



ISBN No.: 978-81-959727-2-2

**ARYA**

INSTITUTE OF ENGG. & TECHNOLOGY

ARYA MAIN CAMPUS, JAIPUR



# TECHNIWIZE

**Author's Name:**

Dr. Himanshu Arora | Mr. Kshitiz Agarwal | Mr. Chirag Arora

## ABOUT AIET



**Arya Institute of Engineering & Technology (AIET)** is amongst the foremost of Top Institutes in Rajasthan for Engineering in Higher Technical Education & Research. Established in the year 2005, in the State of Rajasthan, Arya Institute of Engineering & Technology has evolved into the most prominent College in the state as well as the Best Engineering Colleges in Jaipur. Spread over 5 acres of land, its highly skilled faculties are imparting education and guidance to thousands of students in a multi-faceted environment comprising of various Teaching Departments on its Campus. Since its establishment, the Institute has played a vital role in providing the best technical manpower and know-how to the country.

**Arya Institute of Engineering & Technology** is a catalyst for new & Best ideas, concepts, and skills. Arya Institute of Engineering & Technology ensures that its every student emerges as a total professional i.e. as one with a distinct individuality to lead and galvanize the process of change and transformation in the 21st century. It intends to help students discover their various facets and attain their true potential. To attain its objectives, AIET has the best possible industry contacts, the finest of faculty, and a stimulating learning environment. All in all, AIET ensures that its students are equipped



with the resources to realize their dreams the moment they step out from the Institute. It is one of the Highest Placement Engineering College in Jaipur.

A mutually-stimulating qualitative and quantitative swing in the direction of overall improvement marks the dynamics and mechanics of Arya Institute of Engineering & Technology. Its multi-dimensional development has not only been quick-paced but steady, sustained and seamless, with each front paving way for the other. This incredible milestone is achieved with abundant support of Management and from its committed faculty. Unique and exceptional landmarks, Innovative and pretentious concepts, Incredible reforms, Setting new milestones and records, could easily be attributed as some of the motto describing its unmatched progress.

In addition to accelerating the pace of meeting its primary obligation to fostering the academic, intellectual, and scholastic standards, the College has been making genuine and ample efforts for enhancing the employability skills of the Students and encouraging **Engineering Career in Jaipur.**

All the departments are encouraged to promote quality research culture and spirit. All members of the faculty play an important role in administering the diverse academic and non-academic activities of the Institute. The empowerment of the faculty has been the propelling force behind the best quality of learning experience at **Arya Institute of Engineering & Technology.**

## **ABOUT AIET RESEARCH & TECHNICAL MAGAZINE**

The main purpose of the AIET Research & Technical magazine is to provide information for the general audience and students about the research carryout by our students in different fields on latest ongoing technology in the field of engineering & technology at different national and international levels.

The first step is to plan & identify a clear, achievable and ethical aim. All studies need to have a purpose and aim to develop knowledge or understanding in the field of engineering & technology.

This Research Magazine objective should be **RELEVANT, FEASIBLE, LOGICAL, OBSERVABLE, UNEQUIVOCAL & MEASURABLE**. Objective is a purpose that can be reasonably achieved within the expected timeframe and with the available resources.

The motive of this magazine is to motivate the faculties and students towards the research of his/her interest. Motivation is not only important in its own right; it is also an important predictor of learning and achievement. Faculties & students who are more motivated to learn persist longer, produce higher quality effort, learn more deeply, and perform better in classes and on standardized tests.

## MESSAGE FROM PRINCIPAL



From the very inception, Arya Institute of Engineering & Technology is known to be "a college with a difference" with distinct identity and disposition amongst the Engineering Colleges in the State of Rajasthan. The main objective of the college is to cater to the holistic or total development of students by providing them ample opportunities for their academic, physical, mental, cultural, social, spiritual, and moral enrichment. To this end the college has introduced a number of innovative and novel practices seldom found in most other engineering colleges in the country. Situated in a scenic and picturesque location, the campus provides an environment conducive to learning and achieving the academic and professional aspirations of the students. Facilities are provided to promote every talent and innovation in students.

Innovations and performance have become the survival strategies in the present techno-economic scenario marked by fierce competition. The employers of engineering graduates look for some special skills and attributes in their prospective employees in order to compete in the global business environment. To meet these challenges engineering graduates should possess both hard and soft skills. The emphasis on developing positive thinking and good communication skills in English together provides the needed self-confidence and motivation for securing a good job and performing well in career.

