant	2017IMG-080	Mukhya Mantri Meghavi Vidhayarthi Yogana
6	Ayush Srivastava	2017IMT-025	Mukhya Mantri Meghavi Vidhayarthi Yogana
7	Arihant Jain	2017IMT-096	Mukhya Mantri Meghavi Vidhayarthi Yogana
8	Ketan Gupta	2017IMT-101	Mukhya Mantri Meghavi Vidhayarthi Yogana
9	Adarsh Gupta	2018BCS-002	Mukhya Mantri Meghavi Vidhayarthi Yogana
10	Anuj Bangad	2018IMG-013	Mukhya Mantri Meghavi Vidhayarthi Yogana
11	Ayush Rai	2018IMG-017	Mukhya Mantri Meghavi Vidhayarthi Yogana
12	Manish Dangi	2018IMG-029	Mukhya Mantri Meghavi Vidhayarthi Yogana
13	Rishabh Agrawal	2018IMG-046	Mukhya Mantri Meghavi Vidhayarthi Yogana
14	Anand Verma	2018IMT-016	Mukhya Mantri Meghavi Vidhayarthi Yogana
15	Ashray Gupta	2018IMT-023	Mukhya Mantri Meghavi Vidhayarthi Yogana
16	Shivam Agrawal	2018IMT-094	Mukhya Mantri Meghavi Vidhayarthi Yogana
17	Shivam Soni	2018IMT-095	Mukhya Mantri Meghavi Vidhayarthi Yogana

S. No.	Name of Student	Roll Number	Scholarship
18	Ashutosh Parmar	2019BCS-011	Mukhya Mantri Meghavi Vidhayarthi Yogana
19	Bharat Chadanwani	2019BCS-012	Mukhya Mantri Meghavi Vidhayarthi Yogana
20	Divyansh Falodiya	2019BCS-020	Mukhya Mantri Meghavi Vidhayarthi Yogana
21	Lakshya Gupta	2019BCS-032	Mukhya Mantri Meghavi Vidhayarthi Yogana
22	Sakshi Dhamija	2019BCS-052	Mukhya Mantri Meghavi Vidhayarthi Yogana
23	Shivam Doharey	2019BCS-059	Mukhya Mantri Meghavi Vidhayarthi Yogana
24	Tarun Prtap Singh Yadav	2019BCS-064	Mukhya Mantri Meghavi Vidhayarthi Yogana
25	Anirudh Gautam	2019IMG-006	Mukhya Mantri Meghavi Vidhayarthi Yogana
26	Anuj Gupta	2019IMG-009	Mukhya Mantri Meghavi Vidhayarthi Yogana
27	Dushyant Sengar	2019IMG-019	Mukhya Mantri Meghavi Vidhayarthi Yogana
28	Kavish Dadhich	2019IMG-026	Mukhya Mantri Meghavi Vidhayarthi Yogana
29	Niketan Mangulley	2019IMG-040	Mukhya Mantri Meghavi Vidhayarthi Yogana
30	Nikita Rathore	2019IMG-041	Mukhya Mantri Meghavi Vidhayarthi Yogana
31	Prafull Rahandale	2019IMG-048	Mukhya Mantri Meghavi Vidhayarthi Yogana
32	Swarnim Gupta	2019IMG-060	Mukhya Mantri Meghavi Vidhayarthi Yogana
33	Abhishek Singh Chauhan	2019IMT-005	Mukhya Mantri Meghavi Vidhayarthi Yogana
34	Deependra Yadav	2019IMT-019	Mukhya Mantri Meghavi Vidhayarthi Yogana
35	Harshita Verma	2019IMT-039	Mukhya Mantri Meghavi Vidhayarthi Yogana
36	Kaushal Waghela	2019IMT-049	Mukhya Mantri Meghavi Vidhayarthi Yogana
37	Kunal Jain	2019IMT-052	Mukhya Mantri Meghavi Vidhayarthi Yogana
38	Mohit Kourav	2019IMT-060	Mukhya Mantri Meghavi Vidhayarthi Yogana
39	Naman Lakhwani	2019IMT-064	Mukhya Mantri Meghavi Vidhayarthi Yogana
40	Sarthak Jain	2019IMT-087	Mukhya Mantri Meghavi Vidhayarthi Yogana
41	Shashwat Agrawal	2019IMT-091	Mukhya Mantri Meghavi Vidhayarthi Yogana
42	Ritik Nayan Jhariya	2020IMT-081	Mukhya Mantri Meghavi Vidhayarthi Yogana

Training & Placement

Placement session for the batch 2020-21 was started in August 2021. In the session 2020-21, during the summer internship the work of the students in various organizations were highly appreciated. This year approx 25% students offered "Pre- Placement Offers" (PPOs) by eminent companies viz: Microsoft, Amazon, Morgan Stanley, Make My Trip, Optum(UHG), Innovaccer, EarlySalary, Goldman Sachs, Go-Jek, Urban Clap etc.

During the session 2020-21 apart from the regular visitors, many new organizations have shown their interest for final placements. A total of 70 companies visited the institute for placements of B.Tech, Dual M.Tech and MBA batches. The highest package bagged by this year students is of 100.13LPA with the average package of IPG M.Tech is 19.99 LPA and the overall average package of this batch including all the courses is 16.85 LPA. Total 186 students appeared for campus placement process and 240 offers were received by the students. Students have participated in many reputed coding challenges viz: ACM World Finals, Google Summer of Code (GSOC), CodeVita, HackWithInfyetc and was among the finalist of such coding challenges. Some of the students did not take part in corporate placement process as they were keen to make their careers in the field of Academics/ Civil Services/ PSUs.A brief details of companies visited the institute are as follows.

Regular Recruiters: Amazon, Microsoft, Dell R & D,Directi, MindTickle, TCS,Infosys, HCL, The Smart Cube, IBM, Samsung R& D, Samsung SDS, Triology Inovvation, Nagarro, PWC (US), ZS Associates, GoJek, Oracle, Aganitha, EarlySalary ,Toppr, Quetzal, Axtria, Yamaha, Ericsson R & D, Optum (UHG), Free Charge, Reliance Jio, Rakuten, ShareChat, American Express, Dellotie, IndiaMart Intermesh, Paytm, Publicis Sapient, TCS, Infosys, Zycus, Quantiphi.

First-time Recruiters: Intuit, YugaByte, Commvault Systems CVLT, K-Fintech, Accenture, Codeyoung, VMware, NI(National Instruments), Nutanix, Media.net, Turtlemint, ESAF Bank, D.E.Shaw, Sifive , Bizongo, OneShot.AI , Synopsys, Grab-India, Homelane.

Sr. No	Course	Total Students passed out.	Students opted for Higher Studies / Civil services	Eligible Students Placed	Placement % of Eligible Students
1	B.Tech	40	4	36	100
2	IPG-M.Tech	102	6	96	100
3	PG-M.Tech	28	6	22	100
4	IPG-MBA	14	4	10	100
5	PG-MBA	27	5	22	100

Few of these students are having more than one offer with them. In few of the cases students initially got lower package and gradually fetched higher package.

Summer Internship Details 2020-21 batches

Sr.No	Name	Roll No	Stream	Name of Organisation
1	Abhay Chaturvedi	2017BCS-003	B.Tech	Optum (UnitedHealth group)
2	Abhijeet Chauhan	2017BCS-004	B.Tech	Flamingo
3	Abhishoya Lunavat	2017BCS-007	B.Tech	CasaOne (La Casa India Pvt Ltd.)
4	Akansha Tiwari	2017BCS-008	B.Tech	Enlume
5	Amal Shaji	2017BCS-010	B.Tech	Leading India
6	Aman Kumar Rai	2017BCS-011	B.Tech	Prographer
7	Harsh Vardhan	2017BCS-015	B.Tech	Wealth 42
8	Mohit Goswami	2017BCS-018	B.Tech	CodeSpeedy Technology Private Limited
9	Samanyu Pobbati	2017BCS-021	B.Tech	Prograher
10	Prajwal Singh	2017BCS-023	B.Tech	GoJek
11	Sanchit Bansal	2017BCS-026	B.Tech	Early Salary
12	Shagunpreet Singh	2017BCS-029	B.Tech	Flamingo
13	Suryadeepti Singhal	2017BCS-031	B.Tech	Codebugged
14	Tanmay Sharma	2017BCS-034	B.Tech	Innovaccer
15	Pragnya Tata	2017BCS-035	B.Tech	Flamingo
16	Virendra Singh	2017BCS-041	B.Tech	White Wular
17	Abhishek Choudhary	2016IPG-006	IPG-M.Tech	BrightMoney
18	Abhishek Kumar	2016IPG-007	IPG-M.Tech	IIT PATNA
19	Akshat Maheshwari	2016IPG-010	IPG-M.Tech	Innovaccer
20	Alladi Vivek	2016IPG-012	IPG-M.Tech	Exposys Data Labs
21	Anjali Jain	2016IPG-014	IPG-M.Tech	Xavoc Technocrats Pvt. Ltd.
22	Anuj Bhatt	2016IPG-017	IPG-M.Tech	Athena Consultancy
23	Arjan Singh Bal	2016IPG-019	IPG-M.Tech	CodeNation
24	Ayushi Rastogi	2016IPG-025	IPG-M.Tech	OkCredit
25	Chetana.Y.S	2016IPG-030	IPG-M.Tech	Reliance Jio
26	Daksh Berry	2016IPG-031	IPG-M.Tech	HomeLane
27	Deepak Kumrawat	2016IPG-033	IPG-M.Tech	OkCredit
28	Divya Lakhwani	2016IPG-035	IPG-M.Tech	Ultrainstict
29	Gajpal Singh Gond	2016IPG-037	IPG-M.Tech	CampK12
30	Hitesh Ahuja	2016IPG-038	IPG-M.Tech	Broadsworth Consultancy
31	Juhi Purswani	2016IPG-040	IPG-M.Tech	Microsoft
32	Juhi Tiwari	2016IPG-041	IPG-M.Tech	Microsoft
33	Kriti Gupta	2016IPG-044	IPG-M.Tech	MakeMyTrip
34	Mathew Sachin	2016IPG-047	IPG-M.Tech	Amazon
35	Mayank Yadav	2016IPG-049	IPG-M.Tech	Foreignadmits
36	Mehul Bhutalia	2016IPG-050	IPG-M.Tech	Amazon
37	Mithilesh Kumar	2016IPG-051	IPG-M.Tech	SenSen Networks
38	Mohd Farhan Tahir	2016IPG-052	IPG-M.Tech	Edgistify
39	Mohit Kumar	2016IPG-053	IPG-M.Tech	Edgistify
40	Nandikam Venkata Sai Nikhila	2016IPG-057	IPG-M.Tech	TechSimThe symbol of Expertise
41	Neelam Dheeraj	2016IPG-059	IPG-M.Tech	BR Concepts
42	Nidhi	2016IPG-060	IPG-M.Tech	Exposys Data Labs
43	Nikita Sharma	2016IPG-062	IPG-M.Tech	Microsoft

Sr.No	Name	Roll No	Stream	Name of Organisation
44	Nitish Kamra	2016IPG-064	IPG-M.Tech	Amazon
45	Payal Meena	2016IPG-067	IPG-M.Tech	Futurios
46	Pragati Baheti	2016IPG-068	IPG-M.Tech	Microsoft
47	Prakhar Bansal	2016IPG-070	IPG-M.Tech	InterviewBit Technologies
48	Prakhar Sharma	2016IPG-071	IPG-M.Tech	Sheru
49	Pranjal Srivastava	2016IPG-072	IPG-M.Tech	EnLume Technologies Pvt Ltd
50	Prashant Kumar Tiwari	2016IPG-073	IPG-M.Tech	HomeLane
51	Pratyush Ranjan	2016IPG-074	IPG-M.Tech	Innovaccer
52	Priyansh Saxena	2016IPG-076	IPG-M.Tech	Ernst & Young
53	R Sahith Kumar	2016IPG-077	IPG-M.Tech	Exposys Data Labs
54	Raahat Gupta	2016IPG-078	IPG-M.Tech	Fynd (Shopsense Retail Technologies Pvt. Ltd.)
55	Raj Mehrotra	2016IPG-079	IPG-M.Tech	Optum, United Health Group
56	Rajesh Prajapati	2016IPG-080	IPG-M.Tech	Azure Skynet Solutions
57	Rishabh Patel	2016IPG-083	IPG-M.Tech	Foreign Admits
58	Ritika Agarwal	2016IPG-085	IPG-M.Tech	Morgan Stanley
59	Riya Khandelwal	2016IPG-086	IPG-M.Tech	Intel Corporation
60	Rohit Kumar	2016IPG-087	IPG-M.Tech	Google
61	Rohit Verma	2016IPG-088	IPG-M.Tech	UnitedHealth Group
62	Sahil	2016IPG-089	IPG-M.Tech	Microsoft
63	Sanjal Dhir Katiyar	2016IPG-090	IPG-M.Tech	Karza Technologies Private Limited
64	Sanjit Prasad	2016IPG-091	IPG-M.Tech	InterviewBit
65	Sanyam Gupta	2016IPG-093	IPG-M.Tech	Freecharge
66	Saurabh Gupta	2016IPG-094	IPG-M.Tech	Urban Company (UrbanClap)
67	Saurabh Shukla	2016IPG-095	IPG-M.Tech	ForeignAdmits
68	Shashank Swarup Sharma	2016IPG-097	IPG-M.Tech	The Product Company
69	Shivam Sharma	2016IPG-098	IPG-M.Tech	Goldman Sachs
70	Shivendra Pratap Singh	2016IPG-101	IPG-M.Tech	Amazon
71	Shriyan Jalan	2016IPG-102	IPG-M.Tech	Reliance Jio
72	Shubham Bhattacharyya	2016-IPG-103	IPG-M.Tech	Gommt
73	Shubhanker Srivastava	2016IPG-104	IPG-M.Tech	Innovaccer
74	Sugata Roy	2016IPG-105	IPG-M.Tech	WEBEL
75	Surendra Singh Gangwar	2016IPG-107	IPG-M.Tech	EDGISTIFY
76	Surya Pratap Singh	2016IPG-109	IPG-M.Tech	Xiaomi Technology India
77	Swarup Padhy	2016IPG-110	IPG-M.Tech	Early Salary
78	Tarun Kumar	2016IPG-111	IPG-M.Tech	Workcell Solutions Private Limited
79	Vejjudeepesh	2016IPG-113	IPG-M.Tech	Exposys Data Labs
80	Vemula Hasith	2016IPG-114	IPG-M.Tech	Cloud Technologies
81	Venkata Keerthi Gottimukkala	2016IPG-115	IPG-M.Tech	Exposys Data Labs
82	Vidit Gupta	2016IPG-116	IPG-M.Tech	Verzeo
83	Vishakh Gupta	2016IPG-118	IPG-M.Tech	UHG
84	Yash Chaudhary	2016IPG-119	IPG-M.Tech	Foreign Admits
85	Yash Jaiswal	2016IPG-120	IPG-M.Tech	ForeignAdmits
86	Yatharth Saxena	2016IPG-121	IPG-M.Tech	Interviewbit
87	Shraddha Tripathi	2016IPG-122	IPG-M.Tech	Cricsurf
88	Ankit Sharma	2016IPG-016	IPG-MBA	Tata Steel

Sr.No	Name	Roll No	Stream	Name of Organisation
89	Ayush Kumar Rajoriya	2016IPG-024	IPG-MBA	The Smart Sync
90	Deepankar Singh	2016IPG-034	IPG-MBA	Finlatics
91	Divyanshu Tripathi	2016IPG-036	IPG-MBA	Indiavidual Learning Pvt. Limited
92	Jayprakash Maurya	2016IPG-048	IPG-MBA	Finlatics
93	Oshin Malviya	2016IPG-066	IPG-MBA	MedTourEasy
94	Aditya Sharma	2019MBA-02	PG-MBA	Peacock Solar
95	Amisha Raj	2019MBA-03	PG-MBA	Simanchal detective services Pvt Ltd
96	Ankit Arora	2019MBA-04	PG-MBA	Lenovo India Pvt. ltd.
97	Arunangshu Banerjee	2019MBA-06	PG-MBA	SPMR Technologies pvt. Ltd.
98	Ayushi Sharma	2019MBA-07	PG-MBA	Aditya Birla Group
99	Deepti Mudgal	2019MBA-08	PG-MBA	Fincity
100	Gaurav Kumar Singh	2019MBA-09	PG-MBA	Sonalac Paints & Coatings Ltd.
101	Jeetendra Singh Patel	2019MBA-12	PG-MBA	Finlatics enabling insights
102	Kumar Chiranjeeb	2019MBA-14	PG-MBA	Chai Sutta Bar (Startup)
103	Manisha Dixit	2019MBA-15	PG-MBA	Finlatics
104	Mansi	2019MBA-17	PG-MBA	Lenovo India
105	Mayank Yadav	2019MBA-18	PG-MBA	Finlatics
106	Pooja Talreja	2019MBA-21	PG-MBA	SPADE EMS
107	Prateek Pradhan	2019MBA-22	PG-MBA	NewTech Medical Devices
108	Rupal Barua	2019MBA-25	PG-MBA	Praedico Global Research

Visitors to the Institute for the year 2020-21

Due to Covid 19 pandemic most of the events of the institute were organised in online mode and the guests/experts attended the events in online mode., details as under:

S.No	Name of Visitor	Particular	Date of Visit
01	Prof. N.B. Singh (VC, HBTU Kanpur)	National Education Policy 2020 in the context of research	09/12/2020
02	Prof. Bharatsharan Singh	National Education Policy 2020 in the context of research	09/12/2020
03	Prof. Atul Kothari	National Education Policy 2020 in the context of research	09/12/2020
04	Prof. Ravi Prakash Tiwari	National Education Policy 2020 in the context of research	09/12/2020
05	Prof. Chandra Sekhar Malviya	National Education Policy 2020 in the context of research	09/12/2020
06	Dr. Umashankar Pachori	Implementation of National Education Policy 2020, challenges and opportunities	06/03/2021

Faculty Areas of Research, Development and Extension

The faculty members at ABV-IIITM, Gwalior are committed teachers and leading researchers in their domain of research. The faculty members have sharedspirit, reflected in both research and in the classroom. With anadequate student body and warm community, ABV-IIITM students get unparalleled access to this knowledge. Faculty members are known for their conducts of FDPs/MDPs and workshops/ conferences across the country. They have published their work in high impact journal of international repute. They have also authored number of books in their areas of expertise with recognised publishers. Following table is the indicative research interests of the faculty members.

