



**ARMY INSTITUTE OF TECHNOLOGY**



# Army Institute of Technology

## *R&D Yearly Report* 2022-23

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# ARMY INSTITUTE OF TECHNOLOGY

## R&D ACTIVITIES: 2022-23

### 1. PhD Completed Till 30 June 2023.

(a)	E&Tc	: 11
(b)	Computer	: 04
(c)	IT	: 06
(d)	Mechanical	: 06
(e)	ASGE	: 05
(f)	Library	: <u>01</u>
	<b>Total</b>	<b>: <u>33</u></b>

### 2. Name of Faculty Completed PhD Till 30 Jun 2023.

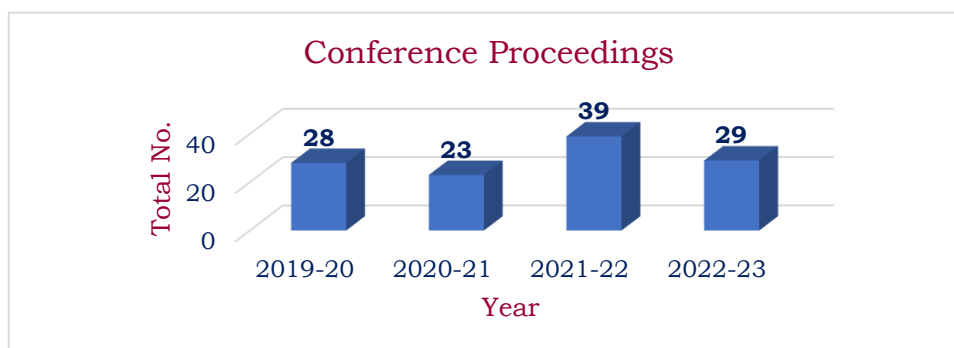
Ser No	Faculty	Date of completion	Ser No	Faculty	Date of completion
<b>E&amp;Tc</b>			<b>COMP</b>		
(a)	Dr. P B Karandikar	16 Feb 2013	(u)	Dr. Jayadevan R	23 May 2013
(b)	Dr. G R Patil	26 Sep 2015	(v)	Dr. S R Dhore	14 Apr 2017
(c)	Dr. Surekha K S	21 May 2018	(w)	Dr. N K Bansode	18 Jan 2018
(d)	Dr. Shraddha Oza	14 Nov 2019	(x)	Dr. Sagar Rane	29 Mar 2022
(e)	Dr. Renuka Bhandari	14 Sep 2019	<b>MECH</b>		
(f)	Dr. Rajashree Suryavanshi	19 Apr 2021	(y)	Dr. UV Awasarmol	01 Sep 2016
(g)	Dr. Sushma Patil	01 Jul 2021	(z)	Dr. Pritee Purohit	20 Jan 2018
(h)	Dr. Avinash Patil	01 Feb 2022	(aa)	Dr. JD Patil	31 May 2018
(j)	Dr. Nidhi Yadav	28 Jan 2018	(ab)	Dr. RB Gurav	26 May 2022
(k)	Dr. Sandeep Bidwai	18 Nov 2022	(ac)	Dr. Lokesh M	21 Apr 2014
(l)	Dr. Preeti Warriar	06 Apr 2023	(ad)	Dr. Laxmikant Jathar	18 July 2022
<b>IT</b>			<b>ASGE</b>		
(m)	Dr. Sangeeta Jadhav	07 Mar 2012	(ae)	Dr. Seema Tiwari	14 July 2005
(n)	Dr. Rahul Desai	26 Dec 2017	(af)	Dr. Swati Kulkarni	14 Sep 2015
(o)	Dr. Ashwini Sapkal	07 Jun 2019	(ag)	Dr. Ganesh Mundhe	30 Mar 2019
(p)	Dr. Gajanan Walunjkar	30 Dec 2022	(ah)	Dr. A K Singh	31 July 2020
(r)	Dr. Aparna Joshi	25 Mar 2023	(aj)	Dr. Sonali Bhosle	24 May 2017
(s)	Dr. Deepika Birari	27 Feb 2023			
<b>Library</b>					
(t)	Dr. Urmila Jagtap	25 Aug 2020			

## R&D Activities Summary (2022-23)

<b>Description</b>	<b>Total No.</b>	<b>Attachment</b>
Journal	41	Appx A
Conference	29	Appx B
Workshop/Seminar	04	Appx C

## Comparative Analysis (Journal Publication)

Year	2019-20	2020-21	2021-22	2022-23
Journal Publication	46	61	19	41
Quality Publication	24	36	14	35
Conference proceedings	28	23	39	29



### **Analysis:**

**Publications in the indexed journals such as UGC approved, SCI, SCIE, ESCI, Scopus etc. are considered as quality publications.**

The publication graph has shown a steady increase up to the year 2020 – 21. Though there is decline in publications for the year 2021-22 due to pandemic situation, the publication has shown a reasonably good increase during the current year. However, the conference proceedings have shown a slight decline for the year 2022-23