*Dr. Himanshu Arora*

*Principal*



## *Index*

| S. No. | Patent/ Paper Title  | Name   |
|--------|--|--|
| 1      | Automatic Speech Recognition System For Handwritten Text   | Dr.Rajeev Yadav  |
| 2      | Artificial Intelligence Based Approach for Exploring The Customer Oriented Attitudes In Online Shopping Through Digital Marketing                                      | Dr.Rajeev Yadav  |
| 3      | Blockchain Based Technique Along With Techniques Of Internet Of Things (Iot) To Monitor And Analysis The Bank Account Of A Particular Banking Organization             | Dr.Rajeev Yadav  |
| 4      | Design and Development of Smart Encoder to Control Rotation of Motor Angle   | Kshitiz Agarwal  |
| 5      | Design and Development of Blockchain IoT for Building Management System  | Kshitiz Agarwal  |
| 6      | Design and Development of IoT Based Home Automation Using Computer Device  | Kshitiz Agarwal  |
| 7      | Design and Development of RoboCop Robot for Advanced Surveillance and Guidance system.   | Kshitiz Agarwal  |
| 8      | Design and Development of Portable Health Machine  | Kshitiz Agarwal  |
| 9      | Design and development of Artifical Intelligence based Nino Robot  | Kshitiz Agarwal  |
| 10     | <b>Security and Privacy in Social Network</b><br>(2nd International Conference on Sentiment Analysis and Deep Learning<br>Springer, Out of India)                      | Abhinav<br>Agarwal, Himanshu<br>Arora, Shilpi<br>Mishra, Gayatri<br>Rawat, Rishika<br>Gupta, Nomisha<br>Rajawat & Khushbu<br>Agarwal |
| 11     | <b>Infrastructure as Code (IaC): Insights on Various Platforms</b><br>(2nd International Conference on Sentiment Analysis and Deep Learning<br>Springer, Out of India) | Manish Kumar, Shilpi<br>Mishra, Niraj Kumar<br>Lathar & Pooran Singh   |
| 12     | <b>Brain Tumor Detection Using Image Processing Approach</b><br>(3rd International Conference on Data Intelligence and Cognitive Informatics<br>ICCES 2022)            | Abhinav Agarwal, Himanshu<br>Arora, Shivam Kumar Singh<br>& Vishwabandhu Yadav   |

| S. No. | Patent/ Paper Title   | Name   |
|--------|---|--|
| 13     | <b>Mammograms- Based Breast Cancer Detection using AI Image Processing Techniques</b><br>(Journal of Coastal Life Medicine)   | Shweta Saraswat, Bright Keswani, Vandna Sharma, Vrishit Saraswat, Monica Lamba                       |
| 14     | <b>Artificial Intelligence that Learns Fish Behavior Might Improve Fishing Gear</b><br>(Journal of Survey in Fisheries Sciences)  | Shweta Saraswat, Shefali Sharma, Nootan Verma, Shashi Sharma, Monica Lamba                           |
| 15     | <b>Mechanical, Wear, and Degradation Behavior of Biodegradable Mg-x%Sn Alloy Fabricated through Powder Mixing Techniques</b><br>(Journal of Materials Engineering and Performance: Web of Science)  | Sandeep Kumar Jhamb, Ashish Goyal, Anand Pandey, Mrigesh Navalkishor Verma                           |
| 16     | <b>A Comprehensive Analysis on Magnesium-bases Alloyt and Metal Matrix Composites for their in-vitro biocompatibility</b><br>(Advances in Materials and Processing Technologies)  | Sandeep Jhamb, Jay Matai, Jay Marwaha, Ashish Goyal, Anand Pandey                                    |
| 17     | <b>Investigation of the Structural and Electrochemical Properties of a ZnO-SnO<sub>2</sub> composite and its electrical properties for application in dye-sensitized solar cell</b><br>(New Journal of Chemistry)                               | Arzoo Sheikh, Kumavat Soni, N. Lakshmi   |
| 18     | <b>Hybrid Mode Reconfigurable Antenna with V-Shapped Extrudes for Cognitive Radio Applications</b><br>(Electronics, MDPI)   | Abha Sharma, Amit Rathi, Hamza Mohammed Ridha Al-Khafaji, Mohammad Gulman Siddiqui, Ajay K. S. Yadav |
| 19     | <b>A Novel Pattern Agile Microstrip Antenna for Modern Wireless Communiaction System</b><br>(Electromagnetics, Taylor & Francis)  | Abha Sharma, Abhay Yadav, Amit Rathi   |
| 20     | <b>Impact of Waste Iron Slag on Mechanical and Durability Properties of Concrete</b><br>(Jordan Journal of Civil Engineering)   | Kishan Lal Jain, Dinesh Kumar Sharma, Rakesh Choudhary, Shruti Bhargava                              |
| 21     | <b>Fuzzy Analysis of a Queueing System Featuring an Unreliable Service Provider and Geometric Arrivals by Incorporating Constant Retrial Policy and Delayed Thershold Recovery</b><br>(Journal of Ambient Intelligence and Humanized Computing) | Anjali Ahuja, Anamika Jain   |



| S. No. | Patent/ Paper Title  | Name   |
|--------|--|--|
| 22     | <b>An Experiment Study on Mechanical and Rheological Properties of SCC with Glass and Carbon Fibre</b><br>(4th International Conference on Inventive Research in Material Science and Technology )                             | Hemant Kumar Sain ,<br>Mohsin Khan Agwan ,<br>Jitendar Kumar Prajapat,<br>Prince Goyal , Sonu Saini<br>and Vishram Gujar |
| 23     | <b>FEM Analysis of Turning Operation using Deform 3D</b><br>(4th International Conference on Inventive Research in Material Science and Technology, Springer)  | Kapil Karadia , Hemant<br>Kumar Sain , Simran Yadav,<br>Shivam Sharma , Rahul<br>Sharma and Rajpal Singh<br>Chuahan      |
| 24     | <b>Analysis of Seismic Behavioural of Single Bay Structure with Composite Beam and RCC Columns</b><br>(4th International Conference on Inventive Research in Material Science and Technology, Springer)                        | Hemant Kumar Sain ,<br>Mohsin Khan Agwan ,<br>Aditya Kumar, Gomant Raj<br>,Sanjay Kumar and Mohit<br>Jangir              |
| 25     | <b>A Study on Fiber Reinforced Concrete Using Different Types of Geo-Polymer Fiber In Preparation of Concrete Sample</b><br>(JETIR Research Journal)   | Nikhil Goyal,Hemant Kumar<br>Sain, Mohsin Khan Agwan   |
| 26     | <b>A Review on Partial Replacement of Cement With Brick Dust</b><br>(JETIR Research Journal )  | Shoyab Khan, Hemant<br>Kumar Sain  |
| 27     | <b>A Review on Utilization of Pareva Dust and Quartz Sand in Concrete</b><br>(International Research Journal of Engineering and Technology)  | Sneha Mathew, Hemant<br>Kumar Sain   |
| 28     | <b>Analytical Study on Fiber Reinforced Concrete Using Different Types of Virgin Polypropylene Fiber in Preparation of Concrete Sample</b><br>(International Advanced Research Journal in Science, Engineering and Technology) | Nikhil Goyal, Hemant Kumar<br>Sain , Mohsin Khan Agwan   |
| 29     | <b>A Detailed Study on Partial Replacement of Cement with Various Percentages of Brick Dust from Different Varieties of Brick</b><br>(International Journal of Recent Research and Review)                                     | Shoyab Khan, Hemant<br>Kumar Sain  |