S.No.	BroadArea	Themes
1	Nano Science &Technology	Material Properties. Sensor Design & Application. Nano- Electronics. GNR in Spintronics. Nano-CMOS. Nano-FET EMS. EMS. Nano-Risk Management
2	Signal & Image Processing	Digital Signal processing. Digital Filter Design. Speech Processing. Digital &Wireless Communication. CDMA Systems. AI. Bio-medicalImage Processing
3	Network & Information Security	Operating Systems. Computer networking. Network Security. Network Management. Wireless Adhoc Networks. Data Security. Multi-Media Security. Wireless Network Security. Cryptography. Quantum Crypto- graphy. Applications of Biometricsin Security
4	Computing	Softcomputing. Quantum computing &Information. Distributed and Computingand Optimization Techniques. Gridcomputing. Parallel computing. Mobilec omputing. Data Mining. Bio-Informatics. Reliability. Multi-objective Optimization. Computational Physics. Computational Biology
5	Intelligent System Design	Artificial Intelligence, Robotics, Neural Networks Fuzzy and Genetic Systems, Nature Inspired Approaches, IT in Robotics, Evolutionary Computing
6	Modeling &Simulation	Financial Modeling. Time Series Analysis. Pattern Formationin Biological System. Material &Device Modeling. Innovation &Diffusion in Marketing Model, Environmental Modeling. System Reliability
7	Marketing	Customer Relationship Management. Brand Management. Service Management. New Product Development. Neuro- Marketing. Social Marketing
8	Finance	Analysis of Financial Systems. Financial Risk Management. Stock Market Analysis. Econometric Analysis
9	Operations	Supply ChainManagement. Technology Management. Total QualityManagement. Service Operations Management. Operations Management
10	IT &Systems	Business Process Management. Enterprise Systems. Software Project Management. Analysis and Design of Information Systems .E-Business. Modeling and Simulation of Business Systems.
11	Governance &Management	E-Governance. Public Private Partnerships. Public Policy Analysis. Development Management. Non-for-profit Management
12	Human Resource Management	Training &Development. Performance Appraisal. Compensation. Talent Management. Consumer Behavior
13	Organizational Behaviour	Behavioral Application of Organization theory to study Institutional Reforms Leadership. Entrepreneurship. Motivation
14	IT Enabled Products & Services	E-Education. E-Governance. E-Health. E- Tourism. E- Business. IT Localization
15	Theoryof Reliability	Software Reliability. Fault Detection. Life testing. Reliability Growth Modeling. Industrial Reliability. Reliability of Robotic Systems. Fuzzy Logic. Soft computing

List of Faculty and their Expertise

Prof G K Sharma

Ph D (Uni.of Roorkee,now IIT-Roorkee)

Professor

Areas of Interest: Energy-Aware Computing, Approximate Computing, System-on-Chip (SoC) Architectures

Prof Rajendra Sahu

Ph D (IIT-Kharagpur)

Professor

Areas of Interest: ERP, Supply Chain Management, Knowledge Management, E-Governance, System Analysis &Design, Modeling and Simulation, Cost Accounting

Prof Shashikala Tapaswi

Ph D (IIT-Roorkee)

Professor

Areas of Interest: Image &Video Processing, Mobile Network, Adhoc Network

Prof Anupam Shukla (On Lien as Director, IIT Pune)

Ph D (NIT-Raipur)

Professor

Areas of Interest: Soft Computing, AI, Speech Processing, Biomedical and Bio-informatics

Prof AdityaTrivedi

Ph D (IIT-Roorkee)

Professor

Areasof Interest: Digital Communication, Adaptive Signal Processing

Prof Mahua Bhattacharya

Ph D (Calcutta University)

Professor

Areas of Interest: Medical Image Processing, Soft Computing, Pattern Recognition, Artificial Intelligence

Prof K VArya

Ph D (IIT-Kanpur)
Professor
Areas of Interest: Image Processing, Biometrics, Information Security, Wireless Adhoc Networks, Secure Image Transmission,

Prof P K Singh

Ph D (IIT-Kharagpur)
Professor
Areas of Interest: Soft Computing, Multi-/Many-Objective Optimization, Data Mining, Computer Networks, Wireless and Sensor Networks

Prof Anurag Srivastava

Ph D (Barkatullah University, Bhopal); PDF (Uppsala University, Sweden)
Professor
Areas of Interest: Computational Materials Science, Nano- Electronics (Device Modelling), Air and Water Pollution Sensors, Energy Devices (Supercapacitors and Battery), Waste Management IT Product and Services, E-Governance, ITApplications in Health Sector

Prof Manoj Patwardhan

PhD (Jiwaji University)
Professor
Areas of Interest: Human Resource Management, Change Management, Organizational Behavior, Leadership &Talent Management

Prof Joydeep Dhar

Ph D (IIT-Kanpur)
Professor
Areas of Interest: Industrial Mathematics: Mathematical Modelling and Simulation in Environmental, EMS, Management systems: Financial Mathematics and Fuzzy logic Applications

Prof Naval Bajpai

Ph D (Pt. Ravishankar Shukla University, Raipur)
Professor
Areas of Interest: Business Statistics, Business Research Methods, Multivariate Analysis, Marketing Research & Organizational Behaviour

Prof Pankaj Srivastava

Ph D (Allahabad University)
Professor
Areas of Interest: Theoretical Condensed Matter Physics, Computational Nanoscience, Quantum Computing, Nanoelectronics, VLSI.

Prof Manisha Pattanaik

Ph D (IITKharagpur)
Professor
Areas of Interest:
CMOS, Device/Circuits/System Co-Design, Characterization and Design of Low Power Logic and Memory

Prof Gyan Prakash

Ph D (IIT- Kanpur)
Professor
Areas of Interest: Supply Chain Management, Service Quality, Management Information System, Business Analysis and Intelligence, Public Systems: e-Governance, Health and Environment

Dr Ritu Tiwari (On Lien-IIIT Pune)

Ph D (NIT Raipur)
Associate Professor
Areas of Interest: Robotics, Artificial Intelligence, Soft Computing and Applications

Dr Gaurav Agrawal

Ph D (Bundelkhand University, Jhansi)
Associate Professor
Areas of Interest: Financial Economics,
International Finance, Monetary Economics,
Investment Management.

Dr Ajay Kumar

Ph D (IIT Roorkee)
Associate Professor
Areas of Interest: Reliability, Statistics, Fuzzy Sets and Fuzzy Logic, Optimization, and Soft Computing

Dr K K Pattanaik

Ph D in Engineering (BIT-Mesra)
Associate Professor
Areas of Interest: Grid Computing, Mobile Computing,
Multi Agent Systems

Dr Manoj Kumar Dash

Ph D (Berhampur University, Orissa)
Assistant Professor (Grade–I)
Areasof Interest: Marketing Science, Ecomoetrics Modeling in Marketing, Marketing Analytics,
Marketing Reseach, Consumer Behaviour

Dr Vinay Singh

Ph D (IIT Kanpur)
Assistant Professor (Grade–I)
Areas of Interest: Agile and Strategic Approach in Business Management, IT for Business,
ERP System, MIS, ITES, Software Project Management, Innovation and Entrepreneurship, Data
Mining and Knowledge Management

Dr Vishal Vyas

Ph D (Vikram University, Ujjain)
Assistant Professor (Grade–I)
Areas of Interest: Financial Risk Management, Behavioural Finance, Project Feasibilityand
Finance, Derivatives, Portfolio Management and Investment Analysis

Dr W Wilfred Godfrey

PhD (IIT, Guwahati)
Assistant Professor (Grade–I)
Areas of Interest: Artificial Intelligence-Robotics, Soft Computing, Multi-Agent Systems,
Machine Learning

Dr Anuraj Singh

Ph D (IIT-Roorkee)
Assistant Professor (Grade–I)
Areas of Interest: Mathematical Modeling, Nonlinear Dynamical Systems, Computational
Biology, Control Theory

Dr Prasenjit Chanak (On Lien since Aug 2020-IIT BHU)

Ph D (IIEST Shibpur)

Assistant Professor (Grade-II)

Areas of Interest: Data Structure, Mobile Computing, Wireless Sensor Networks, Computer Network

Dr Saumya Bhadauria

Ph D (IIT-Indore)

Assistant Professor (Grade-II)

Areas of Interest: Computer Organization and Architecture, Information security, Network security, Optimization Techniques

Dr Neetesh Kumar

(Resigned on 29th June 2020 to join IIT Roorkee)

Ph D (JNU, New Delhi)

Assistant Professor (Grade-II)

Areas of Interest: Design and Analysis of Algorithms, DBMS, Parallel Computing, Cloud Computing

Dr. Gaurav Kaushal

PhD (IIT, Roorkee)

Assistant Professor (Grade-II)

Areas of Interest: VLSI

Dr. Jeevaraj S

Ph.D. (NIT Tiruchirappalli)

Assistant Professor (Grade-II)

Areas of Interest: Fuzzy Mathematics

Dr. Arun Kumar

Ph.D. (ABV-IIITM, Gwalior)

Assistant Professor (Grade-II)

Areas of Interest: Marketing

Dr. Somesh Kumar
Ph.D. (IIT Ropar)
Assistant Professor (Grade-II)
Areasof Interest: VLSI Design & CAD
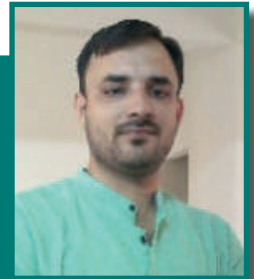
Dr. Sunil Kumar
Ph.D. (IIT Guwahati)
Assistant Professor (Grade-II)
Areas of Interest:

Dr. Binod Prasad
Ph.D. (NIT Durgapur)
Assistant Professor (Grade-II)
Areas of Interest:

Dr. Debanjan Sadhya
Ph.D. (IIT-BHU)
Assistant Professor (Grade-II)
Areas of Interest:

Dr. Vinal Patel
Ph.D. (IIT Gandhinagar)
Assistant Professor Grade-II
Areas of Interest:Signal Processing

Dr. Santosh Singh Rathore
Ph.D. (IIT Roorkee)
Assistant Professor (Grade-II)
Areas of Interest:Computer Science/ Software Engineering

Dr. Pinku Ranjan
Ph.D. IIT (ISM), Dhanbad
Assistant Professor (Grade–II)
Areas of Interest: Electrical / Electronics

Dr. Rajesh Rajagopal
Ph.D. (IISST)
Post - Doc (IIT Madras)
Assistant Professor (Grade–II)
Areas of Interest: Operations Management

Adjunct Faculty

Prof V S R Krishnaiah Director (NIC) New Delhi	**Prof H M Gupta** Ex. Professor, IIT Delhi	**Dr Manish Gupta,** Adjunct faculty, IIIT Bangalore
Prof Prem Pyara Ex-Dean, Dayalbagh University	**Prof N K Sharma** Ex. Professor,IIT Kanpur	
Prof G S Singh Ex. Professor IIT Roorkee	**Dr A K Singh** Ex-Commissioner IRS Chennai	

ADMINISTRATIVEOFFICERS

GROUP "A"OFFICERS

Shri RamPhal Dwivedi
MCA, MPM, LLB
Registrar

Shri Pankaj Gupta
M.Com, MBA
Joint Registrar

Shri D.P. Singh (On Lien)
(on deputation to AIIMS, Bhopal) MBA, MA, LLB.
Joint Registrar

Shri Anil Garg
M.Com, MBA, LLB
Assistant Registrar

Shri Sandeep Upadhyay
MBA
Assistant Registrar

Faculty/Officer, who were on Lien/Deputation/Repatriation during year 2020-21

• Prof. Anupam Shukla as Director IIIT Pune w.ef. from 13.08.2018

• Mr D P Singh, relieved from ABV-IIITM Gwalior to join AIIMS Bhopal as Deputy Director (Admn.) w.e.f 21.09.2020 on deputation.

• Dr. Ritu Tiwari, Associate Professor, ABV-IIITM Gwalior is on lien for the period of two year w.e.f. 25/07/2019 to 24/07/2021 to serve as Professor at IIIT Pune.

Faculty/Officer, who resigned/left the Institute during year 2020-21

• Dr Neetesh Kumar was relieved from the post of Assistant Professor of ABV-IIITM Gwalior on 29th June 2020 to join IIT Roorkee.

Officers and Staff

Table below details name of the staff members and their designation:

S.No.	Name of Employee	Designation
1	Mr. Ram Phal Dwivedi	Registrar
2	Mr. Pankaj Kumar Gupta	Joint Registrar
3	Mr. D. P. Singh	Joint Registrar
4	Mr. Anil Kumar Garg	Assistant Registrar
5	Mr. Sandeep Upadhyay	Assistant Registrar
6	Mr. Dinesh Kr. Dwivedi	Security Officer
7	Dr. Ekta Sakwar	Junior Superintendent
8	Mr. Virendra Kumar Joshi	Junior Superintendent
9	Mr. Sanjay Kumar Soni	Junior Superintendent
10	Dr. J. P. Sharma	Junior Superintendent
11	Mr. Vijay Kr. Dwivedi	Junior Superintendent
12	Mr. Narendra Singh Tomar	Junior Superintendent
13	Ms. Deepa Singh Sisodiya	Senior Technician
14	Mr. Trepan Singh Koundal	Cashier
15	Mr. Hemant Pratap Verma	Senior Technician
16	Mr. Lokendra Singh Mavai	Senior Technician
17	Mr. Mahesh Singh Dhakad	Senior Technician
18	Mr. Rampal Singh Kushwah	Senior Technician
19	Mr. Alok Singh Jadon	Senior Technician
20	Mr. Narendra P S Chauhan	Senior Technician

Conferences/Symposiums/ FDPs/MDP/Short Term Training Programmes Conducted during the year 2020-21

S. No.	Date	Title	Coordinator	No. of Participants
01	21.06.2021-25.06.2021	Wireless Communication Technologies	Prof. Aditya Trivedi	150
02	8-12 October 2021'	Faculty Coordinator, Faculty Development Programme on Application of Econometrics in Management and Social Science Research funded by ATAL AICTE New Delhi	Dr Manoj Kumar Dash	93
03	December 11, 2021	National Webinar on Agriculture 4.o Jointly Organized By MSME, New Delhi & TBI Centre ABV-IIITM, Gwalior	Prof Rajendra Sahu and Dr Manoj Kumar Dash	200
04	25th December 2021	Faculty Coordinator, National workshop on Block chain Technology & Its Application, organised by TIIIC, ABV IIITM Gwalior	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
05	21-21 May 2021	Faculty Coordinator, National conference on Open Innovation on ICT and IT product for COVID 19 Management, organized by TIIC, Indian Institute of Information Technology and Management Gwalior	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
06	21st April 2021	Faculty Coordinator, National Business Plan conference organized by TIIC, Indian Institute of Information Technology and Management Gwalior,	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
07	27-28 February 2021	Faculty Coordinator, National Conference on Entrepreneurship and Innovation organized by TIIC, Indian Institute of Information Technology and Management Gwalior funded by MEITY Government of India, 27-28 February 2021	Prof Rajendra Sahu and Dr Manoj Kumar Dash	150
08	4-8 Oct. 2021	ATAL-FDP on "Quantum Computing", ABV-IIITM, Gwalior	Prof. Pankaj Srivastava	58
09	6-10 November 2020	FDP on Technology Management	Prof Gyan Prakash	92
10	23-27 November 2020	Machine Learning and Applications (MLA-2020)	Prof P K Singh	99
11	20-24 December 2020	Multivariate Data Analysis for Engineering, Science and Management	Dr Ajay Kumar	106
12	16-20 February 2021	Research Methodology and Scientific writing for Engineering and Management	Dr Gaurav Agarwal	127

Workshop/Conferences/Symposiums attended by Faculty Member during Year 2020-21

Name	W/C/S	Int./Nat.	Title	Date	Place
Prof. Pankaj Srivastava	W	National	Online FDP on Advanced Materials (Fabrication, Characterization and Applications.	20-25 July, 2020	KIIT, Bhubaneswar.

Workshop/Conference/Training Programs (Online/Offline) attended by the Non-faculty Officers and Staff during 2020-21:

S.No.	Name of Officer/Staff	Purpose/Topic	Duration	Period From	Period To	Organized by / Place
1	Mr. Narendra Pratap Singh Chauhan (Senior Technician)	Contract Management & Dispute Resolution	10:00 AM to 05:00 PM	08/02/2021	08/02/2021	Systematic Institute of Economic Research & Development (SIERD) New Delhi / **Online Training**
		Public Procurement with e-Procurement	10:00 AM to 05:00 PM	09/02/2021	09/02/2021	
		Government e-Market Place (GeM)	10:00 AM to 05:00 PM	10/02/2021	10/02/2021	

Events/ Activities and Orientation Programme organized through LRC

S No	Date	Name of Events	Coordinator/Organizer
01	14-28 May 2020 11:30am-12:30pm	E-Shodh Sindhu Web of Science Certification Series (Online Webinar)	Through LRC: e-Shodh Sindhu: Consortium for Higher Education Electronic Resources, INFLIBNET Centre, Ahmedabad (Gujarat)
02	19th May 2020 11:00 AM Onwards	Effective Use of the Taylor and Francis Platform (Online Webinar)	Through LRC: e-Shodh Sindhu: Consortium for Higher Education Electronic Resources, INFLIBNET Centre, Ahmedabad (Gujarat)
03	13th July 2020 03:30 PM Onwards	Webinar on Effective Use of TURNITIN Web-Tool (Online Webinar)	Through LRC: M/s TurnitIndia Education Pvt. Ltd. Noida
04	08th January 2021 06:00 PM	Webinar on Survey Design of the Consumer Pyramidshold Survey-CMIE	Through LRC: M/s Centre for Monitoring Indian Economy Pvt. Ltd, New Delhi

Events of Institute (2020-2021)
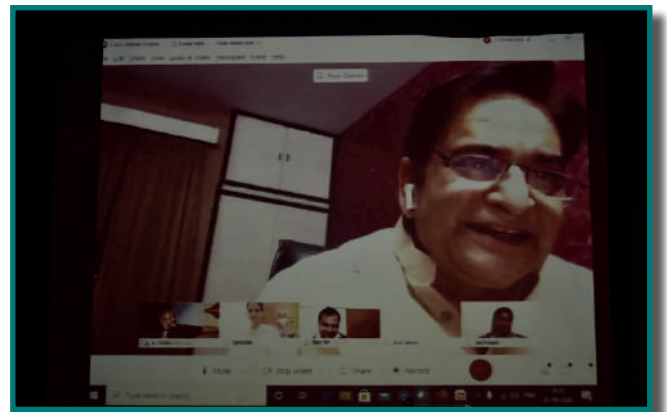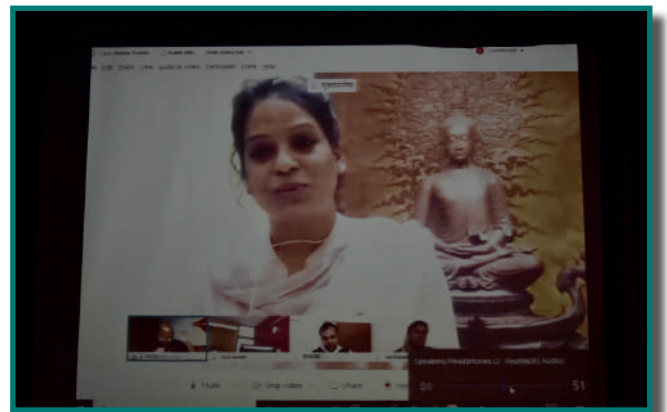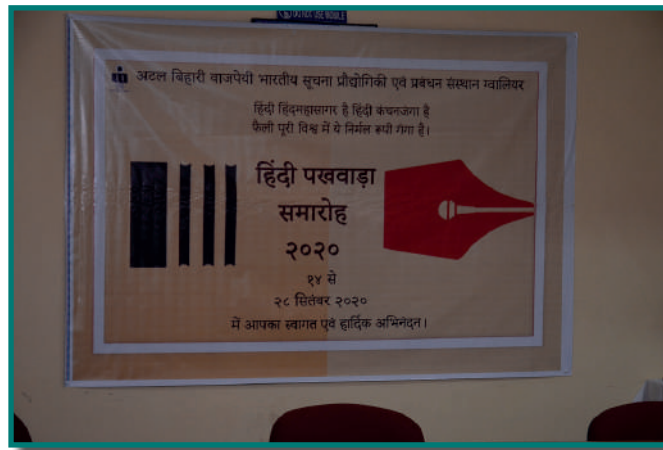
APRIL-2020

Food Distribution to poors

AUGUST-2020

Independence Day, 15/08/2020

Hindi Pakhwada

Republic Day

Fit India Movement-

FIT INDIA FREEDOM RUN (1st September - 12th September, 2020)

With reference to letter No. F- 21-06/2019-TS dated 14th August, 2020 received from MHRD, the faculty members and staff members of the institute are requested to actively participate in "**FIT INDIA FREEDOM RUN**" on 2nd, 5th, 9th and 12th of September, 2020, with following instructions

- a) Run a route of their choice, at a time that suits them.
- b) Break-up their runs.
- c) Run their own race at their own pace.
- d) Track kms manually or by using any tracking app or GPS watch.

Live telecast on Doordarshan of Launch of Fit India Movement by Hon'ble Prime Minister was seen by the staff, students and faculty of IIITM Gwalior followed by Fitness Pledge administered by the Prime Minister.

Rashtriya Ekta Diwas

Institute has organised Rashtriya Ekta Diwas on 31st October, 2020. On the birth of Sardar Vallabhbhai Patel is celebrated as Rashtriya Ekta Diwas (National Unity Day) every year. ABV-IIITM, Gwalior has proudly celebrated the same on 31-Oct-2020, with a "Run for Unity" campaign.

Vigilance Awareness Week

"**Vigilance Awareness Week**" was observed from 28th October to 02nd November 2020, a *Pledge* on Vigilance Awareness was orgainsed and was attended by students, staff and faculty of institute.

National Education Day

Government of India passed a resolution dated 11th September, 2008 to declare 11th November, the Birth Anniversary of Shri MaulanaAbulKalam Azad, the great freedom fighter, eminent educationist and the first Union Minister of Education, as the **National Education Day**. On this auspicious day, our Institute **ABV-IIITM Gwalior** has organized interactive programs like Essay writing, Slogan writing competition, Rally etc.

Constitution Day

ABV-IIITM Gwalior has celebrated "Constitution Day" on 26th Nov, 2020.Faculty members, Staff and Students have taken part in the Preamble-reading followed by live screening of Speech on Constitution Day.

LEARNING RESOURCE CENTER

PURPOSE: The purpose of the library is to connect students, scholars, faculty, and other concerned to the world of information and ideas.

SCOPE: The scope of the library extends to all the teaching staff/non-teaching staff/students/research scholars of this institute. In certain circumstances persons from outside the institute can also access the facility with prior permission from the concerned authority.

OUR MISSION: LRC, Library at the ABV-IIITM Gwalior is privileged to support the institute's march towards it's vision "Global excellence in knowledge economy". It strives to connect outstanding faculty and brilliant engineering, management students to knowledge and stage of the art of their disciplines and thereby strengthens the aspirations on expectation of the research and teaching work at LRC, Library of ABV-IIITM Gwalior, one of the largest learning resource center in Gwalior is truly hub of knowledge.