### **Measures proposed for further improvemet:**

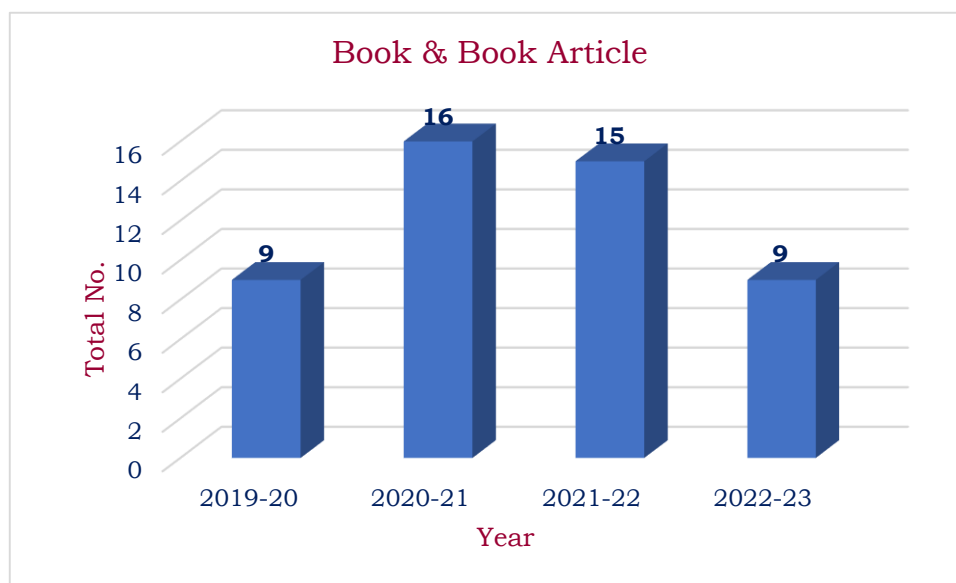
- Incentives for publication
- Best Research & Consultancy award instituted to motivate the faculty since 2016 (revised in 2021)
- Strict quality based CR for consideration for promotion.

Detailed list of publiactions at **Appendix A**

Detailed list of conference proceedings at **Appendix B**

## Comparative Analysis (Book and Book Article)

Year	2019-20	2020-21	2021-22	2022-23
Book & Book Article	09	16	15	09



### **Analysis:**

The Book/Book article published has shown slight decline during the academic year 2022-23 is due to the fact that more weightage is given to Journal/Patent publication

### Book Article

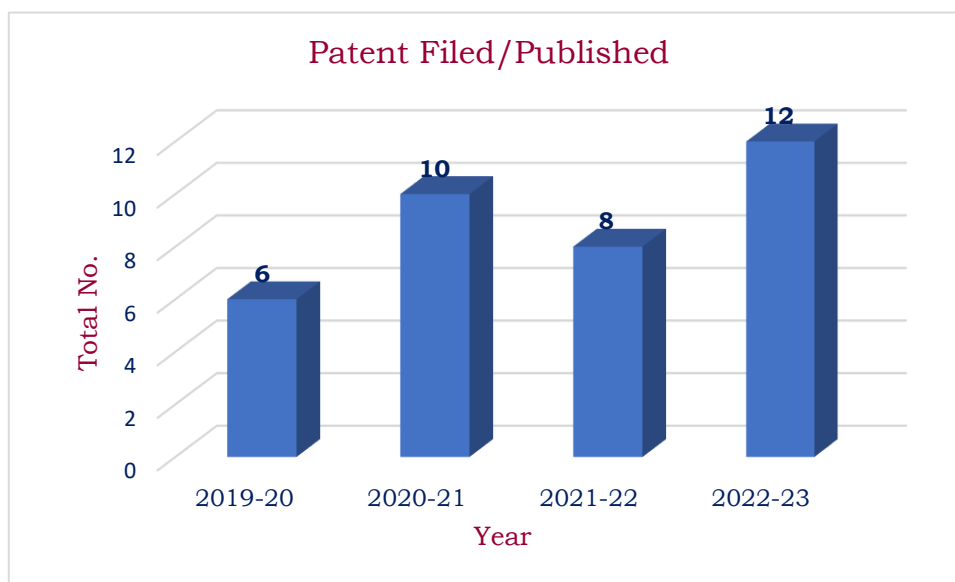
- (1) **Vaishali Ganganwar** - Sentimental Analysis of Code-Mixed Hindi Language - Congress on Intelligent Systems - Lecture Notes on Data Engineering and Communications Technologies - vol 111 - Springer Publisher - SCOPUS indexed - July 2022
- (2) **Rupali Bagate, Aparna Joshi, Abhilash Trivedi, Anand Pandey & Deepshikha Tripathi** - Survey on Algorithmic Trading Using Sentiment Analysis- Lecture Notes in Networks and Systems - Sep 2022
- (3) **Rupali Bagate, Aparna Joshi, Narendra Kumar Yadav, Aman Singh, Gaurav Singh Dhek, Naincy Rathore** - Survey on Accent Correction and Region Prediction - Lecture Notes in Networks and Systems - Sep 2022.
- (4) **Yuvraj Gholap, Rahul Desai** - License plate detection and recognition - Green IoT: Sustainable Design and E-commerce Technologies – AN Publishers – Oct 2022
- (5) **G M Walunjkar, Rahul Desai** - Reducing routing overhead in Manet - Green IoT: Sustainable Design and E-commerce Technologies – AN Publishers – Oct 2022
- (6) **Sanjay M Gaikwad** - Investigation of Heat Transfer and Fluid Flow Characteristics in Straight and Divergent Wavy Mini channels With Water as Working Medium - Fluid Mechanics and Fluid Power - Lecture Notes in Mechanical Engineering - ISBN978-981-19-6269-1- Springer Publisher - Apr 2023
- (7) **Sita Yadav** - Video Object detection with improved classification approach - Data Management, Analytics, and Innovation - May 2023

### Book Published

- (1) **Laxmikant Jathar** - Engineering Thermodynamic - 978-93-332-2201-National Technical Publication, Pune - Aug 2022
- (2) **Laxmikant Jathar** -Energy Engineering - 978-93-5585-313-4 – National Technical Publication, Pune - Oct 2022

## Comparative Analysis (Patent Filed/Published)

Year	2019-20	2020-21	2021-22	2022-23
Patent Filed/Published	06	10	08	12



### **Analysis:**

The Patent published by the faculty has shown a remarkable improvement during the year 2022 – 23. Two patents have been granted.