| S. No. | Patent/ Paper Title   | Name   |
|--------|---|--|
| 30     | <b>A Detailed Study on Alccofine 1203 with Its Benefits, Advantage, Physical and Chemical Properties</b><br>(International Journal of Recent Research and Review)   | Mohmmad Shahrukh Sarkhel , Hemant Kumar Sain , Vikas Yadav |
| 31     | <b>A Review on Concrete Containing GGBFS and Meta kaolin with Calcium Carbide Residue</b><br>(International Journal of Engineering Research and Generic Science)    | Hemant Kumar Sain, Basant Kumar Meena                      |
| 32     | <b>Effects of Alccofine-1203 and Foundry Sand on Properties of Concrete Mix</b><br>(International Advanced Research Journal in Science, Engineering and Technology) | Mohmmad Shahrukh Sarkhel, Hemant Kumar Sain, Vikas Yadav   |

### *Patent Details*

Arya Institute of Engineering and Technology has made significant contributions to the field of research and development, as evidenced by its impressive portfolio of patents. Over the years, the college has filled numerous patents in various fields such as engineering, technology and science. These patents are a testament to the innovation and creative spirit of the faculty and students of the college. The patents cover a wide range of areas, including renewable energy, Artificial intelligence, nanotechnology and biotechnology, among others. The college actively encourages and supports research activities through its well-equipped research labs, funding opportunities, and collaborations with industry and academia. The patents of Arya Institute of Engineering and Technology Jaipur demonstrate its commitment to advancing knowledge and contributing to the progress of society.



*Patent Name: Automatic Speech Recognition System for Handwritten Text*

*Applicant/ Owner: Dr.Rajeev Yadav*



Deutsches  
Patent- und Markenamt

*German Patent Published.*

DPMA register

menu


## Register information for utility models


File number DE: 20 2023 100 358.3 (status: pending/in force, as of: June 9, 2023)

| BASE DATA |  |               |  |
|-----------|--|---------------|--|
| INID      | criteria   | Field         | Contents   |
|           | property right type                                    | SART          | utility model  |
|           | status   | ST            | Pending/In Effect  |
| 21        | Case number DE   | DAKZ          | 20 2023 100 358.3  |
| 54        | designation/title                                      | ti            | Automatic speech recognition system for handwritten text   |
| 51        | IPC main class   | ICM<br>(ICMV) | G06V 30/226 (2022.01)  |
| 22        | Filing date DE   | DATE          | 01/26/2023   |
| 47        | registration day                                       | ET            | 02/09/2023   |
| 45        | Date of publication of the entry in the Patent Gazette | PET           | 03/23/2023   |
| 71/73     | Applicant/Owner  | INH           | Doot, Sunita, Jaipur, IN, Kaushik, Harshita, Jaipur, IN, Kaushik, Priyanka, Ghaziabad, IN, Kumar, Manish, Jaipur, IN, Kumar, Parveen, Biran, IN, Saraswat, Shweta, Jaipur, IN, Shanker, Uma Alwar IN Sunder Shyam Pilani IN Yadav Isha Alwar IN Yadav Kamini Patna IN Yadav Navdeep Rewari IN Yadav Rajeev Rewari IN |
| 74        | Representative   | VTR           | Dilg, Haeusler, Schindelmann<br>Patentanwalts-gesellschaft mbH, 80636 Munich, DE   |
| 10        | Published DE documents                                 | DEPN          | Original document: <a href="#">DE202023100358U1</a>  |

**Patent Name: Artificial Intelligence Based Approach for Exploring the  
Costumer Oriented Attitudes in Online Shopping Through Digital Marketing**  
**Applicant/ Owner: Dr. Rajeev Yadav**

6/9/23, 1:27 PM Intellectual Property India

 Office of the Controller General of Patents, Designs & Trade Marks  
Department of Industrial Policy & Promotion.  
Ministry of Commerce & Industry.  
Government of India  
(<http://ipindia.nic.in/index.htm>)

 INTELLECTUAL PROPERTY INDIA  
PATENTS, DESIGNS, TRADE MARKS  
GEOGRAPHICAL INDICATIONS  
(<http://ipindia.nic.in/index.htm>)