RESPONSIBILTY: The responsibility for day to day administration of the library lies with the Chairman, Library Committee

STEPS & ACTIVITIES: At present the institute library has a separate building, it's nominated as the Learning Resource Center (LRC) the building plinth area is 5,620 sq. ft. and it is located in the central place of the institute. It serves user on all the days except on three National Holidays and restricted usage during weekly holidays, It has a comprehensive collection of literature predominantly related to information technology and management and its allied subjects to meet the present and future information needs of its users. The library activities are computerized using "Alice Window 6.0".

ABV-IIITM, Gwalior encourages the use of library for professional purpose. Individuals and Organizations can use the library regularly either on a deposit or non-deposit basis on payment with prior approval from the concerned authority.

Statistical Information during April 2020 - March 2021

S N	Titles Information	Production During 2019-2020	Production During 2020-2021	Increase
1	Stack Section (25861), Donated (1347), Book Bank (2962)	30126	30170	44
2	E-Books	9433	10618	1185
3	Print Journals	16	–	–
4	E-Resources (E- Journals)	44 (e-journals 6763)	46 (e-journals 6763)	02
5	Number of M Tech (1720), MBA (835 Thesis include [IPG], Ph D Thesis (88)	2643	2673	30
6	Video Cassettes	165	165	–
7	Text Book CD's= (1822), NPTEL Lecture CD's (921) & DVD's (247)	3129	3129	–
8	Annual Report	225	227	02
9	Bound Journals	976	976	–
10	Magazines	50	–	–
11	Newspapers	19	07	–

ABV-IIITM has extended access to information resources through a virtual library set-up to access databases.

Some of the salient features of the library are:

- Member of E-Sodh Sindhu, INFLIBNET Ahmadabad (Setup by MHRD)
- Member of National Digital Library (NDL) Setup by MHRD under its National Mission on Education through Information and Communication Technology (NME-ICT)
- Member of DELNET (Developing Library Network), New Delhi
- Member of Indian Reprographic Rights (IRRO), New Delhi
- Member of ILA (Indian Library Association), New Delhi
    - Access to over 6778 online journals made possible through internet
- Economic database provided by CMIE

In addition to approximately 30,000+ text books, reference books, and reading material in various areas of Information Technology and Management the library subscribes following (online e-resources also). A list of books related to Philosophy, Yoga, Personality development etc. are also available in both English and Hindi language.

Electronic Resources Available at Learning Resource Center

S No	Name of E-Resource	Website
1	ACM Digital Library	http://portal.acm.org/portal.cfm
2	The IEEE/IEE Electronic Library (IEL)	http://ieeexplore.ieee.org/
3	Springer Link	http://www.springerlink.com
4	MathSciNet	http://www.ams.org/mathscinet
5	Science Direct:	http://www.sciencedirect.com
6	EBSCO's Business Source Premier	http://search.epnet.coms
7	Indiastat.com	http://www.indiastat.com

S No	Name of E-Resource	Website
8	J-Stor	http://www.jstor.com
9	Emerald insight	http://www.emeraldinsight.com
10	Economic & Political Weekly	http://www.epw.in/frontpage?0=ip_login_no_cache%3D1d561b6288ded347d725b46f4ce160a1
11	Institute for Studies in Industrial Development (ISID) Database	http://isid.org.in/home.html
12	JGate Plus (JCCC)	http://jgateplus.com/search/
13	Nature	http://www.nature.com/index.html
14	Oxford University Press	http://www.oxfordjournals.org/en/
15	Web of Science Lease Access	http://apps.webofknowledge.com
16	Taylor & Francis e-Books Collection (393 titles)	http://www.crcnetbase.com/
17	IEEE-Wiley e-Books collection (480 titles)	http://ieeexplore.ieee.org/
18	Springer eBooks Collection (7415 titles)	http://www.springerlink.com
19	PROWESS (IP Based)	https://prowessiq.cmie.com/
20	Economic Outlook –IP Bases (Formerly Business Beacon & EIS)	http://economicoutlook.cmie.com/
21	Industry Outlook (IP Based)	http://industryoutlook.cmie.com/
22	Trade$_{Dx}$ (IP Based)	https://tradedx.cmie.com/
23	Communications of the ACM	http://cacm.acm.org/
24	Journal of Interconnection Networks	http://www.inderscience.com/jhome.php?jcode=ijsi
25	Evolutionary Computation	http://www.mitpressjournals.org/loi/evco
26	Journal of Management	http://jom.sagepub.com
27	Journal of Entrepreneurship	http://joe.sagepub.com
28	Physical Review Fluids	https://journals.aps.org/prfluids/
29	Physical Review Applied	https://journals.aps.org/prapplied/
30	Physical Review letters	https://journals.aps.org/prl/
31	Reviews of Modern Physics	https://journals.aps.org/rmp/
32	Physical Review A	https://journals.aps.org/pra/
33	Physical Review B	https://journals.aps.org/prb/
34	Physical Review C	https://journals.aps.org/prc/
35	Physical Review D	https://journals.aps.org/prd/
36	Physical Review E	https://journals.aps.org/pre/
37	Physical Review Online Archive- PROLA	https://journals.aps.org/archive
38	Physical Review Accelerators and beams	http://journals.aps.org/prstab/
39	Physical Review Physics Education Research	http://journals.aps.org/prstper/
40	Physical Review X	http://journals.aps.org/prx/
41	Physics	http://physics.aps.org/
42	Physical Review Materials	journals.aps.org/prmaterials
43	Grammarly (web-tool)	https://app.grammarly.com
44	TURNITIN (web-tool)	https://www.turnitin.com/
45	MyLoft Web-tool	https://app.myloft.xyz/browse/home
46	SCOPUS	https://www.scopus.com/

Research Laboratories

The institute has laboratories required for various courses related to IT, Management and Applied Sciences. The laboratory facilities are continuously being enhanced to cater the ever expanding academic and research needs. Various IT tools are used in functional areas likes marketing research, decision support system, operational research and others. These laboratories have housed more than four hundred Pentium based computer systems of different makes such as Compaq, Digital, HCL and Silicon Graphics etc. There are many servers at present to cater various computing needs of the institute.

Lab No.	Name of the Laboratory	Location	Name of the Faculty Incharge	Email Faculty I/c ***@iiitm.ac.in	Primary Focus
L–2	Data Communication	C-003	Dr Aditya Trivedi	Atrivedi	Teaching
L–3	Secured Computing	C-006	Dr S Tapaswi	Stapaswi	Research
L–4	Communication Skills	C-009	Dr Ritu Tiwari	Ritutiwari	Teaching
L–5	VLSI Design	C-I03	Dr Manisha Pattanaik	manishapattanaik	Research &Teaching
L–6	Communication Systems	C-115	Dr Aditya Trivedi	Atrivedi	Research &Teaching
L–7	Hardware	C-203	Dr Anupam Shukla	anupamshukla	Teaching
L–8	Digital Logic Design	C-213	Dr Ritu Tiwari	ritutiwari	Teaching
L–9	Visual Information Processing Research	D-115	Dr Mahua Bhattacharya	mb	Research
L–10	Advanced Networking	D-203	Dr P K Singh	pksingh	Research &Teaching
L–11	Electrical and Electronics (Basic)	E-002	Dr Anurag Srivastava	anurags	Teaching
L–12	Engineering Physics	E-003	Dr Pankaj Srivastava and Dr Anurag Srivastava	Pankajs anurags	Teaching
L–13	Mathematical Modeling andSimulation	E-I03	Dr Joydip Dhar	jdhar	Research &Teaching
L–14	Computational Nano Scienceand Technology (AMR and NMR Groups)	E-112	Dr Anurag Srivastava and Dr Pankaj Srivastava	anurags pankajs	Research
L–15	Sponsored Project	E-203	Dr Anupam Shukla	anupamshukla	Research
L–16	Soft Computing & Expert System	E-2II	Dr Anupam Shukla	anupamshukla	Research &Teaching
L–17	Computational Intelligence and Data Mining Research	D-001	Dr P K Singh	pksingh	Research
L–18	Linux Lab	A-213	-	-	Research
L–19	Information Security Lab	D-002	Dr K VArya	kvarya	Research &Teaching
L–20	Wireless Sensor Network	A-116	Dr K K Pattanaik	kkpatnaik	Research
L–21	Medical Informatics	D-002	Dr M Bhattacharya	mb	Research &Teaching
L–22	Behavioural Economics and Analytics laboratory	D-205	Dr Manoj Kr. Dash	manojdash	Reseach & Consultancy
L–23	Robotics Lab	A-203	Dr WWilfred Godfrey	godfrey	Research
L–24	Robotics and Intelligent System Design Lab	C-213	Dr Ritu Tiwari	ritutiwari	Research
L–25	Thin Clinet Lab	A-213	Dr Ritu Tiwari	ritutiwari	Research
L–26	Enterprise Integration Lab	D-104 add room	Dr Manoj Patwardhan	manojp	Research
L–27	Data Analysis Lab for Business Management and Social Science Research	C-210	Dr Naval Bajpai	nbajpai	Data Analysis

Lab No.	Name of the Laboratory	Location	Name of the Faculty Incharge	Email Faculty I/c ***@iiitm.ac.in	Primary Focus
L–28	Emerging Computing Lab	LT-2 (102)	Dr Saumya	saumya	Teaching & Resesrch
L–29	IOT based lab	D-008	Dr P Chanak	pchanak	Teaching & Resesrch
L–30	IEEE project lab	F-203	Dr Someh Kumar	somaesh	Resesrch
L–31	Speech and Image Processing Lab	F- 210	Dr Ritu Tiwari	Ritutiwar	Teaching & Resesrch
L–32	Machine Learning and Software Development Lab	LT2:102	Dr PChanak	Pchanak	Tecahing & Resesrch

Ongoing Sponsored Projects during 2020-21

S. No.	Title of Project	Funding Agency	PI(S)/faculty Incharge
1	Vision Based Expert System Design for Cotton Plucking	CSIR, New Delhi	Prof. Mahua Bhattacharya
2	To study the effect of electromagnetic radiation on biological cell /tissues Blood cell using Non invasive imaging	SERB , New Delhi	Prof. Mahua Bhattacharya
3	Morphological and Neurobiological Changes in Spinocerebellar Ataxia Affected Patients (SCA) through MRI Techniques USING Computer Vision Based Analysis"	SERB,DST,New Delhi	Prof. Mahua Bhattacharya
4	NIMAT	DST New Delhi	Prof Rajendra Sahu
5	Industrial and Domestic monitoring and control using a decentralized cyber physical system.	SERB NEW DELHI	Prof Aditya Trivedi
7	Special Manpower Development Programme for chips to system Design	DeITY/MCIT	Prof G K Sharma /Prof. Manisha Pattanaik
8	ISEA Phase - II	DeITY New Delhi	Prof. Shashikala Tapaswi
9	Technology Incubation & Development of Entrepreneurs (TIDE 2.0) in the areas of Electronics and ICT	MCIT, DIT, New Delhi	Prof. Anurag Srivastava (Till April 2020) Dr. Manoj Kumar Dash (Since Dec 2020)
10	Development of a smart monitoring system for health and oestrous of dairy cows in remote location	DST,New Delhi	Dr Prasenjit Chanak
11	Design and performance evaluation of 2D Materials in MOS Devices for low power VLSI application	DST,New Delhi	Dr Subhra Dhar
12	Deep learning based CAD system for lung cancer diagnosis	WOS-/DST New Delhi	Ms Jenkin R Suji
13	Benzene Derivatives based single electron transistor quantum dots for toxic gas sensing	SERB,DST,New Delhi	Prof Anurag Srivastava
14	IoT based automated Real Time and effective Traffic Signal Scheduing for Smart City	DST ,New Delhi	Dr Neetesh Kumar/Prof S Tapaswi
15	UNNAT BHARAT ABHIYAN	MHRD,	Dr Vishal Vyas
16	Accessibility and Adaptability of Ayushman Bharat Program for Social Security of Elderly in Central India "	ICSSR New Delhi	Dr Gaurav Agarwal
17	Assistive Learning Device for Children with Hearing Loss	SERB NEW DELHI	Dr Vinal Patel
18	Compact Modelling for Quasi-Ballistic Transport in GAA MOSFET and Design of Radiation Hardened SRAM Array	SERB NEW DELHI	Dr Gaurav Kaushal
19	Modelling for adaptability and utilisation of Pradhan Mantri Arogya Yojana (PMJAY) for the Social securiy of senior citizens in central india	ICSSR,NEW DELHI	Dr Gaurav Agarwal

S. No.	Title of Project	Funding Agency	PI(S)/faculty Incharge
20	Emergency Aware Intelligent Dynamic Traffic Signal System for Smart Cities	CSIR New Delhi	Dr Neetesh Kumar/Prof S Tapaswi
21	Agent based spatial modeling of Covid-19 pandemic for urban areas	SERB NEW DELHI	Dr Wilfred Godfrey Wilson
22	Design and Modeling of Ultra-Scaled Copper-Graphene Hybrid On-Chip Interconnects for Low Power and High – Speed IC Applications with Machine Learning	SERB NEW DELHI	Dr Somesh Kumar
23	Graph Theoretic Approach in Large scale Epidemic and Ecological Models	SERB NEW DELHI	Dr Anuraj Singh
24	Agri Business and Smart Village Incubation Centre	MSME , New Delhi	Prof Rajendra Sahu
25	A Study on exploration of ICT tools for the sustainability of socio-economic development of fishing community of Odisha state "under domain politics, Law and Economics	ICSSR, New Delhi	Dr Manoj kumar Dash
26	" Investigating the role of Social Media in Addressing Public Health Development issues in India: A Multi- Criteria Decision Making Approach" ,	ICSSR, New Delhi	Dr Manoj kumar Dash

Publications/Conferences

Publications reflect the area interests of the faculty and their research resourcefulness.Publications with student co-authorships encourage strong faculty commitment to mentor both research scholars and post graduates in research. In 2020-21, ABV-IIITM faculty members have published books and book chapters by well known publishers in scientific community, detailed in the table below:

Books/Book Chapters

S. N	Authors	Title	Publisher	Year
01	B. ShantBhshan, Anurag Srivastava, Anu, Mohd. Shahid Khan	Single Electron Devices: Concept to realization	IET Publisher (UK) Book DOI: 10.1049/PBCS049E	2020
02	Aditya Trivedi, Praveen Pawar	D2D in UAV Networks	Wiley	2020-21
03	Aditya Trivedi	ICCAI 2020, Springer Conference	Springer	Sep 17-18, 2020
04	Bhattacharyya, Jishnu & Dash, Manoj & Hewege, Chandana & Balaji, M S & Marc, Lim	Social and Sustainability Marketing: A Casebook for Reaching Your Socially Responsible Consumers through Marketing Science.	Routledge, Taylor & Francis New York USA. ISBN 9780367553630	2021
05	Mishra M, Dash M. K, Uppdhaya, D & Kampa R	Resource Efficiency, Sustainability, and Globalization Exploring India-European Union Cooperation,	Apple Academic Press, CRC Group (A unit of Taylor and Francis Group) ISBN 9781771889599	2021
06	Purswani, J., Rajesh, R., Khandelwal, R., & Singh, A.	Book Chapter: Chaos Theory on Generative Adversarial Networks for Encryption and Decryption of Data. In Advances in Bioinformatics, Multimedia, and Electronics Circuits and Signals (pp. 251-260)	Springer, Singapore	2020

S. N	Authors	Title	Publisher	Year
07	Gupta, N., Rajesh, R., & Daultani, Y.	Book Chapter: Investigation on Supply Chain Vulnerabilities and Risk Management Practices in Indian Manufacturing Industries. In Computational Management, Series: Modeling and Optimization in Science and Technologies.	Springer, Singapore	2021
08	Tiwari, S., Daultani, Y., & Rajesh, R.	Book Chapter: Millennial Customers and Hangout Joints: An Empirical Study Using the Kano Quantitative Model. In Computational Management, Series: Modeling and Optimization in Science and Technologies.	Springer, Singapore	2021

In 2020-21 ABV-IIITM faculty members have published several research papers in reputed journals which are presented as under:

2020

1. Agariya, A.K. & Tikoria, J. 2020, "Development and validation of service quality scale for Indian telecom sector", International Journal of Services and Operations Management, vol. 37, no. 4, pp. 477-508.

2. Agarwal, R., Jalal, A.S. & Arya, K.V. 2020, "A review on presentation attack detection system for fake fingerprint", Modern Physics Letters B, vol. 34, no. 5.

3. Agarwal, R., Jalal, A.S. & Arya, K.V. 2020, "Enhanced Binary Hexagonal Extrema Pattern (EBHXEP) Descriptor for Iris Liveness Detection", Wireless Personal Communications, vol. 115, no. 3, pp. 2627-2643.

4. Agrawal, N. & Tapaswi, S. 2020, "A proactive defense method for the stealthy EDoS attacks in a cloud environment", International Journal of Network Management, vol. 30, no. 2.

5. Agrawal, N. & Tapaswi, S. 2020, "Detection of Low-Rate Cloud DDoS Attacks in Frequency Domain Using Fast Hartley Transform", Wireless Personal Communications, vol. 112, no. 3, pp. 1735-1762.

6. Agrawal, S., Srivastava, A. & Kaushal, G. 2020, "N-Doped Zigzag Graphene Nanoribbons for Nanoscale Interconnects", Proceedings of the 2020 IEEE 10th International Conference on "Nanomaterials: Applications and Properties", NAP 2020.

7. Anshu, A.K., Arya, K.V. & Gupta, A. 2020, "View Invariant Gait Feature Extraction using Temporal Pyramid Pooling with 3D Convolutional Neural Network", 2020 IEEE 15th International Conference on Industrial and Information Systems, ICIIS 2020 - Proceedings, pp. 242.

8. Anu, Srivastava, A. & Khan, M.S. 2020, "Density functional theory calculations for electronic, optoelectronic and thermodynamic properties of dibenzothiophene metal complexes", Materials Research Express, vol. 7, no. 1.

9. Anu, Srivastava, A. & Khan, M.S. 2020, "DFT Analysis of Vanadium Tris (Dithiolene)-Based Double-Gated Single-Electron Transistor", Journal of Electronic Materials, vol. 49, no. 7, pp. 4203-4211.

10. Arya, K.V., Verma, S., Gupta, R.K., Agarwal, S. & Gupta, P. 2020, "IIITM FACE: A database for facial attribute detection in constrained and simulated unconstrained environments", Pervasive Health: Pervasive Computing Technologies for Healthcare, pp. 185.

11. Arya, N., Soni, T., Pattanaik, M. & Sharma, G.K. 2020, "Area and energy efficient approximate square rooters for error resilient applications", Proceedings - 33rd International Conference on VLSI Design, VLSID 2020 - Held concurrently with 19th International Conference on Embedded Systems, pp. 90.

12. Arya, N., Soni, T., Pattanaik, M. & Sharma, G.K. 2020, "Bit significance based reconfigurable approximate restoring dividers and square rooters", Microelectronics Journal, vol. 104.

13. Asif Ahamad, P. & Jeevaraj, S. 2020, "Intrusion classification using ECLAT and Fuzzy Logic", 2020 11th International Conference on Computing, Communication and Networking Technologies, ICCCNT 2020.

14. Asif, K.M. & Trivedi, A. 2020, "OFDM ensemble auto encoder using CNN and SPSA for end-to-end learning communication systems", 4th IEEE Conference on Information and Communication Technology, CICT 2020.

15. Baheti, P., Sikka, M., Arya, K.V. & Rajesh, R. 2020, "Federated learning on distributed medical records for detection of lung nodules", VISIGRAPP 2020 - Proceedings of the 15th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, pp. 445.

16. Bajpai, N., Sharma, G., Dubey, P. & Kulshreshtha, K. 2020, "An empirical examination of elder abuse through the lens of mens rea", Journal of Adult Protection, vol. 22, no. 5, pp. 269-297.

17. Bharti, S., Pattanaik, K.K. & Pandey, A. 2020, "Contextual outlier detection for wireless sensor networks", Journal of Ambient Intelligence and Humanized Computing, vol. 11, no. 4, pp. 1511-1530.

18. Bhat, R.A., Kumar, D., Singh, K., Srivastava, A., Khan, M.D.S., Malla, M.A., Ganie, J.A. & Mir, M.A. 2020, "Synthesis and spectral characterization of Zn(II) complex of S-benzyl- -N-[3-(4-hydroxy-3-methoxy-phenylallylidene)]dithiocarbazate: An approach to antibacterial, thermal studies and DFT calculations", Journal of Molecular Structure, vol. 1199.

19. Chanak, P. & Banerjee, I. 2020, "Congestion Free Routing Mechanism for IoT-Enabled Wireless Sensor Networks for Smart Healthcare Applications", IEEE Transactions on Consumer Electronics, vol. 66, no. 3, pp. 223-232.