### **Measures proposed for further improvemet:**

- IPR policy is introduced since 2021 which supports 100% patent funding under two categories
- Best Research & Consultancy award instituted to motivate the faculty



## Patent (Faculty/Institution)

### Patent Filed/Published (National).

- (1) **Anita Suryawanshi**, Sameer S Shastri (Ext), Mr. Vijay Gharge (Ext) - Experimental Investigations on Influence and Necessity of Initial Curing on the Properties of Hardened Concrete - Published on 24<sup>th</sup> June 2022
- (2) **Anita Suryawanshi** - Advanced Steel Fibre Reinforced Cement Concrete - Patent published on 5<sup>th</sup> Aug 2022
- (3) **Shilpa Pawar, Bharath S, C Khusi, P Divya Bharathi** – IoT Based Asset Tracking and automobile safety system - Patent published on 7<sup>th</sup> Oct 2022
- (4) Dilip Kumar Sharma (Ext), Abdul Hannan (Ext), **Mahesh Lonare**, Vipul Bansal (Ext), **Yogita Hambir**, Santosh Singh (Ext), **Kuldeep Hule**, Kamlesh Patil (Ext), **PR Sonawane**, Pankaj Kulekar (Ext), Kirubanandhan S (Ext), Amruta M (Ext) - The classification technique for the face spoof detection in artificial Neural networks using concepts of Machine Learning – Patent published on 25<sup>th</sup> Nov 2022
- (5) **Aparna Joshi, Gajanan Walunjkar, Rahul Desai, Vaishali Ingale, Rupali Bagate, Yuvraj Gholap** - Interactive Shopping experience using Augmented Reality - Patent Published on 13<sup>th</sup> Jan 2023
- (6) S Dharme (Ext), Anant Kaulage (Ext), **Sandeep Samleti**, S Meenakshi (Ext), C Shyamala (Ext), Sivasankar G A (Ext), K Maran (Ext) - An artificial intelligence and Machine Learning based supply chain management system and method thereof - Patent Published on 27<sup>th</sup> Jan 2023
- (7) Aditi Srivastava (Ext), **Asha Sathe, Kuldeep Hule**, Kolla Bhanu (Ext), **Sharayu Lokhande**, Seema Sharma (Ext), **P R Sonawane, Mahesh Lonare**, Manashree Mane (Ext), Venkata Reddy Dornadula (Ext), Sailaja Petikam (Ext) - An assessment of strategy, networks, complexity and Innovation On Organizational Adaptability – Patent published on 10<sup>th</sup> Feb 2023
- (8) **Sita Yadav**, Sandeep Chaware (Ext) - Video content detection-based system to save stray animals - Patent Published on 31<sup>st</sup> Mar 2023
- (9) S K Bajpai (Ext), **Seema Tiwari**, Aniteshma Chanpuria (Ext), Manjula Bajpai (Ext) et al - Process for preparation of magnetite loaded sulfur oil (mlso) composite adsorbent - Patent Granted on 28<sup>th</sup> Mar 2023

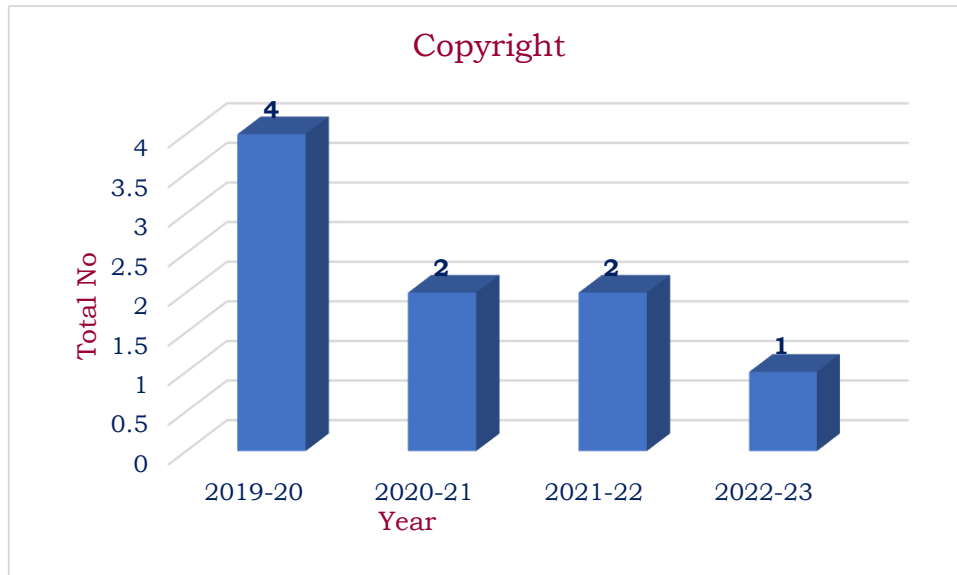
(10) Rini Saxena (Ext), Puja Gupta (Ext), **Renuka Bhandari**, Raj Gupta (Ext), Upendra Singh (Ext), Himanshukamal Verma (Ext), Rafi Mohd Shaikh (Ext), Vinay Manurkar (Ext) - A Smart Light Pole System - Patent Granted on 25<sup>th</sup> Apr 2023

(11) Shobha Waghmode (Ext), Tabmay Jagtap (Ext), **Snehal Marathe, B P Patil**, Rashi Patil (Ext) – To intensify Solar efficiency and water harvesting by & NBSP; using core shell decorated metal organic frame work - Patent Published on 5<sup>th</sup> May 2023