**Application Details**

|                                  |  |
|----------------------------------|--|
| APPLICATION NUMBER               | 202241060220   |
| APPLICATION TYPE                 | ORDINARY APPLICATION   |
| DATE OF FILING                   | 21/10/2022   |
| APPLICANT NAME                   | 1 . Dr R SUBHASHINI<br>2 . SUMAN DAHIYA<br>3 . Dr.R.V.SUGANYA<br>4 . Dr.M.VETRIVEL<br>5 . Prof.(Dr.) RAJEEV YADAV<br>6 . Dr.MEENAKSHI<br>7 . Dr AMARESH JHA<br>8 . SARAH DSOUZA<br>9 . Dr.Y.SIVA REDDY<br>10 . PALLABI BARUAH<br>11 . Dr.A.SASI KUMAR<br>12 . VIHAR POTHUKUCHI |
| TITLE OF INVENTION               | ARTIFICIAL INTELLIGENCE BASED APPROACH FOR EXPLORING THE COSTUMER ORIENTED ATTITUDES IN ONLINE SHOPPING THROUGH DIGITAL MARKETING  |
| FIELD OF INVENTION               | COMPUTER SCIENCE   |
| E-MAIL (As Per Record)           | sgowthami12@gmail.com  |
| ADDITIONAL-EMAIL (As Per Record) | sgowthami12@gmail.com  |
| E-MAIL (UPDATED Online)          |  |
| PRIORITY DATE                    |  |
| REQUEST FOR EXAMINATION DATE     | --   |
| PUBLICATION DATE (U/S 11A)       | 04/11/2022   |

**Application Status**

APPLICATION STATUS

**Awaiting Request for Examination**

[View Documents](#)

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

<https://ipindiaservices.nov.in/PatentSearch/PatentSearch/ViewApplicationStatus>



***Patent Name: Blockchain Based Technique Along With Techniques Of Internet Of Things (IoT) to Monitor and Analysis the Bank Account of a Particular Banking Organization***  
***Applicant/ Owner: Dr.Rajeev Yadav***

6/9/23, 1:27 PM

Intellectual Property India



Office of the Controller General of Patents, Designs & Trade Marks  
Department of Industrial Policy & Promotion,  
Ministry of Commerce & Industry,  
Government of India

(<http://ipindia.nic.in/index.htm>)



INTELLECTUAL  
PROPERTY INDIA  
PATENTS, DESIGNS, TRADE MARKS  
GEOGRAPHICAL INDICATIONS

(<http://ipindia.nic.in/index.htm>)

Application Details

|                                  |  |
|----------------------------------|--|
| APPLICATION NUMBER               | 202211048390   |
| APPLICATION TYPE                 | ORDINARY APPLICATION   |
| DATE OF FILING                   | 25/08/2022   |
| APPLICANT NAME                   | 1 . Dr. SANJEEV KUMAR MANDAL<br>2 . R SRI DEVI<br>3 . ABIRAMI.S.K<br>4 . Dr.T.M.USHA<br>5 . PROF.(Dr.) RAJEEV YADAV<br>6 . KAMAL KANT<br>7 . Dr PRASHANT DIGAMBAR HAKIM<br>8 . ARIVANANTHAM THANGAVELU<br>9 . MRS.R.SATHIYAPRIYA<br>10 . Dr.A.SASI KUMAR<br>11 . ATUL SHARMA<br>12 . KANAGASANKARI S |
| TITLE OF INVENTION               | BLOCKCHAIN BASED TECHNIQUE ALONG WITH TECHNIQUES OF INTERNET OF THINGS (IOT) TO MONITOR AND ANALYSE THE BANK ACCOUNTS OF A PARTICULAR BANKING ORGANIZATION   |
| FIELD OF INVENTION               | COMMUNICATION  |
| E-MAIL (As Per Record)           | sgowthami12@gmail.com  |
| ADDITIONAL-EMAIL (As Per Record) | sgowthami12@gmail.com  |
| E-MAIL (UPDATED Online)          |  |
| PRIORITY DATE                    |  |
| REQUEST FOR EXAMINATION DATE     | --   |
| PUBLICATION DATE (U/S 11A)       | 02/09/2022   |

Application Status

APPLICATION STATUS



Awaiting Request for Examination

[View Documents](#)

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

**Patent Name: Design and Development of Smart Encoder to Control Rotation of Motor Angle**

**Applicant/ Owner: Kshitiz Agarwal**


|  |  |
|--|--|
| Intellectual Property India  |  |
| <br>Office of the Controller General of Patents, Designs & Trade Marks<br>Department of Industrial Policy & Promotion,<br>Ministry of Commerce & Industry,<br>Government of India |  |
| (http://ipindia.nic.in/index.htm)  |  |
|  (http://ipindia.nic.in/index.htm)   |  |
| Application Details  |  |
| APPLICATION NUMBER   | 202311002723   |
| APPLICATION TYPE   | ORDINARY APPLICATION   |
| DATE OF FILING   | 13/01/2023   |
| APPLICANT NAME   | Arya Institute of Engineering and Technology                             |
| TITLE OF INVENTION   | DESIGN & DEVELOPMENT OF SMART ENCODER TO CONTROL ROTATION OF MOTOR ANGLE |
| FIELD OF INVENTION   | BIO-MEDICAL ENGINEERING  |
| E-MAIL (As Per Record)   | agarwal_ksh@yahoo.com  |
| ADDITIONAL-EMAIL (As Per Record)   |  |
| E-MAIL (UPDATED Online)  |  |
| PRIORITY DATE  |  |
| REQUEST FOR EXAMINATION DATE   | --   |
| PUBLICATION DATE (U/S 11A)   | 24/03/2023   |
| Application Status   |  |
| APPLICATION STATUS   | Awaiting Request for Examination   |
| <a href="#">View Documents</a>   |  |
| ➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed  |  |
| In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in   |  |
| <a href="https://indiaservices.nv.in/PatentSearch/PatentSearch/ViewApplicationStatus">https://indiaservices.nv.in/PatentSearch/PatentSearch/ViewApplicationStatus</a>  |  |