20. Chanak, P., Banerjee, I. & Sherratt, R.S. 2020, "A green cluster-based routing scheme for large-scale wireless sensor networks", International Journal of Communication Systems, vol. 33, no. 9.

21. Dewangan, R.K., Shukla, A. & Godfrey, W.W. 2020, "A solution for priority-based multi-robot path planning problem with obstacles using ant lion optimization", Modern Physics Letters B, vol. 34, no. 13.

22. Dhali, S., Karakoti, M., Pandey, S., Santhi Bhushan, B., Verma, R.K., Srivastava, A., Bal, R., Mehta, S.P.S. & Sahoo, N.G. 2020, "Graphene oxide supported Pd-Fe nanohybrid as an efficient electrocatalyst for proton exchange membrane fuel cells", International Journal of Hydrogen Energy, vol. 45, no. 37, pp. 18704-18715.

23. Dubey, P., Bajpai, N., Guha, S. & Kulshreshtha, K. 2020, "Entrepreneurial marketing: an analytical viewpoint on perceived quality and customer delight", Journal of Research in Marketing and Entrepreneurship, vol. 22, no. 1, pp. 1-19.

24. Dubey, P., Bajpai, N., Guha, S. & Kulshreshtha, K. 2020, "Mapping gender and marital roles on customer delight by value perception for mobile technology in India", Technology in Society, vol. 62.

25. Garg, B. & Arya, K.V. 2020, "Four stage median-average filter for healing high density salt and pepper noise corrupted images", Multimedia Tools and Applications, vol. 79, no. 43-44, pp. 32305-32329.

26. Garg, L., Chukwu, E., Nasser, N., Chakraborty, C. & Garg, G. 2020, "Anonymity Preserving IoT-Based COVID-19 and Other Infectious Disease Contact Tracing Model", IEEE Access, vol. 8, pp. 159402-159414.

27. Garg, L., Ramesh, K., Garg, G., Portelli, A. & Jamal, A. 2020, Kitchen Genie: An Intelligent Internet of Things System for Household Inventory Management.

28. Gupta, A. & Agarwal, A. 2020, "Active Net: A computer-vision based approach to determine lethargy", Pervasive Health: Pervasive Computing Technologies for Healthcare, pp. 371.

29. Gupta, S. & Kumar, S. 2020, "A Novel Perspective in Designing a Low Quantum Cost Synchronous Reversible Counters", Proceedings - 2020 15th IEEE International Conference on Design and Technology of Integrated Systems in Nanoscale Era, DTIS 2020.

30. Jain, A., Dhar, J. & Gupta, V. 2020, "Rumor model on homogeneous social network incorporating delay in expert intervention and government action", Communications in Nonlinear Science and Numerical Simulation, vol. 84.

31. Jain, A., Nagar, S., Singh, P.K. & Dhar, J. 2020, "EMUCF: Enhanced multistage user-based collaborative filtering through non-linear similarity for recommendation systems", Expert Systems with Applications, vol. 161.

32. Jain, A., Singh, P.K. & Dhar, J. 2020, "Multi-objective item evaluation for diverse as well as novel item recommendations", Expert Systems with Applications, vol. 139.

33. Jain, R., Trivedi, A. & Gupta, A. 2020, "Co-channel interference suppression for cellular-connected UAV using NOMA", 4th IEEE Conference on Information and Communication Technology, CICT 2020.

34. Jain, U., Tiwari, R. & Godfrey, W.W. 2020, "A hybrid EVSA approach in clustered search space with ad-hoc partitioning for multi-robot searching", Evolutionary Intelligence, vol. 13, no. 4, pp. 551-570.

35. Jeevaraj, S. 2020, "Similarity measure on interval valued intuitionistic fuzzy numbers based on non-hesitance score and its application to pattern recognition", Computational and Applied Mathematics, vol. 39, no. 3.

36. Jindal, R., Kumar, N. & Nirwan, H. 2020, "MTFCT: A task offloading approach for fog computing and cloud computing", Proceedings of the Confluence 2020 - 10th International Conference on Cloud Computing, Data Science and Engineering, pp. 145.

37. Karanam, L., Pattanaik, K.K. & Aldmour, R. 2020, "Intrusion Detection Mechanism for Large Scale Networks using CNN-LSTM", Proceedings - International Conference on Developments in eSystems Engineering, DeSE, pp. 323.

38. Karmarkar, A., Chanak, P. & Kumar, N. 2020, "An Optimized SVM based Fault Diagnosis Scheme for Wireless Sensor Networks", 2020 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS 2020.

39. Kaur, G., Chanak, P. & Bhattacharya, M. 2020, "Memetic Algorithm-Based Data Gathering Scheme for IoT-Enabled Wireless Sensor Networks", IEEE Sensors Journal, vol. 20, no. 19, pp. 11725-11734.

40. Khan, N. & Arya, K.V. 2020, "A new fuzzy rule based pixel organization scheme for optimal edge detection and impulse noise removal", Multimedia Tools and Applications, vol. 79, no. 45-46, pp. 33811-33837.

41. Kumar, A., Pattanaik, M., Srivastava, P. & Jha, K.K. 2020, "Dual Metal Hetero Dielectric GAAFET based Energy Efficient Digital Circuits", Proceedings - International Conference on Smart Electronics and Communication, ICOSEC 2020, pp. 1206.

42. Kumar, A., Pattanaik, M., Srivastava, P. & Jha, K.K. 2020, "Reduction of Drain Induced Barrier Lowering in DM-HD-NA GAAFET for RF Applications", IET Circuits, Devices and Systems, vol. 14, no. 3, pp. 270-275.

43. Kumar, A., Saraswat, S.K., Agrawal, P. & Singh, S. 2020, Multi Header Based Ultra Low Power MTCMOS Technique to Reduce NBTI Effect in Combinational Circuit.

44. Kumar, R., Kumar, A., Guglani, S., Kumar, S., Roy, S., Kaushik, B.K., Sharma, R. & Achar, R. 2020, "A Temperature and Dielectric Roughness-Aware Matrix Rational Approximation Model for the Reliability Assessment of Copper- Graphene Hybrid On-Chip Interconnects", IEEE Transactions on Components, Packaging and Manufacturing Technology, vol. 10, no. 9, pp. 1454-1465.

45. Kumar, R., Kumar, S., Guglani, S., Roy, S., Kaushik, B.K., Sharma, R. & Achar, R. 2020, "Temperature-Aware Compact Modeling for Resistivity in Ultra-Scaled Cu-Graphene Hybrid Interconnects", SPI 2020 - 24th IEEE Workshop On Signal and Power Integrity, Proceedings.

46. Kumar, R., Kumari, B., Kumar, S., Sahoo, M. & Sharma, R. 2020, "Temperature and Dielectric Surface Roughness dependent Performance Analysis of Cu-Graphene Hybrid Interconnects", IEEE Electrical Design of Advanced Packaging and Systems Symposium.

47. Kumar, R., Likith Narayan, S.S., Kumar, S., Roy, S., Kaushik, B.K., Achar, R. & Sharma, R. 2020, "Estimating per-unit-length resistance parameter in emerging copper-graphene hybrid interconnects via prior knowledge based accelerated neural networks", EPEPS 2020 - IEEE 29th Conference on Electrical Performance of Electronic Packaging and Systems.

48. Kumar, V., Dhar, J. & Bhatti, H.S. 2020, "Bifurcation dynamics of a plant-pest-natural enemy system in polluted environment incorporating gestation delays", Ricerche di Matematica, vol. 69, no. 2, pp. 533-551.

49. Kumar, V., Dhar, J. & Bhatti, H.S. 2020, "Stability Switching Dynamics of a Food Chain System Incorporating Gestation Delays", Differential Equations and Dynamical Systems, vol. 28, no. 3, pp. 685-705.

50. Kumar, Y.S., Kumar, R. & Kumar, S. 2020, "2D-Discrete Cosine Transform based Dynamically Controllable Image Compression Technique", 2020 IEEE 22nd Electronics Packaging Technology Conference, EPTC 2020, pp. 203.

51. Kumari, V., Chauhan, S. & Dhar, J. 2020, "Controlling pest by integrated pest management: A dynamical approach", International Journal of Mathematical, Engineering and Management Sciences, vol. 5, no. 4, pp. 769-786.

52. Kunhare, N., Tiwari, R. & Dhar, J. 2020, "Particle swarm optimization and feature selection for intrusion detection system", Sadhana - Academy Proceedings in Engineering Sciences, vol. 45, no. 1.

53. Kushwah, R., Tapaswi, S. & Kumar, A. 2020, "Multipath Delay Analysis Using Queuing Theory for Gateway Selection in Hybrid MANET", Wireless Personal Communications, vol. 111, no. 1, pp. 9-32.

54. Labhane, G., Pansare, R., Maheshwari, S., Tiwari, R. & Shukla, A. 2020, "Detection of Pediatric Pneumonia from Chest X-Ray Images using CNN and Transfer Learning", Proceedings of 3rd International Conference on Emerging Technologies in Computer Engineering: Machine Learning and Internet of Things, ICETCE 2020, pp. 85.

55. Maheshwari, S., Agarwal, A., Shukla, A. & Tiwari, R. 2020, "A comprehensive evaluation for the prediction of mortality in intensive care units with LSTM networks: Patients with cardiovascular disease", Biomedizinische Technik, vol. 65, no. 4, pp. 435-446.

56. Mangion, R.S., Garg, L., Garg, G. & Falzon, O. 2020, "Emotional Testing on Facebook's User Experience", IEEE Access, vol. 8, pp. 58250-58259.

57. Mehto, A., Tapaswi, S. & Pattanaik, K.K. 2020, "A review on rendezvous based data acquisition methods in wireless sensor networks with mobile sink", Wireless Networks, vol. 26, no. 4, pp. 2639-2663.

58. Mehto, A., Tapaswi, S. & Pattanaik, K.K. 2020, "Virtual grid-based rendezvous point and sojourn location selection for energy and delay efficient data acquisition in wireless sensor networks with mobile sink", Wireless Networks, vol. 26, no. 5, pp. 3763-3779.

59. Mishra, K., Gupta, R. & Trivedi, A. 2020, "Use of geometric water-filling algorithm for power allocation in cognitive radio", 2nd International Conference on Data, Engineering and Applications, IDEA 2020.

60. Mishra, N.K. & Singh, P.K. 2020, "FS-MLC: Feature selection for multi-label classification using clustering in feature space", Information Processing and Management, vol. 57, no. 4.

61. Mishra, S. & Sadhya, D. 2020, LiARX: A Lightweight Cipher Based on the LTS Design Strategy of ARX.

62. Mittal, A., Sharma, B. & Ranjan, P. 2020, "Real Estate Management System based on Blockchain", 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering, UPCON 2020.

63. Morampudi, M.K., Veldandi, S., Prasad, M.V.N.K. & Raju, U.S.N. 2020, "Multi-instance iris remote authentication using private multi-class perceptron on malicious cloud server", Applied Intelligence, vol. 50, no. 9, pp. 2848-2866.

64. Naga Raghuram, C.H., Gupta, B. & Kaushal, G. 2020, "Double Node Upset Tolerant RHBD15T SRAM Cell Design for Space Applications", IEEE Transactions on Device and Materials Reliability, vol. 20, no. 1, pp. 181-190.

65. Nagar, S., Jain, A., Singh, P.K. & Kumar, A. 2020, "Pixel-wise dictionary learning based locality-constrained representation for noise robust face hallucination", Digital Signal Processing: A Review Journal, vol. 99.

66. Nanwate, S. & Sadhya, D. 2020, "Similarity attack on cancelable biometric templates using particle swarm optimization", 2020 IEEE International Conference on Computing, Power and Communication Technologies, GUCON 2020, pp. 693.

67. Nayagam, V.L.G., Ponnialagan, D. & Jeevaraj, S. 2020, "Similarity measure on incomplete imprecise interval information and its applications", Neural Computing and Applications, vol. 32, no. 8, pp. 3749-3761.

68. Pandey, A. & Sahu, R. 2020, "Mapping heritage tourism service quality using the Kano model: A case study of Indian tourism", International Journal of Services and Operations Management, vol. 37, no. 2, pp. 264-283.

69. Pandey, A. & Sahu, R. 2020, "Modeling the relationship between service quality, destination attachment and eWOM intention in heritage tourism", International Journal of Tourism Cities, vol. 6, no. 4, pp. 769-784.

70. Pandey, A. & Sahu, R. 2020, "Service designing through Fuzzy Kano analysis in heritage tourism" in Supply Chain Sustainability: Modeling and Innovative Research Frameworks, pp. 89-103.

71. Pandey, A., Sahu, R. & Joshi, Y. 2020, "Kano Model Application in the Tourism Industry: A Systematic Literature Review", Journal of Quality Assurance in Hospitality and Tourism, .

72. Pandey, V., Pattanaik, M. & Tiwari, R.K. 2020, "Impact of NBTI/HCI/PBTI on 6T SRAM reliability", Proceedings of the World Conference on Smart Trends in Systems, Security and Sustainability, WS4 2020, pp. 559.

73. Patel, V., Cheer, J. & Fontana, S. 2020, "Design and Implementation of an Active Noise Control Headphone with Directional Hear-Through Capability", IEEE Transactions on Consumer Electronics, vol. 66, no. 1, pp. 32-40.

74. Patel, V. & George, N.V. 2020, "Multi-channel spline adaptive filters for non-linear active noise control", Applied Acoustics, vol. 161.

75. Pawar, P., Trivedi, A. & Mishra, M.K. 2020, "Outage and ASE Analyses for Power Controlled D2D Communication", IEEE Systems Journal, vol. 14, no. 2, pp. 2269-2280.

76. Prakash, G. & Srivastava, S. 2020, "Exploring value-dense environment in the healthcare service delivery: A patient-centric perspective", TQM Journal, vol. 32, no. 2, pp. 331-347.

77. Pratap Khare, K., Kathal, R., Shukla, N., Srivastava, R. & Srivastava, A. 2020, "Orientation dependent DFT analysis of aniline and pyrrole based copolymer", Materials Today: Proceedings, pp. 6934.

78. Purswani, J., Rajagopal, R., Khandelwal, R. & Singh, A. 2020, Chaos theory on generative adversarial networks for encryption and decryption of data.

79. Raikwar, S. & Tapaswi, S. 2020, "Accurate and Robust Atmospheric Light Estimation for Single Image Dehazing", 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering, UPCON 2020.

80. Raikwar, S.C. & Tapaswi, S. 2020, "Adaptive dehazing control factor based fast single image dehazing", Multimedia Tools and Applications, vol. 79, no. 1-2, pp. 891-918.

81. Raikwar, S.C. & Tapaswi, S. 2020, "Lower Bound on Transmission Using Non-Linear Bounding Function in Single Image Dehazing", IEEE Transactions on Image Processing, vol. 29, pp. 4832-4847.

82. Raikwar, S.C. & Tapaswi, S. 2020, "Tight lower bound on transmission for single image dehazing", Visual Computer, vol. 36, no. 1, pp. 191-209.

83. Rajesh, R. 2020, "A grey-layered ANP based decision support model for analyzing strategies of resilience in electronic supply chains", Engineering Applications of Artificial Intelligence, vol. 87.

84. Rajesh, R. 2020, "A novel advanced grey incidence analysis for investigating the level of resilience in supply chains", Annals of Operations Research, .

85. Rajesh, R. 2020, "Exploring the sustainability performances of firms using environmental, social, and governance scores", Journal of Cleaner Production, vol. 247.

86. Rajesh, R. 2020, "Network design for resilience in supply chains using novel crazy elitist TLBO", Neural Computing and Applications, vol. 32, no. 11, pp. 7421-7437.

87. Rajesh, R. 2020, "Sustainability performance predictions in supply chains: grey and rough set theoretical approaches", Annals of Operations Research, .

88. Rajesh, R. 2020, "Sustainable supply chains in the Indian context: An integrative decision-making model", Technology in Society, vol. 61.

89. Rajesh, R. & Rajendran, C. 2020, "Relating Environmental, Social, and Governance scores and sustainability performances of firms: An empirical analysis", Business Strategy and the Environment, vol. 29, no. 3, pp. 1247-1267.

90. Rajoria, S., Trivedi, A. & Godfrey, W.W. 2020, "Performance analysis of two tier Het Nets with massive MIMO enabled wireless backhauling", Wireless Networks, vol. 26, no. 2, pp. 1459-1472.

91. Rajput, A.K. & Pattanaik, M. 2020, "Energy Efficient 9T SRAM with R/W Margin Enhanced for beyond Von-Neumann Computation", 2020 24th International Symposium on VLSI Design and Test, VDAT 2020.

92. Rajput, A.K. & Pattanaik, M. 2020, "Implementation of Boolean and Arithmetic Functions with 8T SRAM Cell for In-Memory Computation", 2020 International Conference for Emerging Technology, INCET 2020.

93. Rajput, R.S., Gupta, R. & Trivedi, A. 2020, "An Adaptive Covariance Matrix Based on Combined Fully Blind Self Adapted Method for Cognitive Radio Spectrum Sensing", Wireless Personal Communications, vol. 114, no. 1, pp. 93–111.

94. Rajput, S.S. & Arya, K.V. 2020, "A robust face super-resolution algorithm and its application in low-resolution face recognition system", Multimedia Tools and Applications, vol. 79, no. 33-34, pp. 23909-23934.

95. Rajput, S.S. & Arya, K.V. 2020, "CNN Classifier based Low-resolution Face Recognition Algorithm", 2020 International Conference on Emerging Frontiers in Electrical and Electronic Technologies, ICEFEET 2020.

96. Ranjan, P. & Gangwar, R.K. 2020, "Investigation of wideband multi-element multi-segment half-sectored cylindrical dielectric resonator antenna for wireless applications", Progress In Electromagnetics Research C, vol. 100, pp. 31-43.

97. Ranjan, P., Patil, M., Chand, S., Ranjan, A., Singh, S. & Sharma, A. 2020, "Investigation on dual-port printed MIMO antenna with reduced RCS for C-band radar application", International Journal of RF and Microwave Computer-Aided Engineering, vol. 30, no. 3.

98. Rathor, V.S., Garg, B. & Sharma, G.K. 2020, "A Novel Low Complexity Logic Encryption Technique for Design-for-Trust", IEEE Transactions on Emerging Topics in Computing, vol. 8, no. 3, pp. 688-699.

99. Rathor, V.S., Garg, B. & Sharma, G.K. 2020, "New lightweight Anti-SAT block design and obfuscation technique to thwart removal attack", Integration, vol. 75, pp. 178-188.

100. Sadhya, D., De, K., Raman, B. & Roy, P.P. 2020, "Efficient extraction of consistent bit locations from binarized iris features", Expert Systems with Applications, vol. 140.

101. Sapna, Trivedi, A. & Pattanaik, K.K. 2020, "A Sensor-Actor Coordination protocol for Variable Rate Irrigation", 14th IEEE International Conference on Application of Information and Communication Technologies, AICT 2020 - Proceedings.

102. Sapna, K.K. Pattanaik, Aditya Trivedi, "A dynamic distributed boundary node detection algorithm for management zone delineation in Precision Agriculture," Elsevier's Journal of Network and Computer Applications, Volume 167, 2020.

103. Saxena, P., Gupta, R. & Maheshwari, A. 2020, Route planning using nature-inspired algorithms.

104. Saxena, P., Gupta, R., Maheshwari, A. & Maheshwari, S. 2020, Semantic image completion and enhancement using GANs.

105. Shanker, R. & Bhattacharya, M. 2020, "An automated computer-aided diagnosis system for classification of MR images using texture features and gbest-guided gravitational search algorithm", Biocybernetics and Biomedical Engineering, vol. 40, no. 2, pp. 815-835.

106. Sharma, A., Ranjan, P. & Sikandar 2020, "Dual Band Ring Shaped Dielectric Resonator Based Radiator with Left and Right Handed Sense Circularly Polarized Features", IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), , pp. 1-9.

107. Sharma, K. & Bhadauria, S. 2020, "Detection and Prevention of Black Hole Attack in SUPERMAN", International Symposium on Advanced Networks and Telecommunication Systems, ANTS.

108. Sharma, M. & Bhattacharya, M. 2020, "Discrimination and quantification of live/dead rat brain cells using a non-linear segmentation model", Medical and Biological Engineering and Computing, vol. 58, no. 5, pp. 1127-1146.

109. Sharma, M., Verma, R., Mishra, A. & Bhattacharya, M. 2020, A novel approach to classify breast cancer tumors using deep learning approach and resulting most accurate magnification factor.

110. Sharma, R., Valivati, N.K., Sharma, G.K. & Pattanaik, M. 2020, "A New Hardware Trojan Detection Technique using Class Weighted XGBoost Classifier", 2020 24th International Symposium on VLSI Design and Test, VDAT 2020.

111. Sharma, V. & Srivastava, P. 2020, "Aluminum Doped Germanene Nanoribbons: A First Principles Investigation", Integrated Ferroelectrics, vol. 204, no. 1, pp. 58-62.