(12) Muttappa M Mantur (Ext), Prasanna B T(Ext), R Deepa (Ext), Sana Saraswathi (Ext), **Dipika Birari** , M Selvi (Ext), Jalaja Jayalakshmi (Ext),K V S Prasad (Ext), Shantan Kumar (Ext), Sureshkumar C (Ext) - Artificial Intelligence based Automatic Stock Price prediction System to predict High, Low and Closing Price using cloud computing and Machine Learning Algorithms – Patent published on 23<sup>rd</sup> June 2023

## Comparative Analysis (Copyright)

Year	2019-20	2020-21	2021-22	2022-23
Copyright	04	02	02	01



### Analysis:

The copyright published by the faculty is declined during the year 2022-23 due to the fact that patent publication has more weightage

### Measures proposed for improvemet:

- IPR policy is introduced which supports 100% patent funding under two categories
- Best Research & Consultancy award instituted to motivate the faculty

**Copyright Published**

**Pragati Rana, B P Patil** - Cyber Security Threats Detection And Protection in IoT Devices – Copyright published on 31st May 2023

### **Comparative Analysis (Funded Projects)**

Year	2019-20	2020-21	2021-22	2022-23
Amount received (Rs)	7.4 lacs	00	7.4578 crores	7.4578 crores

#### **Analysis:**

- The funding received from NSCS (The National Security Council Secretariat) for the year 2021-23 is Rs. 7.4578 Crores has supported the consultancy activities
- The amount received in the year 2021-23 (Rs.7.4578 Crores ) is considerably higher as compared to the previous years

#### **Measures proposed for improvemet:**

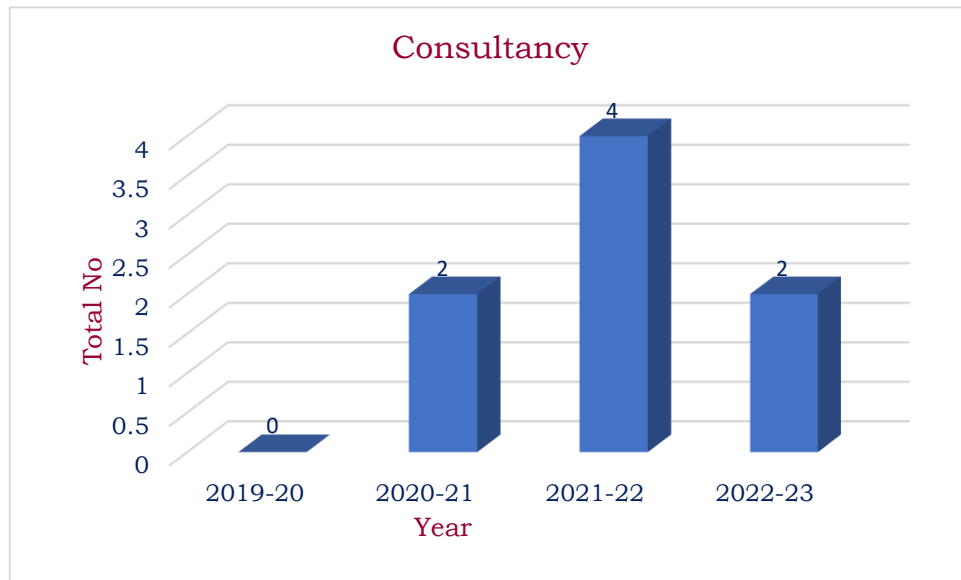
- To motivate faculty to apply for National level funding such as DST, AICTE, ISRO, DDRDO etc.
- To motivate faculty to apply for funding which is beneficial to enhance Research activities

### **Funding Received 2021-23**

Received a grant of **Rs. 7.4578** crores from NSCS (The National Security Council Secretariat) by the Computer Engineering department towards the development of project titled “System for secure Fine Grained Access Control and Authorization of Digital Assets and Operations” to be implemented by AIT & M/s 42 Labs for a duration of 2 years

## Comparative Analysis (Consultancy)

Year	2019-20	2020-21	2021-22	2022-23
Funded Projects	00	02	04	02



### **Analysis:**

There is a marginal increase in the consultancy activity due to funding by the The National Security Council Secretariat (NSCS).

## Consultancy

(1) NSCS – AIT FT42 Research project – Amount received  
**Rs.16,39,940**

(2) **Wear Testing** - Prof M B Phatangare - Wear Testing - **Rs. 38,800**

(3) NSCS – AIT FT42 Research project – Amount received **Rs.16,39,940**

(4) **Wear Testing** - Prof M B Phatangare - Wear Testing - **Rs. 38,800**



### **Research Award**

(1) **Dr. Surekha K S** – Best research award - Virtual International awards on Multi Disciplinary research and innovation – June 2022

(2) **Dr. Seema Tiwari** - International excellence award for outstanding contribution in Teaching and Research – Virtual International awards on Multi Disciplinary research and innovation – Sep 2022

## I&E Cell Activities

### Startup

#### Startups Supported by AIT

##### Startups Launched.

###### Registered

- (1) **Xefficient** - Co-Founders: Mr. Pitamber Panda, Mr. Vishal Singh, Mr. Priyanshu Dayal (Alumni BE Mech. Engg. 2021) - Product: Vertical Axis Wind Turbine with improved efficiency - Type: Pvt. Ltd  
Patent commercialization process is initiated

###### Non Registered

- (1) **Stumato** - A food management application - Allows users to browse and order food, track their orders, and make payments

Status - Application ready, pilot tested with AIT students and Mess and OAC's Night Canteen

Co-founders - Ankit Singh, Kavya Chauhan, Ritik Kumar, Soumyadip Roy, Jaskaran Singh : SE IT

- (2) **Kashida** - A platform to promote handcrafted goods made by Indian Army welfare organizations