**Patent Name: Design and Development of Blockchain IoT for Building Management System**

**Applicant/ Owner: Kshitiz Agarwal**

Intellectual Property India

 Office of the Controller General of Patents, Designs & Trade Marks  
Department of Industrial Policy & Promotion,  
Ministry of Commerce & Industry,  
Government of India

(<http://ipindia.nic.in/index.htm>)

 INTELLECTUAL PROPERTY INDIA  
PATENTS, DESIGNS, TRADE MARKS  
GEOGRAPHICAL INDICATIONS

(<http://ipindia.nic.in/index.htm>)

Application Details

|                                  |   |
|----------------------------------|---|
| APPLICATION NUMBER               | 202311005287  |
| APPLICATION TYPE                 | ORDINARY APPLICATION  |
| DATE OF FILING                   | 25/01/2023  |
| APPLICANT NAME                   | 1 . Kshitiz agarwal<br>2 . Arya Institute of Engineering & Technology   |
| TITLE OF INVENTION               | DESIGN AND DEVELOPMENT OF BLOCKCHAIN IOT FOR BUILDING MANAGEMENT SYSTEM |
| FIELD OF INVENTION               | COMMUNICATION   |
| E-MAIL (As Per Record)           | kshitiz@aryaainstitutejpr.com   |
| ADDITIONAL-EMAIL (As Per Record) |   |
| E-MAIL (UPDATED Online)          |   |
| PRIORITY DATE                    |   |
| REQUEST FOR EXAMINATION DATE     | --  |
| PUBLICATION DATE (U/S 11A)       | 17/03/2023  |

Application Status

APPLICATION STATUS

**Awaiting Request for Examination**

[View Documents](#)

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

In case of any discrepancy in status, kindly contact [ipo-helpdesk@nic.in](mailto:ipo-helpdesk@nic.in)

**Patent Name: Design and Development of IoT Based Home Automation  
Using Computer Device**

**Applicant/ Owner: Kshitiz Agarwal**

2/18/23, 11:14 PM

PATENT eFiling

Welcome Kshitiz agarwal [Sign out](#)

Controller General of Patents, Designs & Trade  
Marks



सत्यमेव जयते  
G.A.R.6  
[See Rule 22(1)]  
RECEIPT



Docket No 20085

Date/Time 2023/02/18 23:13:02

UserId: Erkshitiz

To  
Kshitiz agarwal

patent application

CBR Detail:

| Sr. No. | Ref. No./Application No. | App. Number              | Amount Paid | C.B.R. No. | Form Name | Remarks  |
|---------|--------------------------|--------------------------|-------------|------------|-----------|--|
| 1       | 202311011274             | TEMP/E-1/12021/2023-DEL. | 2240        | 7631       | FORM 1    | Design and Development of IoT based Home Automation Using Computing Device |

| TransactionID | Payment Mode         | Challan Identification Number | Amount Paid | Head of V.C. No  |
|---------------|----------------------|-------------------------------|-------------|------------------|
| N-0001102073  | Online Bank Transfer | 1802230022284                 | 2240.00     | 1475001020000001 |

Total Amount : ₹ 2240.00

Amount in Words: Rupees Two Thousand Two Hundred Forty Only

Received from Kshitiz agarwal the sum of ₹ 2240.00 on account of Payment of fee for above mentioned Application/Forms.

\* This is a computer generated receipt, hence no signature required.

[Print](#)

[Home](#) [About Us](#) [Contact Us](#)

is

<https://ipindiaonline.gov.in/epatentfiling/CBRReceipt/printCBRRceipt>

1/1




**Patent Name: Design and Development of RoboCop Robot for Advanced Surveillance and Guidance system.**


**Applicant/ Owner: Kshitiz Agarwal**

PATENT eFiling

Welcome Kshitiz agarwal [Sign out](#)

Controller General of Patents, Designs & Trade Marks

  
सत्यमेव जयते  
G.A.R.6  
[See Rule 22(1)]  
RECEIPT

  
INTELLECTUAL  
PROPERTY INDIA  
PATENTS | DESIGNS | TRADE MARKS  
GEOGRAPHICAL INDICATIONS

Docket No 42160

To  
Kshitiz agarwal  
patent application

Date/Time 2023/04/11 16:00:37

Userid: Erkshitiz

CBR Detail:

| Sr. No. | Ref. No./Application No. | App. Number             | Amount Paid | C.B.R. No. | Form Name | Remarks   |
|---------|--------------------------|-------------------------|-------------|------------|-----------|---|
| 1       | 202311026791             | TEMP/E-1/29457/2023-DEL | 2240        | 16535      | FORM 1    | Design and Development of RoboCop Robot for Advanced surveillance and Guidance system |

| TransactionID | Payment Mode         | Challan Identification Number | Amount Paid | Head of A/C No   |
|---------------|----------------------|-------------------------------|-------------|------------------|
| N-0001131420  | Online Bank Transfer | 1104230067383                 | 2240.00     | 1475001020000001 |

Total Amount : ₹ 2240.00  
Amount in Words: Rupees Two Thousand Two Hundred Forty Only  
Received from Kshitiz agarwal the sum of ₹ 2240.00 on account of Payment of fee for above mentioned Application/Forms.  
\* This is a computer generated receipt, hence no signature required.