112. Sharma, V. & Srivastava, P. 2020, "Probing Gold-Doped Germanene Nanoribbons for Nanoscale Interconnects Under DFT-NEGF Framework", Journal of Electronic Materials, vol. 49, no. 6, pp. 3938-3946.

113. Singh, A. & Deolia, P. 2020, "Dynamical analysis and chaos control in discrete-time prey-predator model", Communications in Nonlinear Science and Numerical Simulation, vol. 90.

114. Singh, A., Preeti & Malik, P. 2020, "Hopf bifurcation and chaos in a Leslie-Gower prey-predator model with discrete delays", International Journal of Biomathematics, vol. 13, no. 6.

115. Singh, D., Kumar, M., Arya, K.V. & Kumar, S. 2020, "Aircraft Engine Reliability Analysis using Machine Learning Algorithms", 2020 IEEE 15th International Conference on Industrial and Information Systems, ICIIS 2020 - Proceedings, pp. 443.

116. Singh, K.R. & Trivedi, A. 2020, "Physical Layer Security for Wireless Powered Massive MIMO Decode and Forward Relay Systems with Hardware Impairments: Performance Analysis", Wireless Personal Communications, vol. 112, no. 3, pp. 1537-1547.

117. Singh, P. & Agrawal, G. 2020, "Development, present status and performance analysis of agriculture insurance schemes in India: Review of evidence", International Journal of Social Economics, vol. 47, no. 4, pp. 461-481.

118. Singh, P., Tapaswi, S. & Gupta, S. 2020, "Malware Detection in PDF and Office Documents: A survey", Information Security Journal, vol. 29, no. 3, pp. 134-153.

119. Singh, P. & Trivedi, A. 2020, "NOMA and massive MIMO assisted physical layer security using artificial noise precoding", Physical Communication, vol. 39.

120. Singh, V., Sharma, R.R.K. & Lai, K.K. 2020, "Relating environmental and structural uncertainty to management decision making style and behavior during information system planning and implementation", IEEE International Conference on Industrial Engineering and Engineering Management, pp. 898.

121. Singh, V., Verma, P., Muthukumaar, V., Kumar, V., Tewari, M., Lai, K.-. & Chang, Y.-. 2020, "Immunization strategy for epidemic spreading based on membership (m) over a multilayer network", Business Strategy and Development, vol. 3, no. 2, pp. 185-194.

122. Srivastava, M. & Srivastava, A. 2020, "Electron transport in nitrogen functionalized graphene: A case of arsenic detection", Materials Today: Proceedings, pp. 5044.

123. Srivastava, M., Srivastava, A. & Pandey, S.K. 2020, "Suitability of graphene monolayer as sensor for carcinogenic heavy metals in water: A DFT investigation", Applied Surface Science, vol. 517.

124. Srivastava, P., Abhishek & Jaiswal, N.K. 2020, "First-principles investigation of CO_2 and NH_3 adsorption on antimonene nanoribbons", Materials Today: Proceedings, pp. 65.

125. Srivastava, P., Abhishek, Sharma, V. & Jaiswal, N.K. 2020, "First-principle insights of CO and NO detection via antimonene nanoribbons", Applied Physics A: Materials Science and Processing, vol. 126, no. 9.

126. Srivastava, P., Abhishek, Sharma, V. & Jaiswal, N.K. 2020, "First-Principles Investigation of Antimonene Nanoribbons for Sensing Toxic NO_2 Gas", Physica Status Solidi (B) Basic Research, vol. 257, no. 9.

127. Srivastava, S., Prakash, G. & Gauba, R. 2020, "Modelling Teachers Accountability in the Higher Educational Institutions Using Decision-making Trial and Evaluation Laboratory Approach", Business Perspectives and Research, .

128. Suji, R.J., Bhadouria, S.S., Dhar, J. & Godfrey, W.W. 2020, Optical flow based background subtraction method for lung nodule segmentation.

129. Suji, R.J., Bhadouria, S.S., Dhar, J. & Godfrey, W.W. 2020, "Optical Flow Methods for Lung Nodule Segmentation on LIDC-IDRI Images", Journal of Digital Imaging, vol. 33, no. 5, pp. 1306-1324.

130. Suji, R.J., Bhadouria, S.S. & Godfrey, W.W. 2020, "Effect of thres holding using ground truth pixel intensities on lung image database consortium-image database resource initiative lung cancer dataset", Journal of Computational and Theoretical Nanoscience, vol. 17, no. 1, pp. 141-146.

131. Suman, H., Srivastava, R., Shrivastava, S., Srivastava, A., Jacob, A.P. & Malvi, C.S. 2020, "DFT analysis of H_2S adsorbed zigzag and armchair graphene nanoribbons", Chemical Physics Letters, vol. 745.

132. Tewari, S., Agrawal, U., Verma, S., Kumar, S. & Jeevaraj, S. 2020, "Ensemble model for COVID-19 detection from chest X-ray scans using image segmentation, fuzzy color and stacking approaches", 4th IEEE Conference on Information and Communication Technology, CICT 2020.

133. Tiwari, P.K., Choudhary, A., Gupta, S., Dhar, J. & Chanak, P. 2020, "Sensitive Brain-Computer Interface to help manoeuvre a Miniature Wheelchair using Electroencephalography", 2020 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS 2020.

134. Tiwari, S., Farooq, S.U., Singh, P. & Rathore, S.S. 2020, "A Report on the Third Workshop on Emerging Software Engineering Education (WESEE 2020)", PervasiveHealth: Pervasive Computing Technologies for Healthcare.

135. Tiwari, S., Rathore, S.S., Nautiyal, L. & Singh, R. 2020, "A report on the first workshop on Natural Language Processing Advancements for Software Engineering (NLPaSE) co-located with APSEC 2020", CEUR Workshop Proceedings, pp. 38.

136. Tiwari, S., Rathore, S.S., Sagar, S. & Mirani, Y. 2020, "Identifying Use Case Elements from Textual Specification: A Preliminary Study", Proceedings of the IEEE International Conference on Requirements Engineering, pp. 410.

137. Tomar, A. & Chanak, P. 2020, "A Game Theory based Fault Tolerance Routing Scheme for Wireless Sensor Networks", 2020 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS 2020.

138. Upadhyay, S. & Srivastava, P. 2020, "Modelling of antimonene as an anode material in sodium-ion battery: A first-principles study", Materials Chemistry and Physics, vol. 241.

139. Verma, D., Saxena, P. & Tiwari, R. 2020, "Robot navigation and target capturing using nature-inspired approaches in a dynamic environment", Proceedings of the Confluence 2020 - 10th International Conference on Cloud Computing, Data Science and Engineering, pp. 629.

140. Verma, P., Tapaswi, S. & Godfrey, W.W. 2020, "An Adaptive Threshold-Based Attribute Selection to Classify Requests Under DDoS Attack in Cloud-Based Systems", Arabian Journal for Science and Engineering, vol. 45, no. 4, pp. 2813-2834.

141. Verma, P., Tapaswi, S. & Godfrey, W.W. 2020, "AVDR: A Framework for Migration Policy to Handle DDoS Attacked VM in Cloud", Wireless Personal Communications, vol. 115, no. 2, pp. 1335-1361.

142. Verma, R., Mehrotra, R., Rane, C., Tiwari, R. & Agariya, A.K. 2020, "Synthetic image augmentation with generative adversarial network for enhanced performance in protein classification", Biomedical Engineering Letters, vol. 10, no. 3, pp. 443-452.

143. Verma, R.K., Pattanaik, K.K. & Bharti, S. 2020, "Query similarity index based query preprocessing mechanism for multiapplication sharing wireless sensor networks", Telecommunication Systems, vol. 74, no. 4, pp. 477-485.

144. Verma, R.K., Pattanaik, K.K., Bharti, S., Saxena, D. & Cao, J. 2020, "A query processing framework for efficient network resource utilization in shared sensor networks", ACM Transactions on Sensor Networks, vol. 16, no. 4.

145. Verma, S. & Dhar, J. 2020, "Emergence of writing systems through multi-agent cooperation (student abstract)", AAAI 2020 - 34th AAAI Conference on Artificial Intelligence, pp. 13941.

146. Verma, S., Nair, H.S., Agarwal, G., Dhar, J. & Shukla, A. 2020, "Deep reinforcement learning for single-shot diagnosis and adaptation in damaged robots", Pervasive Health: Pervasive Computing Technologies for Healthcare, pp. 82.

147. Vyas, V. & Jain, P. 2020, "Prioritization of financial performance determinants in Indian SMEs", Journal of Indian Business Research, vol. 12, no. 2, pp. 169-190.

148. Vyas, V., Mehta, K. & Sharma, R. 2020, "Investigating socially responsible investing behaviour of Indian investors using structural equation modelling", Journal of Sustainable Finance and Investment, , pp. 1-23.

149. Yadav, S., Rathore, S.S. & Chouhan, S.S. 2020, Authorship Identification Using Stylometry and Document Fingerprinting.

150. Yee Aung, S.M. & Kumar Pattanaik, K. 2020, "Path Loss Measurement for Wireless Communication in Industrial Environments", 2020 International Conference on Computer Science, Engineering and Applications, ICCSEA 2020.

151. Yogi, R., Jaiswal, N.K. & Srivastava, P. 2020, "First-principles study of sensing SO2 adsorption on III–V nitride nanoribbons", Materials Chemistry and Physics, vol. 242.

•••••••••••••••••••• **2021** ••••••••••••••••••••

1. Agarwal, R., Jalal, A.S., Agrawal, S.C. & Arya, K.V. 2021, Fake and Live Fingerprint Detection Using Local Diagonal Extrema Pattern and Local Phase Quantization.

2. Agarwal, R., Jalal, A.S. & Arya, K.V. 2021, "Local binary hexagonal extrema pattern (LBHXEP): a new feature descriptor for fake iris detection", Visual Computer, vol. 37, no. 6, pp. 1357-1368.

3.   Agarwal, V. & Sahu, R. 2021, "Predicting repeat usage intention towards O2O food delivery: extending UTAUT2 with user gratifications and bandwagoning", Journal of Foodservice Business Research, .

4.   Agarwal, V., Tapaswi, S. & Chanak, P. 2021, "A Survey on Path Planning Techniques for Mobile Sink in IoT-Enabled Wireless Sensor Networks", Wireless Personal Communications, vol. 119, no. 1, pp. 211-238.

5.   Agrawal, G. & Mishra, A. 2021, "Universal health coverage initiatives for elderly-a review of ayushman bharat program in india", Aging Medicine and Healthcare, vol. 12, no. 2, pp. 34-40.

6.   Agrawal, N. & Tapaswi, S. 2021, "An SDN-Assisted Defense Mechduanism for the Shrew DDoS Attack in a Cloud Computing Environment", Journal of Network and Systems Management, vol. 29, no. 2.

7.   Agrawal, S., Kaushal, G. & Srivastava, A. 2021, "Electron transport in C3N monolayer: DFT analysis of volatile organic compound sensing", Chemical Physics Letters, vol. 762.

8.   Agrawal, S., Kaushal, G. & Srivastava, A. 2021, "Enhanced metallicity in defected Zigzag graphene nanoribbons: Role of oxygen doping", MRS Advances, vol. 6, no. 30, pp. 723-728.

9.   Agrawal, S., Singh, V. & Upadhyay, Y. 2021, "Structural model of information quality framework to e-agri supply chain", Journal of Advances in Management Research, vol. 18, no. 4, pp. 609-634.

10.   Agrawal, S., Srivastava, A. & Kaushal, G. 2021, "DFT analysis of different shaped cu nanowires for interconnect application", CEUR Workshop Proceedings, pp. 70.

11.   Agrawal, S., Srivastava, A. & Kaushal, G. 2021, "Electron transport in boron functionalised armchair graphene nanoribbons: Potential interconnects", Solid State Communications, vol. 327.

12.   Agrawal, S., Srivastava, A. & Kaushal, G. 2021, "Modeling of interface trap charges induced degradation in underlap DG and GAA MOSFETs", Microelectronics Reliability, vol. 125.

13.   Agrawal, S., Srivastava, A. & Kaushal, G. 2021, "Understanding Electron Transport in oxygen decorated Zigzag Graphene nanoribbons for nanoscale interconnects", Proceedings of the IEEE Conference on Nanotechnology, pp. 21.

14.   Agrawalla, C. & Patel, V. 2021, "Modified Momentum Based Active Noise Control System with Improved Convergence Characteristics", 2021 6th International Conference for Convergence in Technology, I2CT 2021.

15.   Arya, N., Pattanaik, M. & Sharma, G.K. 2021, "Energy-Efficient Logarithmic Square Rooter for Error-Resilient Applications", IEEE Transactions on Very Large Scale Integration (VLSI) Systems, .

16.   Arya, N., Soni, T., Pattanaik, M. & Sharma, G.K. 2021, "READ: A fixed restoring array based accuracy-configurable approximate divider for energy efficiency", Integration, vol. 76, pp. 1-12.

17.   Bansal, P., Kumar, R. & Kumar, S. 2021, "Disease detection in apple leaves using deep convolutional neural network", Agriculture (Switzerland), vol. 11, no. 7.

18.   Bansal, S.A., Singh, S., Srivastava, A., Singh, A.P. & Kumar, S. 2021, "Covalent attachment of 2D graphene oxide (GO) sheets with poly allylamine (PAA) for enhanced mechanical performance: Theoretical and experimental study", Polymer, vol. 213.

19.   Bharti, S., Pattanaik, K.K. & Bellavista, P. 2021, "Value of information based sensor ranking for efficient sensor service allocation in service oriented wireless sensor networks", IEEE Transactions on Emerging Topics in Computing, vol. 9, no. 2, pp. 823-838.

20.   Bhattacharyya, J. & Dash, M.K. 2021, "Investigation of customer churn insights and intelligence from social media: a netnographic research", Online Information Review, vol. 45, no. 1, pp. 174-206.

21.   Bhattacharyya, J., Kundu, S., Dash, M.K. & Dolhey, S. 2021, "An investigation on consumer switching behavior in an Asian telecommunication market", International Journal of Service Science, Management, Engineering, and Technology, vol. 12, no. 6, pp. 105-125.

22. Ch, N.R., Gupta, B. & Kaushal, G. 2021, "Single-event multiple effect tolerant rhbd14t sram cell design for space applications", IEEE Transactions on Device and Materials Reliability, vol. 21, no. 1, pp. 48-56.

23. Chanak, P. & Banerjee, I. 2021, "Internet-of-Things-Enabled SmartVillages: An Overview", IEEE Consumer Electronics Magazine, vol. 10, no. 3, pp. 12-18.

24. Charak, I., Manhas, M., Bedyal, A.K., Singh, S., Srivastava, A., Swart, H.C. & Kumar, V. 2021, "Structural and spectral studies of highly pure red-emitting Ca3B2O6:Eu3+ phosphors for white light emitting diodes", Journal of Alloys and Compounds, vol. 869.

25. Chauhan, S.S., Narwariya, P., Shrivasatava, A.K. & Srivastava, P. 2021, "Electronic and transport properties of nitrogen and boron doped zigzag silicon carbide nanoribbons: First principle study", Solid State Communications, vol. 338.

26. Chauhan, S.S., Narwariya, P., Srivasatava, A.K. & Srivastava, P. 2021, "Electronic and transport properties of chemically functionalised zig-zag graphene nanoribbons: First principle study", Pramana - Journal of Physics, vol. 95, no. 2.

27. Chibisova, M.A., Chibisov, A.N. & Srivastava, A. 2021, "Behavior of two hole qubits of boron atoms in silicene", CEUR Workshop Proceedings, pp. 79.

28. Chopra, C. & Verma, R. 2021, Novel methods based on CNN for improved bacteria classification.

29. Chouhan, S.S. & Rathore, S.S. 2021, "Generative Adversarial Networks-Based Imbalance Learning in Software Aging-Related Bug Prediction", IEEE Transactions on Reliability, vol. 70, no. 2, pp. 626-642.

30. Dey, S., Pattanaik, M. & Kaushal, G. 2021, "A low power low noise analog front-end for ECG recording", Analog Integrated Circuits and Signal Processing, vol. 109, no. 2, pp. 449-458.

31. Dwivedi, A.K., Sharma, A. & Ranjan, P. 2021, "Dual-band modified rectangular shaped dielectric resonator antenna with diversified polarization feature", International Journal of Circuit Theory and Applications, vol. 49, no. 10, pp. 3434-3442.

32. Garg, R., Maheshwari, S. & Shukla, A. 2021, Decision Support System for Detection and Classification of Skin Cancer Using CNN.

33. Gaurav, K., Santhi Bhushan, B., Mino-Galaz, G., Gutierrez, G. & Srivastava, A. 2021, "Hybridization and torsion defects influenced electron transport in trans-polyacetylene", Physica E: Low-Dimensional Systems and Nanostructures, vol. 129.

34. Gaurav, K. & Srivastava, A. 2021, "Electron Transport in Trans-polyacetylene with Heterogeneous Electrodes: A DFT Study", Proceedings of the IEEE Conference on Nanotechnology, pp. 185.

35. Goyal, C. & Patwardhan, M. 2021, "Strengthening work engagement through high-performance human resource practices", International Journal of Productivity and Performance Management, vol. 70, no. 8, pp. 2052-2069.

36. Goyal, V., Gupta, M., Trivedi, A. & Kolhe, M.L. 2021, Preface.

37. Gupta, A. & Mahaur, B. 2021, "An Improved DV-maxHop Localization Algorithm for Wireless Sensor Networks", Wireless Personal Communications, vol. 117, no. 3, pp. 2341-2357.

38. Gupta, J., Dhar, J. & Sinha, P. 2021, "Mathematical study of the influence of canine distemper virus on tigers: an eco-epidemic dynamics with incubation delay", Rendiconti del Circolo Matematico di Palermo, .

39. Gupta, N., Rajesh, R. & Daultani, Y. 2021, Investigation on Supply Chain Vulnerabilities and Risk Management Practices in Indian Manufacturing Industries.

40. Jain, A., Nagar, S., Singh, P.K. & Dhar, J. 2021, "ADC@ r: Adaptive divisional categorization of ratings under rating threshold r for similarity computation in recommendation systems", Applied Intelligence, .

41. Jain, A., Pattanaik, K.K., Kumar, A. & Bellavista, P. 2021, "Energy and congestion aware routing based on hybrid gradient fields for wireless sensor networks", Wireless Networks, vol. 27, no. 1, pp. 175-193.

42. Jain, D., Dash, M.K. & Thakur, K.S. 2021, "Development of research agenda on demonetization based on bibliometric visualization", International Journal of Emerging Markets,

43. Jain, D., Thakur, K.S. and Dash, M.K. (2020), "Demonetization move in India: a conceptual study", Journal of Money Laundering Control, Vol. 23 No-04. Pp863-869.

44. Jain, S., Pattanaik, K.K., Verma, R.K., Bharti, S. & Shukla, A. 2021, "Delay-Aware Green Routing for Mobile-Sink-Based Wireless Sensor Networks", IEEE Internet of Things Journal, vol. 8, no. 6, pp. 4882-4892.

45. Jain, S., Pattanaik, K.K., Verma, R.K. & Shukla, A. 2021, "Correction to: EDVWDD: EventDriven Virtual Wheelbased Data Dissemination for Mobile SinkEnabled Wireless Sensor Networks (The Journal of Supercomputing, (2021), 77, 10, (11432-11457), 10.1007/s11227-021-03714-7)", Journal of Supercomputing, vol. 77, no. 10, pp. 11458-11459.

46. Jain, S., Pattanaik, K.K., Verma, R.K. & Shukla, A. 2021, "EDVWDD: Event-Driven Virtual Wheel-based Data Dissemination for Mobile Sink-Enabled Wireless Sensor Networks", Journal of Supercomputing, vol. 77, no. 10, pp. 11432-11457.

47. Jenkin Suji, R., Wilfred Godfrey, W. & Dhar, J. 2021, Border to Border Distance Based Method for Detecting Juxta-Pleural Nodules.

48. Jindal, A., Agarwal, V. & Chanak, P. 2021, "Emergency Evacuation System for Clogging Free and Shortest-Safe Path Navigation with IoT-enabled WSNs", IEEE Internet of Things Journal, .

49. Jindal, R., Kumar, N. & Patidar, S. 2021, IoT Stream Data Compression Using LDPC Coding.

50. Kaur, G., Chanak, P. & Bhattacharya, M. 2021, "Energy-Efficient Intelligent Routing Scheme for IoT-Enabled WSNs", IEEE Internet of Things Journal, vol. 8, no. 14, pp. 11440-11449.

51. Kaur, L., Mahendia, S., Saini, S. & Srivastava, A. 2021, "Arsenic sensing using Al/Fe doped armchair graphene nanoribbons: Theoretical investigations", Journal of Physics and Chemistry of Solids, vol. 152.