Status - Platform ready and hosted, Revenue generated of Rs. 20,000 in the year

Co-founders - Ankit Singh, Kavya Chauhan, Ritik Kumar, Soumyadip Roy, Jaskaran Singh : SE IT

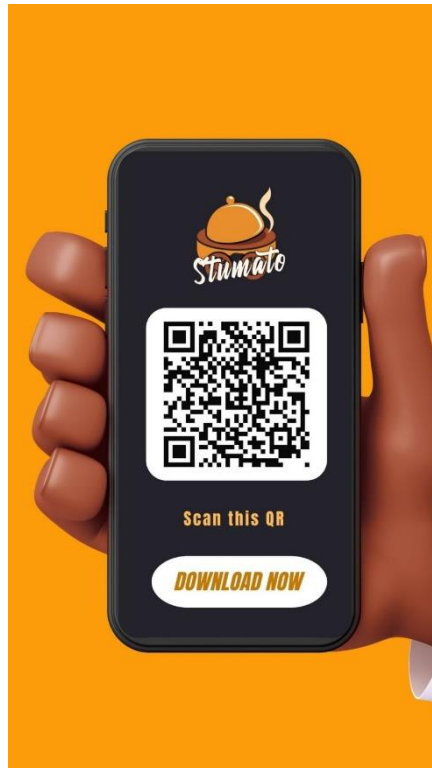
**Startups Supported by AIT**

**Xefficient**



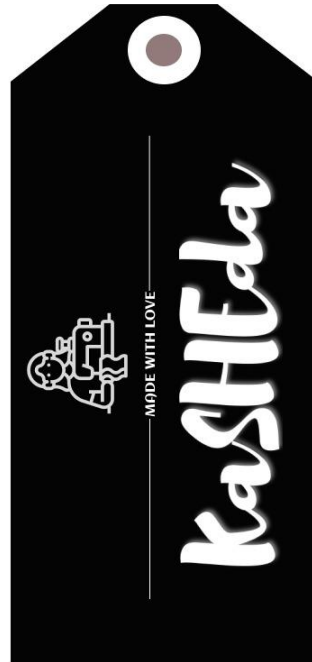
**Startups Supported by AIT**

**Stumato**



**Startups Supported by AIT**

**Kashida**



## Appx A

### Publication – Journals

- (1) **Sagar Rane**, Sanjeev Wagh (Ext), Arati Dixit (Ext) - Blockchain Driven Secure and Efficient Logging for Cloud Forensics - International Journal of Computing and Digital Systems, Vol 11, Issue 1, pp 1439 to 1455 – University of Baharain Publisher - **Scopus Indexed** - June 2022
- (2) **Smita Kulkarni (Ext), Sangeeta Jadhav** - Group Activity Recognition Based on Interaction Contextual Information in Videos Using Machine Learning - International Journal of Next-Generation Computing – Vol 13, Issue 2, pp 141 to 150 - Perpetual Innovation Media Pvt Ltd Publisher - **ESCI indexed** - July 2022
- (3) **Gajanan Walunjkar, Yuvraj Gholap, Rahul Desai, R Sankalp Shukla** - Prediction of Market Trends using Machine learning - International Journal of Next-Generation Computing) - Vol 13, Issue 2, pp 181 to 188 - Perpetual Innovation Media Pvt Ltd Publisher - **ESCI indexed** - July 2022
- (4) **Aparna Joshi**, Shyamala Devi Munisamy (Ext) - In-depth analysis of dynamic degree load balancing technique in public cloud for heterogeneous cloudlets - Indonesian Journal of Electrical Engineering and Computer Science - Vol. 27 Issue 2, pp 1119 to 1126 - ISSN: 2502-4752 -Institute of Advanced Engineering and Science Publisher - **Scopus indexed** - Aug 2022
- (5) **Sagar Rane, Anant Kaulage** - Best Shot Selection using Convolutional Neural Networks - International Journal of Next-Generation Computing - Vol 13, Issue 2 – pp 117 to 128 - ISSN: 0976-5034 -Perpetual Innovation media Pvt Ltd Publisher - **ESCI indexed** - Aug 2022
- (6) **J D Patil** - Oscillating flow heat transfer: a comprehensive review Energy Sources, Part A: Recovery, Utilization, and Environmental Effects - SCIE indexed - Vol 44 (3) - pp 7598 to 7619 - ISSN: 1556-7036 - Taylor & Francis Inc Publisher - **SCIE indexed** - Aug 2022.
- (7) **Ramshiromani Verma, Anand A Ramgude, Sanjay M Gaikwad** - Aerodynamic Performance Enhancement Of Wind Turbine Blade Using Cavity - International Journal of Mechanical and Production Engineering Research and Development - Vol 12, Issue 4 - pp 1 to 8 - ISSN: 2249-8001 - Aug 2022