[Print](#)

[Home](#) [About Us](#) [Contact Us](#)

<https://ipindiaonline.gov.in/ePatentFiling/CBRReceipt/printCBRRceipt>

1/1

**Patent Name: Design and Development of Portable Health Machine.**

**Applicant/ Owner: Kshitiz Agarwal**



PATENT eFiling

Welcome Kshitiz agarwal [Sign out](#)

Controller General of Patents, Designs & Trade Marks



सत्यमेव जयते  
G.A.R.6  
[See Rule 22(1)]  
RECEIPT



Docket No 44945

Date/Time 2023/04/18 14:11:00

UserId: Erkshitiz

To  
**Kshitiz agarwal**  
patent application

CBR Detail:

| Sr. No. | Ref. No./Application No. | App. Number             | Amount Paid | C.B.R. No. | Form Name | Remarks   |
|---------|--------------------------|-------------------------|-------------|------------|-----------|---|
| 1       | 202311028174             | TEMP/E-1/31381/2023-DEL | 2400        | 17608      | FORM 1    | Design and Development of Portable Health Machine |

| TransactionID | Payment Mode         | Challan Identification Number | Amount Paid | Head of A/C No   |
|---------------|----------------------|-------------------------------|-------------|------------------|
| N-0001134848  | Online Bank Transfer | 1804230019866                 | 2400.00     | 1475001020000001 |

Total Amount : ₹ 2400.00

Amount in Words: Rupees Two Thousand Four Hundred Only

Received from Kshitiz agarwal the sum of ₹ 2400.00 on account of Payment of fee for above mentioned Application/Forms.

\* This is a computer generated receipt, hence no signature required.

[Print](#)

[Home](#)

[About Us](#)

[Contact Us](#)



**Patent Name: Design and development of Artificial Intelligence based Nino Robot**

**Applicant/ Owner: Kshitiz Agarwal**

PATENT eFiling

Welcome Kshitiz agarwal [Sign out](#)

Controller General of Patents, Designs & Trade Marks



सत्यमेव जयते  
G.A.R.6  
[See Rule 22(1)]  
RECEIPT



Docket No 50851

Date/Time 2023/05/02 16:32:12

To  
Kshitiz agarwal  
patent application

UserId: Erkshitiz

CBR Detail:

| Sr. No. | Ref. No./ Application No. | App. Number             | Amount Paid | C.B.R. No. | Form Name | Remarks  |
|---------|---------------------------|-------------------------|-------------|------------|-----------|--|
| 1       | 202311031223              | TEMP/E-1/33239/2023-DEL | 2400        | 19974      | FORM 1    | Design and Development of Artificial Intelligence based Nino Robot |

| TransactionID | Payment Mode         | Challan Identification Number | Amount Paid | Head of A/C No.  |
|---------------|----------------------|-------------------------------|-------------|------------------|
| N-0001142201  | Online Bank Transfer | 0205230025186                 | 2400.00     | 1475001020000001 |

Total Amount : ₹ 2400.00

Amount in Words: Rupees Two Thousand Four Hundred Only

Received from Kshitiz agarwal the sum of ₹ 2400.00 on account of Payment of fee for above mentioned Application/Forms.

\* This is a computer generated receipt, hence no signature required.

[Print](#)

[Home](#)

[About Us](#)

[Contact Us](#)

***2nd International Conference on Sentiment Analysis and Deep Learning  
Springer (Out of India)***

***Security and Privacy in Social Network***

Abhinav Agarwal, Himanshu Arora, Shilpi Mishra, Gayatri Rawat, Rishika Gupta, Nomisha Rajawat & Khushbu Agarwal

***Abstract***

For many people, social media has become an essential part of daily life. While many people began by exchanging data in the form of text and images in the media sphere, others moved on to sharing test papers, coursework, and masterclasses in the academic domain and e-learning materials, marketing, and a performance of the business clientele in the amusement sphere as well as jokes, music, and recordings in the entertainment sphere. Even the tiniest of Internet users would prefer long-range social media to the current Internet culture because of its widespread use. Sharing personal information on social media may be fun, but it also demands a great deal of security and safety. Data about customers should be kept private if it is to be kept private.

***2nd International Conference on Sentiment Analysis and Deep Learning  
Springer (Out of India)***

***Infrastructure as Code (IaC): Insights on Various Platforms***

Manish Kumar, Shilpi Mishra, Niraj Kumar Lathar & Pooran Singh

***Abstract***

In the present-day tech-stack, cloud computing is evolving as a successful and one of the popular fields of technology where the new businesses are achieving success by deploying their functionalities, products, data, and services on cloud instead of on-premises system and that also without depending on any physical component. Infrastructure as code (IaC) is a set of methodologies which uses code to set up the install packages, virtual machines and networks, and



configure environments. A successful IaC implementation and adoption by developers requires a broad set of skills and knowledge. It is Development Operations' tactic of provisioning an application's infrastructure and managing it through binary readable configuration files, instead of any hardware configuration.