52. Khare, K.P., Kathal, R., Shukla, N., Srivastava, R. & Srivastava, A. 2021, "6 thioguanine sensing using poly pyrrole: DFT study", AIP Conference Proceedings.

53. Khare, K.P., Kathal, R., Shukla, N., Srivastava, R. & Srivastava, A. 2021, "Sensing behavior of poly-9 vinyl carbazole for 6-Thioguanine anti-cancer drug: A DFT study", AIP Conference Proceedings.

54. Kumar, N., Rahman, S.S. & Dhakad, N. 2021, "Fuzzy Inference Enabled Deep Reinforcement Learning-Based Traffic Light Control for Intelligent Transportation System", IEEE Transactions on Intelligent Transportation Systems, vol. 22, no. 8, pp. 4919-4928.

55. Kumar, N. & Vidyarthi, D.P. 2021, "A novel energy-efficient scheduling model for multi-core systems", Cluster Computing, vol. 24, no. 2, pp. 643-666.

56. Kumar, R., Narayan, S.S.L., Kumar, S., Roy, S., Kaushik, B., Achar, R. & Sharma, R. 2021, "Knowledge-Based Neural Networks for Fast Design Space Exploration of Hybrid Copper-Graphene On-Chip Interconnect Networks", IEEE Transactions on Electromagnetic Compatibility, .

57. Kumar, S., Bhuyan, M.K. & Iwahori, Y. 2021, "Multi-level uncorrelated discriminative shared Gaussian process for multi-view facial expression recognition", Visual Computer, vol. 37, no. 1, pp. 143-159.

58. Kunhare, N., Tiwari, R. & Dhar, J. 2021, Network packet analysis in real time traffic and study of snort ids during the variants of dos attacks.

59. Mathur, K.S., Srivastava, A. & Dhar, J. 2021, "Dynamics of a stage-structured SI model for food adulteration with media-induced response function", Journal of Engineering Mathematics, vol. 127, no. 1.

60. Mavilavalappil, U.P., Tikoria, J. & Agariya, A.K. 2021, "Benchmarking business excellence practices: A case-based approach", International Journal of Process Management and Benchmarking, vol. 11, no. 4, pp. 498-541.

61. Mehta, K., Sharma, R., Vyas, V. & Kuckreja, J.S. 2021, "Exit strategy decision by venture capital firms in India using fuzzy AHP", Journal of Entrepreneurship in Emerging Economies, .

62. Mehto, A., Tapaswi, S. & Pattanaik, K.K. 2021, "Multi-objective particle swarm optimization based rendezvous point selection for the energy and delay efficient networked wireless sensor data acquisition", Journal of Network and Computer Applications, vol. 195.

63. Mehto, A., Tapaswi, S. & Pattanaik, K.K. 2021, "Optimal rendezvous points selection to reliably acquire data from wireless sensor networks using mobile sink", Computing, vol. 103, no. 4, pp. 707-733.

64. Mishra, N.K. & Singh, P.K. 2021, "Feature construction and smote-based imbalance handling for multi-label learning", Information Sciences, vol. 563, pp. 342-357.

65. Mishra, P., Godfrey, W.W. & Kumar, N. 2021, "A green computing-based algorithm in software defined network with enhanced performance", Proceedings - IEEE 2021 International Conference on Computing, Communication, and Intelligent Systems, ICCCIS 2021, pp. 953.

66. Mishra, P., Kumar, N. & Godfrey, W.W. 2021, "A Meta-heuristic-based Green-routing Algorithm in Software-Defined Wireless Sensor Network", Proceedings of the 6th International Conference on Inventive Computation Technologies, ICICT 2021, pp. 36.

67. Misra, O.P., Dhar, J. & Sisodiya, O.S. 2021, "Modeling and analysis of the transmission dynamics of mosquito-borne disease with environmental temperature fluctuation", International Journal of Modeling, Simulation, and Scientific Computing, .

68. Nagar, S., Jain, A., Singh, P.K. & Kumar, A. 2021, "Mixed-noise robust face super-resolution through residual-learning based error suppressed nearest neighbor representation", Information Sciences, vol. 546, pp. 121-145.

69. Nallagonda, S., Bhowmick, A. & Prasad, B. 2021, "Throughput performance of cooperative spectrum sensing network with improved energy detectors and SC diversity over fading channels", Wireless Networks, vol. 27, no. 6, pp. 4039-4050.

70. Nitin, Kumar, K. & Rathore, S.S. 2021, Analyzing Ensemble Methods for Software Fault Prediction.

71. Pal, D., Sharma, H. & Chaudhuri, K. 2021, "Data Agnostic RoBERTa-based Natural Language to SQL Query Generation", 2021 6th International Conference for Convergence in Technology, I2CT 2021.

72. Pandey, S., Karakoti, M., Surana, K., Dhapola, P.S., Santhi Bhushan, B., Ganguly, S., Singh, P.K., Abbas, A., Srivastava, A. & Sahoo, N.G. 2021, "Graphene nanosheets derived from plastic waste for the application of DSSCs and supercapacitors", Scientific Reports, vol. 11, no. 1.

73. Patel, V., Subhra Bhattacharjee, S. & George, N.V. 2021, "Convergence Analysis of Adaptive Exponential Functional Link Network", IEEE Transactions on Neural Networks and Learning Systems, vol. 32, no. 2, pp. 882-891.

74. Pathak, Y., Shukla, P.K. & Arya, K.V. 2021, "Deep Bidirectional Classification Model for COVID-19 Disease Infected Patients", IEEE/ACM Transactions on Computational Biology and Bioinformatics, vol. 18, no. 4, pp. 1234-1241.

75. Pawar, P. & Trivedi, A. 2021, "Joint Uplink-Downlink Resource Allocation for D2D Underlaying Cellular Network", IEEE Transactions on Communications, .

76. Pradhan, V., Kumar, A. & Dhar, J. 2021, "Modelling software reliability growth through generalized inflection S-shaped fault reduction factor and optimal release time", Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, .

77. Prakash, G. 2021, "Exploring enablers of modularity in healthcare service delivery", TQM Journal, .

78. Prakash, G. 2021, "QoS in higher education institutions: the concept, a literature review and future directions", TQM Journal, vol. 33, no. 6, pp. 1245-1262.

79. Prakash, G. & Srivastava, S. 2021, "Exploring antecedents and consequences of care coordinated pathways using organization routines", International Journal of Healthcare Management, vol. 14, no. 1, pp. 77-84.

80. Priyadarshi, A. & Singh, P.K. 2021, Change Detection in Satellite Imagery: A Multi-label Approach Using Convolutional Neural Network.

81. R., R. 2021, "Flexible business strategies to enhance resilience in manufacturing supply chains: An empirical study", Journal of Manufacturing Systems, vol. 60, pp. 903-919.

82. Raikwar, S. & Tapaswi, S. 2021, An enhanced depth approximation model for haze removal using single image.

83. Raikwar, S.C. & Tapaswi, S. 2021, "Estimation of minimum color channel using difference channel in single image Dehazing", Multimedia Tools and Applications, vol. 80, no. 21-23, pp. 31837-31863.

84. Raj, N. & Sadhya, D. 2021, Securing Biometric Data over Cloud via Shamir's Secret Sharing.

85. Rajesh, R. 2021, "Optimal trade-offs in decision-making for sustainability and resilience in manufacturing supply chains", Journal of Cleaner Production, vol. 313.

86. Rajesh, R., Agariya, A.K. & Rajendran, C. 2021, "Predicting resilience in retailing using grey theory and moving probability based Markov models", Journal of Retailing and Consumer Services, vol. 62.

87. Rajesh**, R**., Rajeev, A., and C Rajendran (2021) 'Corporate Social Performances of Firms in Select Developed Economies: A Comparative Study', *Socio-Economic Planning Sciences*, Vol. 62, No. 102599. (IF 4.92; CS 4.9; SJR Q1; ABS 2) (Elsevier)

88. Rajoria, S., Trivedi, A. & Godfrey, W.W. 2021, "Energy Efficiency Optimization for Massive MIMO Backhaul Networks with Imperfect CSI and Full Duplex Small Cells", Wireless Personal Communications, vol. 119, no. 1, pp. 691-712.

89. Rajoria, S., Trivedi, A. & Godfrey, W.W. 2021, "Sum-rate optimization for NOMA based two-tier hetnets with massive MIMO enabled wireless backhauling", AEU - International Journal of Electronics and Communications, vol. 132.

90. Rane, C., Dias, G., Lechervy, A. & Ekbal, A. 2021, "Improving Neural Text Style Transfer by Introducing Loss Function Sequentiality", SIGIR 2021 - Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval, pp. 2197.

91. Rane, C., Mehrotra, R., Bhattacharyya, S., Sharma, M. & Bhattacharya, M. 2021, "A novel attention fusion network-based framework to ensemble the predictions of CNNs for lymph node metastasis detection", Journal of Supercomputing, vol. 77, no. 4, pp. 4201-4220.

92. Ranjan, P. & Khandare, S. 2021, "Investigation of Dielectric Resonator Oscillator Using High-Electron Mobility Transistor at 26 GHz for Space Applications", Journal of Circuits, Systems and Computers, .

93. Ranjan, P. & Singh, S. 2021, "Dual Band Cylindrical Dielectric Resonator Antenna for WiMAX Application", 2021 International Conference on Intelligent Technologies, CONIT 2021.

94. Rathor, V.S., Garg, B., Patil, M. & Sharma, G.K. 2021, "Security analysis of image CAPTCHA using a mask R-CNN-based attack model", International Journal of Ad Hoc and Ubiquitous Computing, vol. 36, no. 4, pp. 238-247.

95. Rathor, V.S. & Sharma, G.K. 2021, "A lightweight robust logic locking technique to thwart sensitization and cone-based attacks", IEEE Transactions on Emerging Topics in Computing, vol. 9, no. 2, pp. 811-822.

96. Rathore, S.S. 2021, "An exploratory analysis of regression methods for predicting faults in software systems", Soft Computing, vol. 25, no. 23, pp. 14841-14872.

97. Rathore, S.S. & Kumar, S. 2021, "An empirical study of ensemble techniques for software fault prediction", Applied Intelligence, vol. 51, no. 6, pp. 3615-3644.

98. Rathore, S.S. & Kumar, S. 2021, "Software fault prediction based on the dynamic selection of learning technique: findings from the eclipse project study", Applied Intelligence, .

99. Ratnesh, R.K., Goel, A., Kaushik, G., Garg, H., Chandan, Singh, M. & Prasad, B. 2021, "Advancement and challenges in MOSFET scaling", Materials Science in Semiconductor Processing, vol. 134.

100. Reddy, B.V., Krishna, D.V.S., Sharma, A. & Ranjan, P. 2021, "Accelerated Antenna Design Assisted by Enhanced Machine Learning Techniques", 2021 International Conference on Intelligent Technologies, CONIT 2021.

101. S, J. 2021, "Ordering of interval-valued Fermatean fuzzy sets and its applications", Expert Systems with Applications, vol. 185.

102. Sachin, N. & Rajesh, R. 2021, "An empirical study of supply chain sustainability with financial performances of Indian firms", Environment, Development and Sustainability, .

103. Saxena, P., Maheshwari, A. & Maheshwari, S. 2021, Predictive Modeling of Brain Tumor: A Deep Learning Approach.

104. Sekhar, C. & Patwardhan, M. 2021, "Flexible working arrangement and job performance: the mediating role of supervisor support", International Journal of Productivity and Performance Management, .

105. Selvaraj, J. & Majumdar, A. 2021, "A new ranking method for interval-valued intuitionistic fuzzy numbers and its application in multi-criteria decision-making", Mathematics, vol. 9, no. 21.

106. Semwal, S., Agrawal, S., Srivastava, A. & Kaushal, G. 2021, "Analytical model for quasi-ballistic transport in MOSFET including carrier backscattering", Journal of Computational Electronics, vol. 20, no. 2, pp. 838-847.

107. Shahzad Khan, M., Guo, Q., Slough, W., Srivastava, A. & Pandey, R. 2021, "Enhanced quantum capacitance in 3d-transition metal porphyrin functionalized graphene", Materials Science and Engineering B: Solid-State Materials for Advanced Technology, vol. 272.

108. Shanker, R. & Bhattacharya, M. 2021, "Automated Diagnosis system for detection of the pathological brain using Fast version of Simplified Pulse-Coupled Neural Network and Twin Support Vector Machine", Multimedia Tools and Applications, vol. 80, no. 20, pp. 30479-30502.

109. Shanker, R. & Bhattacharya, M. 2021, "Correction to: Automated diagnosis system for detection of the pathological brain using fast version of simplified pulse-coupled neural network and twin support vector machine (Multimedia Tools and Applications, (2021), 80, 20, (30479-30502), 10.1007/s11042-021-10937-6)", Multimedia Tools and Applications, vol. 80, no. 20, pp. 30503.

110. Sharma, A., Gupta, B., Dhar, J., Srivastava, S.K. & Sharma, P. 2021, "Stability analysis and optimal impulsive harvesting for a delayed stage-structured self dependent two compartment commercial fishery model", International Journal of Dynamics and Control, .

111. Sharma, A., Sharma, N., Saxena, Y., Singh, A. & Sadhya, D. 2021, "Benchmarking deep neural network approaches for Indian Sign Language recognition", Neural Computing and Applications, vol. 33, no. 12, pp. 6685-6696.

112. Sharma, G., Kulshreshtha, K. & Bajpai, N. 2021, "Getting over the issue of theoretical stagnation: an exploration and metamorphosis of grounded theory approach", Quality and Quantity, .

113. Sharma, G., Vidalis, S., Anand, N., Menon, C. & Kumar, S. 2021, "A survey on layer-wise security attacks in iot: Attacks, countermeasures, and open-issues", Electronics (Switzerland), vol. 10, no. 19.

114. Sharma, G., Vidalis, S., Menon, C., Anand, N. & Kumar, S. 2021, "Analysis and implementation of threat agents profiles in semi-automated manner for a network traffic in real-time information environment", Electronics (Switzerland), vol. 10, no. 15.

115. Sharma, M., Goudar, V.S., Koduri, M.P., Tseng, F.G. & Bhattacharya, M. 2021, "Quantitative and qualitative image analysis of in vitro co-culture 3d tumor spheroid model by employing image-processing techniques", Applied Sciences (Switzerland), vol. 11, no. 10.

116. Sharma, N., Sohi, P.J.S., Garg, B. & Arya, K.V. 2021, "A novel multilayer decision based iterative filter for removal of salt and pepper noise", Multimedia Tools and Applications, vol. 80, no. 17, pp. 26531-26545.

117. Sharma, R., Rathor, V.S., Sharma, G.K. & Pattanaik, M. 2021, "A new hardware Trojan detection technique using deep convolutional neural network", Integration, vol. 79, pp. 1-11.

118. Sharma, R., Sharma, G.K. & Pattanaik, M. 2021, "A Few Shot Learning based Approach for Hardware Trojan Detection using Deep Siamese CNN", Proceedings of the IEEE International Conference on VLSI Design, pp. 163.

119. Sheth, S.D., Verma, Y., Kaur, G. & Chanak, P. 2021, "An energy optimized routing algorithm for IoT-enabled WSN", Proceedings - 2021 4th International Conference on Computational Intelligence and Communication Technologies, CCICT 2021, pp. 308.

120. Siddharth, T., Daultani, Y. & Rajesh, R. 2021, Millennial Customers and Hangout Joints: An Empirical Study Using the Kano Quantitative Model.

121. Singh, A. & Deolia, P. 2021, "BIFURCATION and CHAOS in A DISCRETE PREDATOR-PREY MODEL with HOLLING TYPE-III FUNCTIONAL RESPONSE and HARVESTING EFFECT", Journal of Biological Systems, vol. 29, no. 2, pp. 451-478.

122. Singh, A. & Malik, P. 2021, "Bifurcations in a modified Leslie–Gower predator–prey discrete model with Michaelis–Menten prey harvesting", Journal of Applied Mathematics and Computing, vol. 67, no. 1-2, pp. 143-174.

123. Singh, A., Parwaliya, A. & Kumar, A. 2021, "Hopf bifurcation and global stability of density-dependent model with discrete delays involving Beddington-DeAngelis functional response", Mathematical Methods in the Applied Sciences, vol. 44, no. 11, pp. 8838-8861.

124. Singh, D., Bajpai, N. & Kulshreshtha, K. 2021, "Brand Experience-Brand Love Relationship for Indian Hypermarket Brands: The Moderating Role of Customer Personality Traits", Journal of Relationship Marketing, vol. 20, no. 1, pp. 20-41.

125. Singh, D., Bajpai, N. & Kulshreshtha, K. 2021, "Factors underlying brand trust for affecting brand love leading to customers' purchase intention in Indian hypermarkets", International Journal of Electronic Marketing and Retailing, vol. 12, no. 3, pp. 254-284.

126. Singh, D., Bajpai, N. & Kulshreshtha, K. 2021, "The Effect of Brand Anthropomorphism on Customers' Behaviour Towards the Indian Hypermarket Brands", Journal of Creative Communications, .

127. Singh, G., Daultani, Y. & Sahu, R. 2021, "Investigating the barriers to growth in the Indian food processing sector", OPSEARCH, .

128. Singh, R., Ahmed, T., Kumar Singh, A., Chanak, P. & Singh, S.K. 2021, "SeizSClas: An Efficient and Secure Internet-of-Things-Based EEG Classifier", IEEE Internet of Things Journal, vol. 8, no. 8, pp. 6214-6221.

129. Sirohi, A., Santhi Bhushan, B. & Srivastava, A. 2021, "Charge transport in polythiophene molecular device: DFT analysis", Journal of Molecular Modeling, vol. 27, no. 3.

130. Sisodiya, O.S., Misra, O.P. & Dhar, J. 2021, "Modeling effects of impulsive control strategies on the spread of mosquito borne disease: role of latent period", Journal of Applied Mathematics and Computing, .

131. Sohi, P.J.S., Sharma, N., Garg, B. & Arya, K.V. 2021, Noise Density Range Sensitive Mean-Median Filter for Impulse Noise Removal.

132. Srivastava, M. & Srivastava, A. 2021, "Cu decorated functionalized graphene for Arsenic sensing in water: A first principles analysis", Applied Surface Science, vol. 560.

133. Srivastava, M. & Srivastava, A. 2021, "DFT analysis of nitrogen and Boron doped Graphene sheet as lead detector", Materials Science and Engineering B: Solid-State Materials for Advanced Technology, vol. 269.

134. Suji, R.J. & Bhadauria, S.S. 2021, "Automatic lung segmentation and lung nodule type identification over lidc-idri dataset", Indian Journal of Computer Science and Engineering, vol. 12, no. 4, pp. 1125-1135.

135. Suji, R.J. & Bhadauria, S.S. 2021, "Comparision of some image thresholding techniques with morphological operations and quantitative evaluation for lung segmentation", 2021 2nd International Conference for Emerging Technology, INCET 2021.

136. Tewari, C., Santhi Bhushan, B., Srivastava, A. & Sahoo, N.G. 2021, "Metal doped graphene oxide derived from Quercus ilex fruits for selective and visual detection of iron(III) in water: Experiment and theory", Sustainable Chemistry and Pharmacy, vol. 21.

137. Tiwari, A.V., Bajpai, N., Singh, D. & Vyas, V. 2021, "Antecedents of hedonism affecting memorable tourism experience (MTE) leading to revisit intention in tourists", International Journal of Tourism Cities, .

138. Tiwari, K. & Gangurde, S.J. 2021, "LSB Steganography Using Pixel Locator Sequence with AES", ICSCCC 2021 - International Conference on Secure Cyber Computing and Communications, pp. 302.

139. Tripathi, N., Kumrawat, D., Gottimukkala, V.K., Jeevaraj, S. & Godfrey, W.W. 2021, Edge Detection on Medical Images Using Intuitionistic Fuzzy Logic.

140. Upadhyay, S. & Srivastava, P. 2021, "First-principles study of structural and electronic properties of antimonene doped with Ge, Sn, Se, Te", Journal of Solid State Chemistry, vol. 302.

141. Verma, P., Tapaswi, S. & Godfrey, W.W. 2021, "A request aware module using CS-IDR to reduce VM level collateral damages caused by DDoS attack in cloud environment", Cluster Computing, vol. 24, no. 3, pp. 1917-1933.

142. Verma, P., Tapaswi, S. & Godfrey, W.W. 2021, "A service governance and isolation based approach to mitigate internal collateral damages in cloud caused by DDoS attack", Wireless Networks, vol. 27, no. 4, pp. 2529-2548.

143. Verma, P., Tapaswi, S. & Godfrey, W.W. 2021, "An impact analysis and detection of HTTP flooding attack in cloud using bio-inspired clustering approach", International Journal of Swarm Intelligence Research, vol. 12, no. 1, pp. 1-16.

144. Verma, R., Maheshwari, S. & Shukla, A. 2021, "Feature engineering combined with 1-D convolutional neural network for improved mortality prediction", Bio-Algorithms and Med-Systems, vol. 16, no. 4.