- (8) **Swadesh Suman (Alumni), Sanjay M Gaikwad** - Numerical Analysis and Parametric Optimization of a Static Wavy Flag for Heat Transfer Enhancement - Global Journal of Researches in Engineering: A Mechanical and Mechanics Engineering - Vol. 22, Issue 2, - pp 8 to 20 - ISSN : 2249-4596 - Aug 2022
- (9) **Dhanshri Patil, Sangeeta Jadhav** - Road Segmentation in High-Resolution Images Using Deep Residual Networks - Engineering, Technology & Applied Science Research - Vol 12, No 6, pp 9654 to 9660 - EOS Assoc Publisher - **ESCI indexed** - Oct 2022
- (10) **Rupali Bagate, R Suguna (Ext)** – Sarcasm detection on tweets: Ensemble approach - International Journal of Next generation and computing - Vol 13, Issue 3, pp 512 to 519 - Perpetual Innovation Media Publisher - **ESCI indexed** - Oct 2022
- (11) **Dipika Birari, Dilendra Hiran (Ext), Vaibhav Narawade (Ext)** - Constraint and Descriptor Based Image Retrieval through Sketches with Data Retrieval using Reversible Data Hiding - International Journal of Intelligent Systems And Applications In Engineering - Vol 10 1(s), pp 409 to 417 - Ismail Saritas Publisher - **Scopus indexed** - Oct 2022
- (12) **Mahesh MB, M Shyamala Devi (Ext)** - An Optimization of Network paths in congested SDN using Genetic Algorithm: Optimization of Virtual Network functions using SDN - International Journal of Next-Generation Computing - Vol 13, special issue 3 - Perpetual Innovation Media Pvt Ltd Publisher - **ESCI Indexed** - Oct 2022
- (13) **G. R. Patil** - Study and analysis of online and Hybrid Mode learning of an engineering course conducted during COVID-19 Pandemic - Journal of Positive School Psychology - Vol. 6 No. 7, PP 5586 to 5597 - ASR Research India Publisher - **Scopus indexed** - Oct 2022
- (14) **Rupali Bagate, Aparna Joshi, Shilpa Pawar, Yogita Hambir, Sharayu Lokhande** - Movie Recommendation Using Clustering and Nearest Neighbour- International Journal of Next-Generation Computing - Vol 13, special issue 3 - Perpetual Innovation Media Pvt Ltd Publisher - **ESCI Indexed** - Oct 2022
- (15) **Rupali Bagate, R Suguna (Ext)** - Sarcasm Detection with and without #Sarcasm: Data Science Approach - International Journal of Information Science and Management - Vol 20, No 4, 2022, pp 1 to 15 - Regional Information Center for Science and Technology Publisher - **Scopus indexed** - Oct 2022

- (16) **Ganesh Mundhe, YM Borse (Ext), KV Dalvi (Ext)** - On graphic elementary lifts of graphic matroids- Discrete Mathematics - Vol 345, issue 10 - Elsevier Publisher - **SCIE indexed** - Oct 2022
- (17) **Shilpa Pawar, Shipra, Priyanka, Divya** - Deep learning watershed algorithm to calculate cardiac stroke volume of the left ventricle for the analysis to detect person suffering from cardiac vascular disease using cardiac MRI data - AIP Conference Proceedings - AIP Publisher - **Scopus indexed** - Oct 2022
- (18) **Gajanan Walunjkar, V. Srinivasa Rao (Ext)** - Behavior of Dynamic Routing Protocol for Disaster Area Scenario - International Journal of Next-Generation Computing - Vol. 13, No. 4, PP 862 to 873 - Perpetual Innovation Media Pvt Ltd Publisher - **ESCI Indexed** - Nov 2022.
- (19) Gangaram Mandaloi (Ext), **Aniket Nagargoje**, Ankit Kumar Gupta (Ext), Gaurabh Banerjee (Ext), Harshal Y. Shahare (Ext), Puneet Tandon (Ext) - A Comprehensive Review on Experimental Conditions, Strategies, Performance, and Applications of Incremental Forming for Deformation Machining - Journal of Manufacturing Science and Engineering - Vol 144, pp 1 to 15 - The American Society of Mechanical Engineers Publisher - **Scopus indexed** - Nov 2022
- (20) Prabhakar N Kota(Ext), Ashok S Chandak (Ext), **BP Patil** - IOT-HTML: A hybrid machine learning technique for IOT enabled industrial monitoring and control system - concurrency and computation: Practice and experience, Wiley Online Library - Vol 35, issue 3 - John Wiley & sons - **SCIE indexed** - Dec 2022
- (21) **Rupali Amit Bagate**, Ramadass Suguna (Ext) - Sarcasm Detection on Text for Political Domain - An Explainable Approach - International Journal on Recent and Innovation Trends in Computing and Communication - Volume: 10 Issue: 2s - Auricle Global Society of Education and Research Publisher - Dec 2022
- (22) Dipti Pandit (Ext), **Sangeeta Jadhav** - 2D Face Emotion Recognition and Prediction Using Labelled Selective Transfer Machine and CNN Transfer Learning Techniques for Unbalanced Datasets - International Journal Of Intelligent Systems and Applications In Engineering - Ismail Saritas Publisher - **Scopus indexed** - Dec 2022
- (23) J B Saraf (Ext), YM Borse (Ext), **Ganesh Mundhe** - On conditional connectivity of the Cartesian product of graphs - Discussiones Mathematicae Graph Theory - Vol 43 (1) , pp 17 to 34 - SCIENDO Publisher - **SCIE indexed** - Jan 2023