*3rd International Conference on Data Intelligence and Cognitive Informatics  
ICCIS 2022*

***Brain Tumor Detection Using Image Processing Approach***

Abhinav Agarwal, Himanshu Arora, Shivam Kumar Singh & Vishwabandhu Yadav

***Abstract***

Brain tumors have been linked to an increase in death rates. To improve patients' life expectancy, an early and accurate discovery of tumors is the first step, and categorization is used for a more accurate diagnosis of the tumor. Brain tumor identification is the most demanding and intriguing thing to conduct in medical image processing. Tumor location, size, shape, type, and contrast of tumor tissues are used in computer-aided diagnosis (CAD). In the instance of brain imaging analysis, a machine learning algorithm is a feasible option. Convolutional neural network (CNN) is now the most common and effective approach for image categorization utilizing brain magnetic resonance imaging. It is, however, sluggish and lacking accuracy. The application of this well-known technology is DNN which is a model that is modified in the feature-extraction and segmentation phases to increase accuracy. This work presents a unique approach of detecting and classifying brain tumors from MRI scans of patients utilizing deep learning methods, as well as CNN for classification. The proposed system is made up of many steps, including pre-processing, feature extraction, segmentation, tumor detection, and tumor classification. MRI pictures were chosen because they outperform other imaging modalities in terms of brain tumor analysis. The MRI image datasets for testing and training would be derived from WHO medical image databases. In this also discusses other image processing approaches. Following a study of the comparative research, this is an extension of earlier studies that identifies and classifies tumors with more accuracy, sensitivity, and precision, shorter processing time with bigger datasets, and better performance than other systems that employed SVM and ANN classifiers.

*Journal of Coastal Life Medicine: Web of Science*

***Mammograms- Based Breast Cancer Detection using AI Image Processing Techniques***

Shweta Saraswat, Bright Keswani, Vandna Sharma, Vrishit Saraswat, Monica Lamba

***Abstract***

In women all around the world, breast cancer is the most frequent kind of cancer. It begins with the uncontrolled growth of breast cells. X-rays of the breast may reveal tumors or masses caused by these cells. Differentiating between benign and malignant (cancer-causing) tumors is the primary difficulty in detecting tumors. Using image processing methods such as image pre-processing, feature extraction and selection, and image classification, this effort aims to find early-stage tumors that are undetectable by humans.

*Journal of Survey in Fisheries Sciences: Web of Science*

***Artificial Intelligence that Learns Fish Behavior Might Improve Fishing Gear***

Shweta Saraswat, Shefali Sharma, Nootan Verma, Shashi Sharma, Monica Lamba

***Abstract***

Researchers have used monitoring devices to examine fish behavior in the vicinity of fishing gear. Deep learning algorithms allow marine scientists to quickly analyze massive amounts of image data (AI) documenting fish behavior. New artificial intelligence (AI) algorithms can identify and classify fish species with near-human precision, but reliable techniques for observing fish in their natural habitats, particularly tropical species, are still lacking. Interactions between fish and fishing gear are extremely uncommon, especially for temperate species. As part of this study, we looked at how advanced fish monitoring, categorization, and behavior recognition systems powered by AI may improve the selection of fishing equipment. It analyzes the progress of AI as well as the opportunities and constraints it faces in order to comply with fishing regulations and sustainable goals. This discovery has the potential to transform the fishing industry for the benefit of fishers, the environment, and the economy.



***Mechanical, Wear, and Degradation Behavior of Biodegradable Mg-x%Sn Alloy Fabricated through Powder Mixing Techniques***

*Sandeep Kumar Jhamb, Ashish Goyal, Anand Pandey, Mrigesh Navalkishor Verma*

***Abstract***

Magnesium (Mg) is one of the potential biomaterial for bone implants due to its biomechanical and biodegradability properties. However, its rate of deterioration is too fast for clinical use. Alloying treatment technique has been used to slow down the rate of degradation in the present study. Microstructure morphology, mechanical, tribology, and degradation behavior of Mg-x%Sn (x = 0, 1, 2, and 3 wt percent) alloys were investigated. Powder metallurgy (P/M) was used to fabricate Mg-Sn alloys, which involves adding tin to magnesium powder in various ratios. To avoid the negative effects of excessive reactivity to Mg particles, mechanical alloying was used to fabricate the alloys within high-energy planetary mill (HEPM). Sample pallets with a diameter of 12 mm were produced in hydraulic pressing machine by using produced powder mixture. A combined study is utilized for phase evolution, microstructural characterization, hardness and wear test, and corrosion tests, and this gave an effective way of observing the properties of bulk consolidated alloys. All these combined studies indicated that increase in concentration of Sn in alloy enhances the mechanical properties with decline in corrosion properties. The most optimum composition based on all results was found to be of alloy with 1wt.% Sn.

***A Comprehensive Analysis on Magnesium-bases Alloyt and Metal Matrix Composites for their in-vitro biocompatibility***

*Sandeep Jhamb, Jay Matai, Jay Marwaha, Ashish Goyal, Anand Pandey*

***Abstract***

Due to low density and high mechanical and physical properties, magnesium matrix composites are prospective materials for diverse aerospace and defence applications. Specific strength, stiffness, damping behaviour, and wear behaviour can all be improved. The installation of reinforcing components has a substantial impact on creep and fatigue parameters compared to traditional engineering materials, into the metallic matrix. This paper describes the outline of impacts of various reinforcement into the magnesium and its alloy,

featuring their advantage and disadvantage alongside the performance of magnesium metal matrix composites under mechanical testing like hardness, ductility, stiffness, corrosion, biocompatibility other significant properties to make them suitable for human implant. It additionally depicts various processes with which magnesium metal composites can be manufactured alongside their benefits and drawbacks. Finally, this publication highlights the researchers' findings as well as prospects for magnesium-based composites.