145. Verma, S. 2021, "Towards sample efficient learners in population based referential games through action advising", Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS, pp. 1677.

146. Vishal, P., Ajay, K. & Joydip, D. 2021, "SRGMs with uncertainty of operating environments for software reliability assessment: A factor-based survey", Proceedings - 26th ISSAT International Conference on Reliability and Quality in Design, RQD 2021, pp. 256.

147. Vyas, V. & Jain, P. 2021, "Role of digital economy and technology adoption for financial inclusion in India", Indian Growth and Development Review, vol. 14, no. 3, pp. 302-324.

148. Yadav, P., Singh, P., Kaur, G. & Chanak, P. 2021, "An energy efficient hierarchical routing algorithm for IoT-enabled WSNs", Proceedings - 2021 4th International Conference on Computational Intelligence and Communication Technologies, CCICT 2021, pp. 302.

149. Yadav, T.P., Srivastava, A. & Kaphle, G.C. 2021, "Magnetism in Zigzag and Armchair CuO Nanoribbons: Ab Initio Analysis", Physics of the Solid State, vol. 63, no. 2, pp. 279-285.

Faculty members on various editorial Boards of Journals and Outreach Activities/Lecture series for the year 2020-21

Faculty Name	Faculty members as Reviewer and in Editorial Board
Prof. Anurag Srivastava	**Membership of Scientific Societies** • International Academy of Physical Science (Life Member) • Materials Research Society of India (Life Member) • Computer Society of India (Member) • IACSIT (Senior Member) • Member, Board of studies, Comp. Sc.& IT SRM University, Lucknow • Member, Board of studies, Applied Physics, MIT School of Engineering, MIT ADT University, Pune • Member, Board of studies, Physics, UIT RGPV Bhopal • Materials Research Society of India (Life Member) • International Academy of Physical Science (Life Member) • American Chemical Society (Member) • Institute of Physics, London (Member) • Vigyaan Bharti Madhya Bharat (Life Member and Advisor) • Member of Editorial Board, ISST Journal of Applied Physics, India **Expert talks** • Expert talks on Environmental Challenges: Opportunities for Computational Scientists and Engineered Graphene for Supercapacitors and Interconnects: Modeling and Simulation, 15-27 Feb 2021 during Refresher Course on Nanoscience & Nano Technology and its Applications, organised by G G University, Bilaspur • Invited Talk on Nanomaterials for Energy and Environment: Computational Insights during India-Russia Scientific Webinar on Materials Science, New Materials and Nanotechnology, 9-10 Dec 2020, organised by Russian Academy of Science and Embassy of India, Moscow. • Plenary Talk on Pollution Detection using Nanomaterials based Sensors: Computational Analysis, AMRP-2020, 9-11 November 2020 organised by Sant Longowal Institute of Engineering and Technology, Punjab • Expert Talk on Pollution Monitoring using 1D and 2D nanomaterials: Computational Analysis, Amity Institute of Nanotechnology, AUUP , 18 April, 2020 • Expert Lecture on Environmental Pollution Detection using 1D and 2D Materials, National Seminar on Environmental Issues and Health Hazards at govt SLP College, Gwalior , 14-15 Feb, 2020 • KeyNote Lecture on Advance Tools and Techniques in Modelling and Simulation: Materials and Devices, three day FDP under TEQUIP-III program of RGPV Bhopal at NITM College, Gwalior , 7-9 Feb, 2020 • Inaugural Lecture on Modelling and Simulation in Materials and Devices, during a one week workshop on "Modelling and Simulation of Microstrip Antenna, Circuits and Materials" at Dr. RM L Avadh University, Ayodhya, Gwalior, 27Jan- 2 Feb, 2020. • Expert Lecture on Advances in Modelling and Simulation, one week FDPat RJIT College,Gwalior ,6-11 Jan,2020 **Reviewer of number of reputed Journals** • ACS-Nano • RSC-Advances • Advanced Materials • Elsevier Journals of Physics and Materials Science • Springer Journals

Faculty Name	Faculty members as Reviewer and in Editorial Board
	• Taylor and Francis Journals • World scientific Journals • IEEE-Transaction- Nanotechnology • IEEE-Sensors **Patent Filed** • Highly efficient Graphene-Soap Based Spray paints for the efficient killing of corona Viruses and Preparation process thereof (2020) **202011018342**
Dr. Manoj Kumar Dash	Reviewer International Journal of Production Management Reviewer International Journal of Cleaner Production Reviewer International Journal of Online Information Review
Prof. Pankaj Srivastava	Reviewer, Physical Chemistry, Chemical Physics (PCCP), RSC Publishing Reviewer of Journal of Physical Chemistry, RSC Publishing Reviewer of Applied Surface Science, Elsevier Reviewer of IEEE_TNANO Reviewer of J. of Electronic Reviewer of J. of Molecular Modelling, Springer Reviewer of Organic Electronics, Elsevier Reviewer of PHYSICA -E Reviewer of PHYSICA -B Reviewer of RSC Advances LIFE MEMBER- The Indian National Science Congress Academic Editor- Intech Open Publishers, UK Reviewer of – Chemical Physics Letters Reviewer– Journal of Physics and Chemistry of Solids **Invited Talk** in FDP on Research Methodology and Scientific Writing for Engineering and Management (RMSW-2021), jointly organized by ABV-IIITM, Gwalior and AICTE Training and Learning (ATAL) Academy from 16.02.2021 to 20.02.2021. (Online). **Invited Talk on** "2D materials for energy storage applications" in STP on 2D materials-atoms to devices, Dept. of ECE, IIIT, Prayagraj (UP), October 21 – 25, 2021 (Online). **Invited Talk on** "Physics of Quantum Computers" in Recent Advances in Applied Physics, Dept. of Physics NERIST, Itanagar, Arunachal Pradesh. 27th International Conference of International Academy of Physical Sciences (CONIAPSXXVII) October 26 – 28, 2021 (Online). **Session Chair**– 3rd IEEE BOMBAY Section Signature Conference (IBSSC-2021), November 18-20, 2021, organized by IEEE Bombay Section and ABV-IIITM, Gwalior.
Dr. Jeevaraj S	IEEE Transactions on Fuzzy Systems IEEE Transactions on Cybernetics International Journal of Intelligent Systems Applied Soft Computing Journal of Intelligent and Fuzzy Systems Iranian Journal of Fuzzy Systems International Journal of Fuzzy Systems Computational and Applied Mathematics Opsearch Complex and Intelligent Systems Soft Computing

Faculty Name	Faculty members as Reviewer and in Editorial Board
Dr. Anuraj Singh	• Invited talk in International Conference on Recent Trends in Mathematics and Its Applications to Graphs, Networks and Petri Nets (ICRTMA-GPN-2020), Jawaharlal Nehru University, New Delhi, July 20-24, 2020. • Invited lecture in Virtual Workshop on Differential Equations and their Applications, Indian Institute of Technology Mandi, November 27-28, 2020. • Invited talk in the Workshop on Bio-Mathematics (WoBM-2020), Indian Institute of Technology Patna, December 8-11, 2020. • Invited talk in International Conference on Advances in Differential Equations & Mathematical Modelling (IC–ADE-MM-2020), Jawaharlal Nehru University, New Delhi, December 18-20, 2020.

Ph D Thesis Report awarded during the year 2020-21

S.N.	Thesis Title	Author	Supervisor(s)	Year
01	Towards Efficient Resource Utilization in Multi Application Sharing IoT Sensory Environment	Rahul Kumar Verma	Dr. K.K. Pattanaik	2020
02	Designing Service Blueprint for Heritage Tourism using Fuzzy Kano Analysis A Case of India	Ashutosh Pandey	Prof. Rajendra Sahu	2020
03	Efficient Routing Protocols for Moile Sink Based Wireless Sensor Networks	Shubhra Jain	Dr. K.K. Pattanaik	2020
04	Energy Efficient Design for Trust Tecniques for Trustworthy System Design	Vijaypal Singh Rathor	Prof. G.K Sharma	2020
05	Multi Robot Target Searching in an Unknown Environment using Nature Inspired Methods	Upma Jain	Dr. Ritu Tiwari and Dr, W. Wilfred Godrey	2020
06	Performance Analysis of Massive Mimo Enabled Heterogeneous Network with Wireless Backhauling	Shweta Rajoria	Prof. Aditya Trivedi and Dr. W. Wilfred Godfrey	2020
07	Development of Recurrent Neural Network Based Deep Learning Model for Healthcare	Saumil Maheshwari	Prof. Anupam Shukla	2020

PG Thesis Reports of Pass-Out students during the year 2020 - 21

MBA Thesis Report (Including IPG)

S.N.	Title	Author	Guidance	Year	Roll No.
1	Financial Analysis of Biofloc Technology system in India's Perspective	Deepak Kumar	Prof. Rajendra Sahu and Prof. Manoj patwardhan	2020	2015IPG-019
2	Stock Returns and Volatility Analysis of Asian Economies Stock markets	Dheeraj Bareliya	Dr. Vishal Vyas and Dr. Vinay Singh	2020	2015IPG-022
3	Oil price fluctuations, stock market and macroeconomic fundamentals: Evidence from India	Shiva Kruthi Kalakonda	Dr. Rajendra Sahu and Dr. Vishal Vyas	2020	2015IPG-038
4	Analysis of Mutual Fund Performance	Rahul Goyal	Dr. Vishal Vyas & Dr. Vinay Singh	2020	2015IPG-070
5	Empirical Study of Sustainable Supply Chain Practices with Financial Performances of Indian firms	Sachin Nikunj	Dr. Rajesh Rajagopal	2020	2015IPG-078
6	Financial Literacy of students and their financial behaviour	Saurabh Srijan	Dr. Vishal Vyas and Dr. Vinay Singh	2020	2015IPG-087
7	NSE Stock Market Index Prediction Using Machine Learning Approach	Shaan Mahato	Prof. Naval Bajpai and Dr. Vishal Vyas	2020	IPG2015-088

S.N.	Title	Author	Guidance	Year	Roll No.
8	Sustainability of Innovation In Indian Automobile Company Belonging to Medium Scale Category	Shivam Kedia	Dr. Vinay Singh and Dr. Jeevara j S	2020	2015IPG-94
9	Study of Driver Attitude and Government Efforts to Avoid The Road Accidents	Amit Meena	Dr. Vinay Singh and Dr. Jeevara jS	2020	2015IPG-122
10	A framework for Organizational Capabilities, Disruptive Innovation and Organizational Performance	Jainendra Singh	Dr Vinay Singh and Dr Vishal Vyas	2020	2018MBA-01
11	Major Factors of Talent Acquisition in the Indian Start-Up Industry: An in-sight into the I.T. Sector	Anshul Shrivastava	Prof. Manoj Patwardhan	2020	2018MBA02
12	An Empirical Study on the Ideal Idea of Today's Millennials When it Comes to Hangout Joints	Siddharth Tiwari	Dr. Rajesh Rajagopal and Dr. Yash Daultani	2020	2018MBA-03
13	Developing a Framework for Agile Supply Chain: A Case Study on Vikram Woolens	Pravesh Gupta	Prof. Gyan Prakash and Prof. Naval Bajpai	2020	2018BA - 05
14	Corporate Governance and Sustainability Performance: An Empirical Study of Social Sustainability Factors Influence on Corporate Governance	Chandrakant Raut	Dr Rajesh Rajagopal and Dr Arun Kumar	2020	2018MBA 05
15	Ranking of Critical Success Factors (CSFs) For Erp Implementation In Indian SMEs	Deeksha	Prof. Rajendra Sahu	2020	2018MBA-06
16	Factors Affecting Employee Performance: A study of 6 predictors on employees working in three different industrial sectors (Govt., Banking & Corporate)	Divya Singh	Prof. Naval Bajpai	2020	2018MBA-07
17	Exploring Confectionery Supply Chain	Harmeet Kaur	Prof. Gyan Prakash	2020	2018MBA-08
18	Study Of The Enablers of Collaborative Planning Forecasting and Replenishment	Hemant Joshi	Dr. Rajesh Rajagopal and Dr. Yash Daultani	2020	2018MBA-09
19	Investigation of Critical Barriers To Filling Line Productivity In Paint Industries	Naman Markan	Prof. Rajendra Sahu & Dr. Yash Daultani	2020	2018MBA-10
20	Exploring the Effect of Perceived Social Support, Self-Concealment, and Procrastination on Happiness	Neha Sharma	Prof. Manoj Patwardhan and Dr. Yash Daultani	2020	2018MBA-11
21	Study on Supply chain vulnerabilities and Risk management in Manufacturing Industries	Nikhil Gupta	Dr. Yash Daultani and Dr. Rajesh Rajagopal	2020	2018MBA-12
22	Innovation in Social entrepreneurship in context of technical education	Nirdesh	Dr. Vinay Singh and Dr. Vishal Vyas	2020	2018MBA-13
23	Analytical Testing Market Analysis for Exported Food Items In India & Starting A Test Lab Business	Shubhadip Singha	Prof. Rajendra Sahu	2020	2018MBA-17
24	E – Learning – Exploration of Users' Satisfaction Factors And Ways To Strenghten E-Learning Implementation	Shubhangi Gupta	Dr. Vishal Vyas	2020	2018MBA-18
25	Inhibitors of Disruptive innovation	Aakriti Saxena	Prof. Gyan Prakash	2020	2018MBA-21
26	Identification of practices in organizations: A study from gender perspective	Ananya Sharma	Prof. Manoj Patwardhan	2020	2018MBA-22
27	Factors Affecting Customer Preferences	Payaswani Gangrade	Prof. Naval Bajpai	2020	2018MBA-23
28	Identification and Prioritization of Critical Success Factors For Implementing Sustainable Practices In Indian Logistics Sector	Priyanshi Jain	Dr. Yash Daultani & Prof. Naval Bajpai	2020	2018MBA-24

M.Tech Thesis (Including IPG)

S.N.	Title	Author	Guidance	Year	Roll No.
1	Enhanced Quantum Search and Recommendation Algorithm	Aayush Choudhary	Prof. Pankaj Srivastava	2020	2015IPG-001
2	Blockchain For Secure EHRs Sharing In Cloud Based E-Health Systems	Aayush Sidana	Prof. S. Tapaswi	2020	2015IPG-002
3	Securing Online Multimedia Contents using Encryption	Abhinav Anand	Dr. Santosh Singh Rathod & Dr. Debanjan Sadhya	2020	2015IPG-003
4	Mutli-class Anomaly based Intrusion Detection System for Networks using Deep Learning	Aditya Gupta	Prof. Aditya Trivedi and Dr. Saumya Bhadauria	2020	2015IPG-004
5	Pre-Execution Malware Detection using Ensemble of Deep Learning Techniques	Aditya Raj	Dr. Saumya Bhadauria.	2020	2015IPG-005
6	A study of tourism impact factors and tourism demand forecasting in India.	Akshay Agarwal	Dr. Ajay Kumar	2020	2015IPG-006
7	Optimized Cloudlet Selection Strategy with Dynamic Pricing for Optimal Scheduling	Anil Kumar	Dr. Neetesh Kumar	2020	2015IPG-007
8	Unsupervised Text Summarisation Using Spectral Clustering	Aniruddha Shrikhande	Dr Anuraj Singh	2020	2015IPG-008
9	Severity Classification for Diabetic Retinopathy using Machine Learning	Ankita Yadav	Prof. Manisha Pattanaik & Prof. Mahua Bhattacharya	2020	2015IPG-010
10	Change Detection in Satellite Imagery: a multi-label approach using Convolutional Neural Network	Anurag Priyadarshi	Prof. Pramod Kumar Singh	2020	2015IPG-011
11	Self-Synchronisation Flexible Length Audio Watermarking Technique	Anvesh Chanderiya	Dr. Vinal Patel	2020	2015IPG-012
12	Sliding Window Protocol on Bechmann Pasquinucci, Peres Protocol	Arvind Rachuri	Prof. Pankaj Srivastava	2020	2015IPG-013
13	Gait Profiling and Recognition System	Ashish Kumar Anshu	Prof. K. V. Arya	2020	2015IPG-015
14	Automatic Text Summarization using Deep Neural Networks	Ayush Gupta	Dr. Neetesh Kumar	2020	2015IPG-016
15	Malicious code Detection using Deep Learning without lossy image compression	Barre Rishvanth	Prof. S Tapaswi & Dr. W Wilfred Godfrey	2020	2015IPG-017
16	Right Ventricle Segmentation using Lucas Kanade Optical Flow Method	Bobbili Medha	Dr. Wilfred Godfrey	2020	2015IPG-018
17	Financial analysis of Biofloc Technology system in India's perspective	Deepak Kumar	Prof. Rajendra Sahu & Prof. Manoj Patwardhan	2020	2015IPG-019
18	Classifying User's Myers-Briggs Personality Type from literary style using Sequence Models	Anand Deshmukh	Dr. Neetesh Kumar	2020	2015IPG-020
19	Stock returns and volatility analysis of emerging Asian economies stock markets	Dheeraj Bareliya	Dr. Vishal Vyas, Dr. Vinay Singh	2020	2015IPG-022
20	Facilitation of Relational Database Queries for Naive End-Users through Natural Language Instructions	Dheeraj Kumar Varshney	Dr Sunil Kumar	2020	2015IPG-023
21	Deep Hybrid Model for Ecient Text Normalization	Divya	Dr. Sunil Kumar	2020	2015IPG-025

S.N.	Title	Author	Guidance	Year	Roll No.
22	Intelligent Anti-lock Braking System Using Fuzzy Logic	Faraz Malik	Dr. Jeevaraj S	2020	IPG2015-027
23	Saliency Detection Using Absorbing Markov Chains	Durgam Chandana	Dr. W Wilfred Godfrey	2020	2015IPG-026
24	Evacuation in an Indoor footing using Q-Matrix based Policy iteration	G. Sriram	Prof. Shashikala Tapswi and Dr. Neetesh Kumar	2020	2015IPG-028
25	Portfolio Optimization using Nature Inspired Algorithms	Gatij Jain	Dr. Anuraj Singh	2020	2015IPG-029
26	Intelligent Non-Repetitive Recommendation Systems	Gaurav Agarwal	Prof. Joydip Dhar and Dr. Jeevaraj S	2020	2015IPG-030
27	Named Entity Recognition for Weather Domain Text in Hindi	Gaurav Yadav	Dr Santhosh Rathore & Dr Debanjan	2020	2015IPG-031
28	Release Time Analysis of Open Source Software Using Entropy and Reliability	Gunjan Tripathi	Dr Ajay Kumar	2020	2015IPG-033
29	Machine Translation using end to end Neural Architectures	Hardik Khandelwal	Prof. Rajendra Sahu	2020	2015IPG-034
30	Enhanced Neural Architecture Search for Automated Multimodal Learning	Haritha S.	Dr. Anuraj Singh	2020	2015IPG-035
31	Collaborative intrusion detection in IoT environments using Blockchain	Jalaj Krishna Varshney	Prof. S. Tapaswi	2020	2015IPG-036
32	Intrusion Detection Mechanism for Large Scale Networks using CNN-LSTM	Lokesh Karanam	Dr. K K Pattanaik	2020	2015IPG-039
33	CUSTOMER RESPONSE ANALYSIS FOR FASTER REVIEW UNDERSTANDING USING LSTM	Karra Avinath Chawan	Dr.Binod Prasad	2020	2015IPG-040
34	Detection of Depression using Machine Learning	Kavita Yadav	Dr. Ajay Kumar	2020	2015IPG-041
35	Multimodal Embedding Representations for Technical Support Problems	Kushal Chauhan	Prof. P.K. Singh	2020	2015IPG-045
36	Detecting and Classifying Toxic Comments	Lovely Pandey	Prof. Rajendra Sahu	2020	2015IPG-048
37	Handwriting detection from Scanned images using Deep Neural Networks	Mahima Gupta	Dr. Neetesh Kumar	2020	2015IPG-050
38	Fake News Detection using Stylometry	Mathangi Akash Kumar	Dr. Binod Prasad	2020	2015IPG-051
39	Secure storage of biometric data over cloud using Shamir's secret sharing	Nishant Raj	Dr. Debanjan sadhya	2020	2015IPG-052
40	Improving CNN Based Sequential Recommendation System by Using Joint Embedding and Efficient Convolutions	P. Lakshmi Narayana	Dr. K.K.Pattanaik and Prof. Rajendra Sahu	2020	2015IPG-053
41	A comparative study of Restaurant visitor forecasting using time series and machine learning techniques	Palak Jain	Dr. Pinku Ranjan and Dr. Somesh Kumar	2020	2015IPG-054
42	Alzheimer Disease Detection using Brain MRI Images	Parag Jain	Prof P.K. Singh	2020	2015IPG-056
43	Depression Scale Prediction using Multimodal Deep Learning System	Paritosh Kumar	Dr. Pinku Ranjan	2020	2015IPG-057