- (24) **R B Gurav** - Investigation on tube in tube metal foam heat exchanger – Materials Today: Proceedings -Vol 72, part 3 – pp 951 to 957 - Elsevier Ltd publisher - **Scopus indexed** - Jan 2023
- (25) Shruthi V (Ext), Kavitha Venkatachari (Ext), **Kuldeep Anil Hule, Mahesh Lonare, Asha Sathe, P R Sonawane** - Predicting The Behavior Of Online Buying Insurance Intention With the association of technological acceptance model - Journal of Data Acquisition and Processing - 38 (1), pp 107 to 125 – Science Press publisher- **Scopus indexed** – Jan 2023
- (26) Arvind Pandey (Ext), D. Arivazhagan (Ext), **Sagar Rane, Sita Yadav**, Khan Vajid (Ext), Ashish Oberoi (Ext) - A Novel Digital Mark CP-ABE Access Control Scheme for Public Secure Efficient Cloud Storage Technique - International Journal of Intelligent Systems and Applications in Engineering – Vol 11, Issue 3, pp 100 to 103 – Ismail Saritas Publisher - **Scopus Indexed** – Feb 2023
- (27) **Sanjay Gaikwad** - Implementing Combinative Distance Base Assessment (CODAS) for Selection of Natural Fibre for Long Lasting Composites - Materials Science Forum - Vol. 1081- pp 41 to 48 - Trans Tech Publications – Mar 2023
- (28) **Ashwini Sakpal, Arti, Dishant Pawar, Prashant Singh** - Lane detection techniques for self-driving vehicle: comprehensive review – Multimedia tools and applications – Springer Nature publication – **Scopus Indexed** - Mar 2023
- (29) **J D Patil, U V Awasarmol** - Experimental investigation of rectangular mini channel array as an effective tool for energy efficient cooling of electronic gadgets - Energy Sources, Part A: Recovery, Utilization, and Environmental Effects – Vol 45 (1) – pp 3154 to 3169 – Taylor & Francis Inc Publisher - **SCIE indexed** - Mar 2023
- (30) **Vishal Binorkar, Pankaj Dorlikar** Synthesis of new suspension mechanisms for two-wheeler vehicles - Materials Today: Proceedings - Vol. 77 Part 3 – pp 711 to 716 – Elsevier Ltd. Publisher - **Scopus indexed** - Mar 2023
- (31) **Pragati Rana, B P Patil** – Cyber security threats in IoT. A review – Journal of high speed network - Vol 29, No 2 - PP 1 to 16 - IoS Press publisher – **SCOPUS Indexed** - Apr 2023
- (32) **Pragati Rana, B P Patil** - Cyber Security Threats Detection And Protection Using Machine Learning Techniques in IoT - Journal of Theoretical and Applied Information Technology - Vol 101, No 7 - PP 2526 to 2539 - Little Lion Scientific publisher - **Scopus Indexed** - Apr 2023

- (33) **Surekha K S** - DSP based Portable ECG monitoring system - CIMS Journal - Vol 29, No 4 - PP 279 to 287 – Computer Integrated Manufacturing Systems publisher - **Scopus indexed** - Apr 2023
- (34) Roshani Raut (Ext), **Ashwini Sapkal, Vaishali Ingale, Pradnya Borkar (Ext), Parul Bhanarkar (Ext)** - Assessment of diabetic retinopathy progression using CNN from ocular thermal images - Soft Computing - **Scopus Indexed** - Apr 2023
- (35) Water Level Monitoring and Analysis using IoT-Based System - **Seema Tiwari, Basavaraj Chunchure (Ext), B K Sarkar (Ext)** - Chinese Journal of Geotechnical Engg – Vol 45, No4 – Apr 2023
- (36) **Arjun Dashrath, Kumari Palak, Aman Singh, Kuldeep Hule, Kapil Poonia** – Implementing Outcome mapping using Deep Learning – Journal for Basic Sciences - Vol 23, Issue 5 - PP 1321 to 1328 - May 2023
- (37) **Preeti Warriar, Pritesh Shah (Ext)** - Design of an Optimal Fractional Complex Order PID Controller for Buck Converter - Journal of Robotics and Control (JRC) – Vol 4, Issue 3 -Dept of Electrical Engg, Universitas Muhammadiyah Yogyakarta publisher - **Scopus Indexed** - May 2023
- (38) **Laxmikant D. Jathar, U V Awasarmol** - Comprehensive review of environmental factors influencing the performance of photovoltaic panels: Concern over emissions at various phases throughout the lifecycle - Environmental Pollution – Vol 327 – Elsevier publisher- **SCIE indexed** - June 2023
- (39) Satyashil D Nagarale (Ext), **B P Patil** - Accelerating AI based battery management system's SOC and SOH on FPGA – Applied Computational Intelligence and Soft Computing – Vol 2023 – Hindawi Publisher- **ESCI indexed** - June 2023
- (40) **Rushikesh Patil, Mridula Chandola and Swati Kulkarni** - Fibre Cement Boards, An Alternative to Brick Walls - AIP Conference Proceedings - Volume 2782, Issue 1- American Institute of Physics publisher- **Scopus indexed** - June 2023
- (41) Sakhare Bangare (Ext), J Ajalkar (ext), **Walunjkar Gajanan, Borawake (Ext) & Ingle A (Ext)** - Intelligent Conversational Agents Based Custom Question Answering System - International Journal of Intelligent Systems and Applications in Engineering - Vol 11 No 65 – Ismail Saritas publisher - **Scopus indexed** - June 2023

**Appx – B**  
**Publication - Conference**

- (1) M Shyamala Devi (Ext), P S Ramesh (Ext), **Aparna Joshi** - Probable Deviation Outlier based Classification of Obesity with Eating Habits and Physical Condition International Conference on Soft Computing And Signal Processing - June 2022
- (2) Savita Jadhav (Ext), **Sangeeta Jadhav** - KPSO: K-Mean and PSO based clustering algorithm for wireless Sensor Network - 6th International Conference on Computing, Communication, Control and Automation, Pune - Aug 2022
- (3) **Dipankar Kumar Singh, Rahul Desai, Geeta Patil** - Fraud Detection Using Machine Learning - UMTEB International Scientific Research Congress-Xii By Mata Sundri College for Women, University Of Delhi - Aug 2022
- (4) **Rahul Desai, Geeta Patil** - Detection and Prevention of Black Hole Attack under AODV Routing Protocol- International Scientific Research and Innovation Congress - Aug 2022
- (5) **G M Walunjkar, Rahul Desai** - Dynamic Image/Video captioning using Convolutional Neural networks and LSTM - 2nd International Architectural Sciences and Applications Symposium - Baku Engineering University Baku - Sep 2022
- (6) **Pritee Purohit, R B Gurav** - Hot Corrosion Performance of Plasma Sprayed Coatings - 4th International conference on Contemporary advances in Mechanical Engineering - Sep 2022
- (7) **Sanjay Gaikwad** - Implementing Combinative distance base assessment for selection of natural fibre for long lasting composites - Modern Materials for Engineering and Research (ICMMER 2022) Tiruchengode, Tamil Nadu - Sep 2022
- (8) **Seema Tiwari, Nidhi Jain ,Mridula Chandola** - Biodegradable polymeric nanocomposite for Wound Healing Application: Synthesis and characterization Virtual International conf on Multidisciplinary Research and studies – Sep 2022