S.N.	Title	Author	Guidance	Year	Roll No.
44	Unsupervised Multimodal Representation Learning For Audio and Video Correspondence	Pasumarthy Srinivas	Dr. Sunil Kumar	2020	2015IPG-058
45	Database query in natural language	Pradhuman Singh Parihar	Prof. G.K. Sharma and Prof. Manisha Pattanaik	2020	2015IPG-060
46	Blockchain for Secure Shared Expenses Management System	Prakhar Kapoor	Prof. S. Tapaswi	2020	2015IPG-061
47	Malware Prediction Using Machine Learning Algorithm	Prakhar Saxena	Prof. Manisha Pattanaik	2020	2015IPG-062
48	Movie Genre Prediction Based on Plot Summary	Prakhar Srivastava	Prof Pankaj Srivastava	2020	2015IPG-063
49	A Robust Machine Learning Based Eyeball TrackingSystem for Calculating Gaze Fixation Duration	Pranay Verma	Prof. Joydip Dhar	2020	2015-IPG-064
50	Intellectual prop erty management s ystem using blo ckchain and digital watermarking	Pranjal Kumar	Dr. Saumya Bhadauria	2020	2015IPG-065
51	Stock Market Prediction Analysis by Incorporating daily News Opinion and Sentiment	Praveen Prajapati	Prof. Rajendra Sahu	2020	2015IPG-066
52	Audio-visual speech enhancement in a multiple-speaker environment using deep learning algorithms	Priya Yadav	Dr. Anuraj Singh	2020	2015-IPG067
53	Watermarking of Deep Recurrent Neural Network Using Adversarial Examples to Protect Intellectual Property	Pulkit Rathi	Dr. Saumya Bhadauria	2020	2015IPG-068
54	Anomaly Detection in Transaction Pattern on Imbalanced Data using cost sensitive learning	Pushpak dhakad	Dr. Anuraj Singh, Dr. Yash Daultani	2020	2015IPG-069
55	Text Summarization using GANs	Raj Kuwar Gupta	Prof. Joydip Dhar	2020	2015IPG-071
56	Solar Irradiation Level prediction using Multilayer Perceptron and Autoregressive Non-linear Exogenous Models	Rakesh Kumar	Dr. Anuraj Singh	2020	2015IPG-072
57	A Blockchain-Based Application for Counterfeits Detection in Pharmaceuticals Distribution Systems	Raktim Patar	Dr. Neetesh Kumar	2020	2015IPG-073
58	Product Recommendation based on Visual Similarity using Trivial CNN Architecture	Reddi Kamal Sandeep	Dr. Binod Prasad	2020	2015IPG-075
59	Building and Querying Knowledge Graph Database using Natural Language	Rishabh Jain	Prof Aditya Trivedi, Dr. Vinal Patel	2020	2015IPG-076
60	Multi-robot path planning with Obstacle Avoidance in Dynamic Target Environment	Sahibdeep Singh Sodhi	Dr. Joydip Dhar	2020	2015IPG-079
61	Artificial Inteligence Based Recommendation System for Tourism in India	Sahil Kureel	Dr. Ajay Kumar and Dr. Vinay Singh	2020	2015IPG-080
62	Automated Analysis and Prediction of Obstructive Sleep Apnea in subjects using Deep Learning	Sakshi Chahal	Prof. Aditya Trivedi	2020	2015IPG-081
63	Deep Learning based Visual Similarity for Recommendation Systems	Saloni	Dr. W Wilfred Godfrey	2020	2015IPG-082
64	Vision Based Natural Language Models for Image Representation	Saloni Jain	Prof. Rajendra Sahu	2020	2015IPG-083
65	Semi-supervised multi-label classification of MBTI personality types of Twitter users using Graph Convolution Network	Sanket Rai	Prof. Pramod Kumar Singh	2020	2015IPG-084

S.N.	Title	Author	Guidance	Year	Roll No.
66	Autonomous Traffic Light System using Reinforcement Learning and Software-Defined Network	Sarthak Mittal	Dr. Neetesh Kumar	2020	2015IPG-085
67	Advance analysis of malwares propagation and security with impulsive delay strategy in computer network	Saurabh Kumar	Prof. Joydip Dhar	2020	2015IPG-086
68	NSE Stock Market Index Prediction using Machine Learning Model	Durgam Chandana	Prof. Naval Bajpai & Dr. Vishal Vyas	2020	2015IPG-088
69	Digital Image Forgery Detection using Convolutional Neural Networks	Shagun Srivastava	Dr. Ajay Kumar	2020	2015IPG-089
70	An Automatic Skin Lesion Analyser Using Image Processing and Classi cation	Zeenab Karishma	Prof. Rajendra Sahu	2020	2015IPG-090
71	Generation of Structured Language through Analysis of Transform and Sequential GAN Neural Net Architectures	Sharad Kumar Mishra	Dr. Santosh Singh Rathore	2020	2015IPG-091
72	Electronic Health Record Management System Using Blockchain Technology	Shashank Bothra	Dr. Anuraj Singh and Dr. Gaurav Kaushal	2020	2015IPG-092
73	Blockchain-based Electronic Health Record Management and Secure Medical Data Sharing	Samarth Shetty	Dr. Pinku Ranjan	2020	2015IPG-093
74	Author Identification using Stylometry and Document Fingerprinting	Shubham Yadav	Dr. Santosh Singh Rathore	2020	2015IPG-097
75	Single image dehazing using conditional generative adversarial network	Shweta Singh	Dr. Sunil Kumar	2020	2015IPG-098
76	Combating depression through the neural network analysis of web behavior	Siddharth Srivatsa	Prof. Pramod Kumar Singh	2020	2015IPG-099
77	Forecasting Sudden Eruptions of Electromagnetic radiation from Sun using Recurrent Neural Networks	Suragani Girish	Dr. K K Pattanaik and Prof. Rajendra Sahu	2020	2015IPG-101
78	An Automatic Cell Nuclei Segmentation based on Deep Learning Strategies	Ushnesha Daripa	Prof. Mahua Bhattacharya	2020	2015IPG-102
79	Design Of Cancelable Biometric Template For Face Images Based On Locality Sensitive Hashing	Utkarsh Utsav	Dr. Debanjan Sadhya	2020	2015IPG103
80	Classification of Sports Videos using Deep Learning Model and Fine Tuning	Vaibhav Singh	Dr. Pinku Ranjan	2020	2015IPG-104
81	Smart Deep Image Prior For Image Denoising Without Clean Image	Vinayak Sharma	Dr. Sunil Kumar	2020	2015IPG-107
82	Privacy Management in Social Networks: Trust Determination Based On Security Feature Opinions of Peers	Volety Anurag	Dr. K. K. Pattanaik	2020	2015IPG-109
83	Detecting Malicious Web Content And Its Types Using Machine Learning Algorithms	Anshul Warade	Dr. Ajay Kumar	2020	2015IPG-110
84	Deep Learning Approach For Recognition Of Human Activities Based On The Motion Of Skeletal Joints	Yash Kodesia	Prof. P.K Singh	2020	2015IPG-111
85	A Deep Learning Model For The No-Show Prediction In Hospital Appointments	Yash Prajapati	Prof. Pankaj Srivastava	2020	2015IPG-112
86	Classifying Thoracic Diseases Using Encoded Representation of Chest X-Ray Images	Deepanshu Aggarwal	Prof. Pankaj Srivastava	2020	2015IPG-113

S.N.	Title	Author	Guidance	Year	Roll No.
87	Photorealistic Video Frames Generation using Generative Adversarial Networks (GANs)	Abhay Pratap Singh	Dr. Sunil Kumar	2020	2015IPG-114
88	Load balancing using weighted multipath routing in network function virtualization	Adarsh Yadav	Dr. Pinku Ranjan	2020	2015IPG-116
89	Forecasting Sto ck trends using Attention in Neural Networks	Kartikey Sharma	Dr. Ajay Kumar and Dr. Vinay Singh	2020	2015IPG-117
90	Temporal concept localization of special moments in a video	Shubham Shukla	Wilfred Godfrey	2020	2015IPG-118
91	Improving the Accuracy of Text Classification UsingTerm Weighting Methods and Fuzzy Logic	Yash Goyal	Dr. Jeevaraj S	2020	2015IPG-119
92	Product Reviews Based Query Answering System for Online Marketplaces	Tarun Bathwal	Dr Neetesh Kumar	2020	2015IPG-121
93	Security of Healthcare Record using Blockchain Technology	Aditya Santra	Dr. Saumya Bhadauria	2020	2015IPG-123
94	Improving Human Understandability of Abstractive Summarization	Nishant Sharma	Prof. G. K. Sharma	2020	2015IPG-124
95	Dynamic Load Balancing in Software Defined Network	Harsh Raitani	Prof. S. Tapaswi	2020	2015IPG-125
96	Sound Event Detection: A Wavelet Based Approach for Weakly Labelled Data	Amit Kumar	Dr. Vinal Patel	2020	2018DC-01
97	Convex Combination of Adaptive Filters for Channel Estimation of Wireless Sensor Networks	Anurag Singh	Dr. Vinal Patel	2020	2018DC-02
98	KNN Based Indoor Localization Using Time of Arrival and Channel Transfer Function	Chingeetham Nuthan	Prof. Aditya Trivedi	2020	2018DC-03
99	Robust Nonlinear Active Noise Control System for Impulsive Noise	Chirag Agrawalla	Dr. Vinal Patel		2018DC-04
100	OFDM Ensemble0Autoencoder Using CNN and SPSA for End-to-EndLLearning Communication LSystems	K Mohammed Asif	Prof. Aditya Trivedi	2020	2018DC-05
101	Design of Low Cost Digital Hearing Aid Using Ane Projection Algorithm	Kumar Shubham Singh	Dr. Vinal Patel	2020	2018DC-06
102	Estimation of Atmospheric Attenuation and Coverage Analysis for UAV Networks with MmWave Communication	Naveen Pawar	Prof. Aditya Trivedi	2020	2018DC-07
103	Modified Chan-Vese Active Contour Based Brain Tumor Segmentation	Pooja Verma	Prof. Mahua Bhattacharya	2020	2018DC-08
104	Co-Channel Interference Suppression for Cellular-Connected UAV using NOMA	Rochak Jain	Prof. Aditya Trivedi	2020	2018DC-09
105	Brain Tumor Classification Using Wavelet Features and Least Square-Support Vector Machine	Sai Teja K	Prof. Mahua Bhattacharya	2020	2018DC-10
106	Fake Currency Detection using Artificial Neural Networks	Shaik Khadar Basha	Prof. Mahua Bhattacharya	2020	2018DC-11
107	Blind Deconvolution Techniques For Blurry MRI Image	Tarun Kumar	Prof. Mahua Bhattacharya & Dr. Vinal Patel	2020	2018DC-12

S.N.	Title	Author	Guidance	Year	Roll No.
108	An Optimized Support Vector Machine based Fault Detection in Wireless Sensor Networks	Aishwarya Karmarkar	Dr. Prasenjit Chanak and Dr. Neetesh Kumar	2020	2018CN-02
109	An Energy Efficient Game Theory based Clustering Approach for Fault Tolerance in Wireless Sensor Networks	Alpi	Dr. Prasenjit Chanak	2020	2018CN-03
110	Multi Objective Gray Wolf Optimization based Path Design for Multiple Mobile Sinks in Wireless Sensor Networks	Archana Ojha	Dr. Prasenjit Chanak	2020	2018CN-05
111	A Learning Automata Technique for Target Coverage in Wireless Sensor Networks	Jyoti	Dr. Prashenjit Chanak	2020	2018CN-07
112	An Energy Efficient Query Processing Scheme for IoT-enabled Wireless Sensor Networks	Kavita Jha	Dr. Prasenjit Chanak	2020	2018CN-09
113	Hexagonal grid-based data collection in Heterogeneous Sensing WSNs	Manmohan	-	2020	2018CN-10
114	Binary PSOGSA Algorithm for Congestion Control in Wireless Sensor Networks	Nidhi Agrawal	Dr. Prasenjit Chanak	2020	2018CN-11
115	Scheduling of Redundant Sensors in Densely Deployed Wireless Sensor Networks	Nishat Zafar	Dr. Prasenjit Chanak	2020	2018CN-12
116	A Robust approach of eavesdropper handling in Quantum Key Distribution	Akash Shrivastava	Prof. Pankaj Srivastava	2020	2018IS-01
117	Efficient Ranking Function Using Fuzzy Logic for Information Retrieval System	Arun Chaudhary	Dr. Jeevaraj S	2020	2018IS-03
118	Hybrid Approaches for Rare Events Classification from Imbalanced Data	Divya Gajare	Dr. Joydip Dhar	2020	2018IS-04
119	Detection and Prevention of Black Hole Attack in SUPERMAN	Kratika Sharma	Dr. Saumya Bhadauria	2020	2018IS-06
120	Binary Multi-class Classi cation to Detect Cyber Attack using Normalized Deep Learning Approach in IDS	Mahan Bharat Doneriya	Dr. Saumya Bhadauria	2020	2018IS-07
121	Intrusion Detection System using Fuzzy Logic	Asif Ahamad	Dr. Jeevaraj S	2020	2018IS-08
122	Dynamic Malware Analysis Using Machine Learning Techniques	Swati Upadhyay	Dr. Saumya Bhadauria	2020	2018IS-15
123	An Improved Sequential Logic Lo cking technique to Thwart IP Piracy, Counterf eiting and Overbuilding	Bharat kumar	Prof. G.K Sharma	2020	2018VLSI-01
124	Analysis of Interface-trapped charges in GAA MOSFET and Design of low power SRAM cell	Diksha Bhargava	Dr.Gaurav Kaushal	2020	2018VLSI-02
125	Modelling and Performance Benchmarking of Flexible GateAll Around MOSFET for Advanced Technology Nodes	Himani Shahare	Dr. Somesh Kumar	2020	2018VLSI-03
126	Approximate Computing for Aging Aware Energy Efficient Design	Medha Pandey	Prof. Manisha Pattanaik	2020	2018VLSI-04
127	Hardware Trojan Detection Using Machine Learning	Nitya Kritin Valivati	Prof G.K Sharma and Prof Manisha Pattanaik	2020	2018VLSI-06
128	Design and Performance Benchmarking of Dual Gate Flexible Bilayer Graphene FETs	Palash Gupta	Dr.Somesh Kumar	2020	2018VLSI-07

S.N.	Title	Author	Guidance	Year	Roll No.
129	Design and synthesis of sequential reversible Circuits in quantum dot cellular automata technology	Shivangi Gupta	Dr. Somesh Kumar	2020	2018VLSI-08
130	A Low Noise Amplifier Based PLL with Reduced Jitter and Phase Noise	Shivani Gupta	Dr. Gaurav Kaushal	2020	2018VLSI-09
131	A low power low noise Analog Front-End for ECG recording application	Subhajit Dey	Dr. Gaurav Kaushal.	2020	2018VLSI-10
132	Design and implementation of low power, high-speed configurable approximation 8- bit booth multiplier	Y Sampath Kumar	Dr. Somesh Kumar	2020	2018VLSI-12
133	Application of in-memory computing for convolutional neural network	Yachna Kumari	Dr. Gaurav Kaushal	2020	2018VLSI-13

Right to Information Act, 2005: Report (01.04.2020 - 31.03.2021)

For implementation of Right to Information Act 2005, Institute has been taking initiative to make the system transparent and trying to upload maximum information on the institute website suo-moto for the citizens of India. The implementation of RTI Act 2005 is ensured by the officials designated for the purpose, who are as follows:

Shri Pankaj Gupta	**Shri Ram Phal Dwivedi**
Joint Registrar	Registrar
Central Public Information Officer	First Appellate Authority

Other details are given below:

No. of RTI applications received in the institute   :   27

No. of RTI applications replied by the institute   :   27

No. of first appeals received by the institute   :   01

No. of decisions passed by the FAA of the institute   :   01

Amount collected as RTI fee and additional fee   :   220

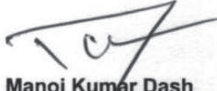**Atal Bihari Vajpayee - Indian Institute of Information Technology and Management, Gwalior (MP)**

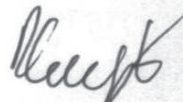**Balance Sheet as at 31st March 2021**

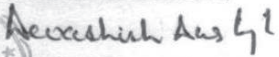| SOURCES OF FUNDS	Schedule	Current Year (₹)	Previous Year (₹)
Corpus Fund/ Capital Fund	1	3,33,62,80,984.00	3,18,62,65,083.00
Designated / Earmarked / Endowment Funds	2	1,31,24,38,150.00	1,21,21,12,071.00
Current Liabilities and Provisions	3	29,33,47,278.00	22,88,54,093.00
TOTAL :		**4,94,20,66,412.00**	**4,62,72,31,247.00**
APPLICATION OF FUNDS			
Fixed Assets (Gross Value)	4		
Tangible Assets		1,95,83,46,705.00	1,95,35,21,870.00
Intangible Assets		12,83,11,344.00	11,15,77,502.00
Capital Works-In-Progress		65,72,41,248.00	63,43,27,430.00
Investments- From Earmarked / Endowment Funds			
Long Term	-	0.00	0.00
Short Term	5	83,52,64,505.00	78,14,68,200.00
Investments- Others	6	0.00	0.00
Current Assets	7	1,20,11,11,824.00	93,53,05,309.00
Loans, Advances & Deposits	8	16,17,90,786.00	21,10,30,936.00
TOTAL :		**4,94,20,66,412.00**	**4,62,72,31,247.00**
Significant Accounting Policies	23		
Contingent Liabilities and Notes on Accounts	24		

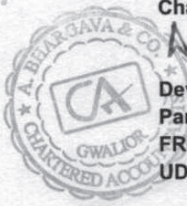Date : 28th October 2021

Place : Gwalior

Anil K Garg
AR (F&A)

Dr. Manoj Kumar Dash
JR (F&A) (I/c)

Pankaj Kumar Gupta
Registrar (I/c)

For : A Bhargava & Co.
Chartered Accountants,

Devashish Dasgupta
Partner, M. No. : 076234,
FRN : 001973C
UDIN : 21076234AAAABC5325

Prof. Rajendra Sahu
Director

Atal Bihari Vajpayee - Indian Institute of Information Technology and Management, Gwalior (MP)

Income & Expenditure Account for the year ended 31st March 2021

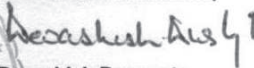| Particulars	Schedule	Current Year (₹)	Previous Year (₹)
A. INCOME :			
Academic Receipts	9	14,84,66,719.00	12,37,91,627.00
Grants / Subsidies	10	25,64,36,685.00	34,34,00,000.00
Income from Investment	11	5,03,79,912.00	4,47,85,118.00
Interest Earned	12	90,97,771.00	1,16,44,738.00
Other Incomes	13	42,20,425.00	70,60,354.00
Prior Period Income	14	0.00	1,706.00
Total (A) :		46,86,01,512.00	53,06,83,543.00
B. EXPENDITURE :			
Staff Payments & Benefits (Establishment Expenses)	15	11,54,04,271.00	13,10,11,067.00
Academic Expenses	16	3,77,59,636.00	5,23,50,565.00
Administrative and General Expenses	17	9,44,14,734.00	12,50,64,333.00
Transportation Expenses	18	6,60,642.00	23,19,048.00
Repairs & Maintenance	19	78,95,180.00	1,22,08,637.00
Finance Costs	20	8,132.00	9,806.00
Depreciation	4	4,87,81,300.00	4,89,81,243.00
Other Expenses	21	0.00	0.00
Prior Period Expenses	22	2,94,090.00	16,84,250.00
Total (B) :		30,52,17,985.00	37,36,28,949.00
C. Balance being excess of Income over Expenditure (A-B) :		16,33,83,527.00	15,70,54,594.00
D. Less : Transfer to Internal Corpus Fund :	1.1	(21,21,64,827.00)	(18,72,81,837.00)
E. Add : Amount taken from Internal Corpus Fund :	1.1	0.00	0.00
Being amount transferred to Schedule 1 (C-D+E) :		-4,87,81,300.00	-3,02,27,243.00

Date : 28th October 2021

Place : Gwalior

Anil K Garg
AR (F&A)

Dr. Manoj Kumar Dash
JR (F&A) (I/c)

Pankaj Kumar Gupta
Registrar (I/c)

For : A Bhargava & Co.
Chartered Accountants,

Devashish Dasgupta
Partner, M. No. : 076234,
FRN : 001973C
UDIN : 21076234AAAABC5325

Prof. Rajendra Sahu
Director

विश्वजीवनामृतं ज्ञानम्

Atal Bihari Vajpayee-
Indian Institute of Information Technology & Management, Gwalior
(An Autonomous Institute of Government of India)

Morena Link Road, Gwalior – 474015 (India)
Phone : +91-751-2449720, 2449816, Fax : +91-751-2460313
Website : www.iiitm.ac.in