- (9) **Yuvraj Gholap, G M Walunjkar, Rahul Desai** - License Plate Detection and Recognition - International Virtual Conference on Recent Trends in Applied Mathematics – Oct 2022
- (10) **Ankit Kumar, Rahul Desai, Yuvraj Gholap** - Finger Reader for Blind Peoples - International Virtual Conference on Recent Trends in Applied Mathematics – Oct 2022
- (11) **Archana Kumari, Rahul Desai, Yuvraj Gholap** - Mental Health Analysis using Machine Learning and Artificial Intelligence – International Virtual Conference on Recent Trends in Applied Mathematics – Oct 2022
- (12) **Rahul Desai, Yuvraj Gholap** - Hand Sign Recognition using Deep Learning – International Virtual Conference on Recent Trends in Applied Mathematics – Oct 2022
- (13) **Amit Kumar Sharma, Rahul Desai, G M Walunjkar** – Blockchain in HealthCare - International göbeklitepe scientific research congress – Oct 2022
- (14) **Rajveersinh Gohil, Rahul Desai** - Detection of Covid-19 using speech & voice analysis through Machine Learning - International Virtual Conference on Recent Trends in Applied Mathematics - Oct 2022
- (15) **R B Gurav. Pritee Purohit** - Ungraded Tire Performance Analysis for Indian Road Conditions - Third International Conference on Future Technologies in Manufacturing Automation Design and Energy – Dec 2022
- (16) **Mridula Chandola, Nithya Basker, Sachin Tanwade** - Collaborative Learning; A Case Study - Proceedings of the Third International Conference on Information Management and Machine Intelligence - Feb 2023
- (17) Shyamala Devi (Ext), **Aparna Joshi** - Batch Normalized Siamese Network Deep Learning Based Image Similarity Estimation - 2023 Fifth International Conference on Electrical, Computer and Communication Technologies – Feb 2023
- (18) **G M Walunjkar, Rahul Desai** - Detection of Covid-19 using speech & voice analysis - International conference on emerging engineering Technologies - Mar 2023
- (19) **Rahul Desai, G M Walunjkar** - Reducing routing overhead in multi-hop wireless Communications - International conference on emerging engineering Technologies - Mar 2023

- (20) **Yuvraj Gholap, Rahul Desai** - License plate detection and recognition including unconstrained capture scenarios - International conference on emerging engineering Technologies - Mar 2023
- (21) **Shambhavi Choudhary, Gaurav Yadav, Shashank Singh, Sumit Dahiya, Rahul Desai** - Predicting the expected popularity of a song before release using a machine learning - International conference on emerging engineering Technologies - Mar 2023
- (22) **Rajeev Kumar, Vaishali Ingale, Varun Kumar** - Deep Lightning network for object detection in low light environment - International conference on emerging engineering Technologies - Mar 2023
- (23) **Sangeeta Jadhav**, Smita Kulkarni (Ext) - Insight on Human Activity Recognition Using the Deep Learning Approach - IEEE International Conference on "Emerging Smart Computing & Informatics - Mar 2023
- (24) **Kuldeep Hule** - Outcome Mapping Using Deep Learning - Virtual international conference on AIMTREF - Apr 2023
- (25) **Pritee Purohit** - Kinematic design of Adaptive Control Adjustable Stroke Piston Pump for Automated Lubrication System - 5th International e-Conference on Souvenir Frontiers in Materials Engineering & Nano Technology- May 2023
- (26) **Pritee Purohit, R B Gurav** - Improving crash-worthiness & occupant safety of bus seat structures in frontal crashes as per AIS023 using Finite Element Analysis - Third International Conference on Intelligent Robotics, Mechatronics and Automation Systems - May 2023
- (27) **R B Gurav, Pritee Purohit** - Computational Study on Forced Convection Heat Transfer in Pin Fin Heat Sink (PFHS) with Inclined Wings - Third International Conference on Intelligent Robotics, Mechatronics and Automation Systems - May 2023
- (28) **Pritee Purohit** - Performance evaluation of adjustable stroke piston pump with varying fulcrum position - Third International Conference on Intelligent Robotics, Mechatronics and Automation Systems - May 2023
- (29) **Sangeeta Jadhav, Harish Kumar Bajiya, Manoj Kumar Rewar, Rohan Khandkole, Rohit Kumar** - Insight on Real time Automated Cloth Deformity Detection Using Deep learning Technique-

**Appx C**  
**Workshop/Seminar**

- (1) Three day workshop on IoT- The Future Technology is conducted by Mr. Ashish Dhudale, Asst. Prof, for the students.
- (2) 6 day workshop on C# is conducted by Mr. Dheeraj Yadav, Senior Software Developer, Hilti Technology Solutions for the first year engineering students
- (3) The faculty and students from AIT attended AFINDEX 2023 - Defence Equipment Display at Foreign Training Node, Aundh Military Station, Pune on 29th Mar 2023
- (4) S2A2I2 organised in AIT on 12<sup>th</sup> May 2023



  
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