*New Journal of Chemistry: Web of Science SCI*

***Investigation of the Structural and Electrochemical Properties of a ZnO-SnO<sub>2</sub> Composite and its Electrical Properties for Application in Dye-Sensitized Solar Cell***

Arzoo Sheikh, Kumavat Soni, N. Lakshmi

***Abstract***

This study compares the photovoltaic and electrochemical properties of a nano-sized ZnO-SnO<sub>2</sub> composite synthesized by a simple yet effective mechanical mixing technique for use as a photoanode material with ruthenium N719 dye in DSSCs for energy harvesting applications. The formation of the composite was confirmed by the X-ray diffraction technique. The electrochemical properties of the composite and pure samples were studied by cyclic voltammetry, Mott-Schottky analysis and electrochemical impedance spectroscopy. The results show that the nanocomposite behaves as a single semiconducting material with a single flat-band potential and oxidation/reduction potentials with superior photovoltaic performance (>33% compared with the pure ZnO sample) in comparison with its constituent metal oxides. The higher stability of the nanocomposite has been confirmed in this work by the improved electron lifetime of this material. The results achieved by the fabricated device and the analysis of the photovoltaic properties suggest that these composite nanomaterials can serve as new-generation photoanodes in high-efficiency DSSCs.



*Electronics (MDPI): Web of Science SCI*

***Hybrid Mode Reconfigurable Antenna with V-Shapped Extrudes for  
Cognitive Radio Applications***

Abha Sharma,Amit Rathi, Hamza Mohammed Ridha Al-Khafaji, Mohammad Gulman  
Siddiqui, Ajay K. S. Yadav

***Abstract***

As the same device may be used for various types of applications, antennas must have the capacity to perform multiple functions. Reconfiguring the polarization, operational frequency, and radiation pattern can create an outcome of multi-functionality. A hybrid, frequency- and pattern-reconfigurable antenna with two V-shaped extrudes in a patch is proposed. To increase the bandwidth of the proposed antenna, the defected ground structure (DGS) phenomenon is presented, which is significant in the bandwidth of 3200 MHz from 2.7 GHz to 5.9 GHz, providing a gain of 3.5 dB. For this design, an FR-4 material was chosen as the substrate, and CST software was used for simulation. Using two p-i-n diodes, the projected antenna illustrates switching for multi-frequency bands such as 1.5, 2.6, 3.2, 5.1, and 8.1 GHz, with a constant radiation pattern and a main lobe direction of 155 degrees. It has C-band, WLAN, cognitive radio (CR), and Bluetooth applications. The proposed antenna displays radiation pattern switching at 3.5 GHz, showing variation between 7°, 158°, 173°, and 175°, and at 4 GHz, it demonstrates switching between 11°, 15°, 165°, and 344°, which defines the hybrid reconfiguration.

*Electromagnetics (Taylor & Francis): Web of Science SCI*

***A Novel Pattern Agile Microstrip Antenna for Modern Wireless  
Communiacion System***

Abha Sharma,Abhay Yadav,Amit Rathi

***Abstract***

This article presents a circular microstrip patch antenna loaded with three complementary split rings (CSRRs) on the ground plane for pattern agility features. The antenna resonated at 5.3 GHz and accommodated the frequency spectrum from 5.1–5.7 GHz for different CSRR combinations. The reconfigurable pattern feature has been produced with three p-i-n diode combinations integrated with the CSRR slot on the ground patch. The CSRR combinations

are utilized to change the radiation phase concerning the primary radiating circular patch. The proposed antenna radiation beam can steer from  $\pm 15^\circ$ ,  $180^\circ$ , and  $0^\circ$  of the broadside pattern in the elevation plane with a satisfactory gain of 3 dBi. The phase variation for various CSRR combinations concerning the primary antenna is presented. The presented antenna is fabricated on an FR4 substrate and tested in an anechoic environment; the tested results verify the pattern agility of the antenna. The demonstrated antenna is suitable for modern wireless communications like LTE and Cognitive radios. The compact size, simple biasing, and low cost are added advantages of the antenna.

*Jordan Journal of Civil Engineering :Web of Science SCI*

***Impact of Waste Iron Slag on Mechanical and Durability Properties of Concrete***

Kishan Lal Jain, Dinesh Kumar Sharma, Rakesh Choudhary, Shruti Bhargava

***Abstract***

Waste management is of great concern in today's world. Every year, an enormous amount of solid waste is generated from different industrial activities. Especially, the waste which produces by iron industries in a particular form of slag. The major issue of emission of carbon-di-oxide from cement industries is a serious problem for the earth's environment and surrounding area. Thus, in this study, the waste iron slag obtained from nearby iron industries was used as a partial substitute for cement. The cement was replaced with iron slag (IS) at the substitution levels of 7.5%, 15%, 22.5%, 30%, and 37.5% by weight of cement. The doses of superplasticizer for every mix were taken based on the essential workability requirements for the reinforced concrete work. Performance of control and blended mixes were evaluated by workability evaluation, compressive strength test, flexural strength test, water permeability test, water absorption evaluation, rapid chloride penetration test (RCPT) and carbonation test. Scanning electron microscope (SEM), X-ray diffraction (XRD) techniques, and Thermogravimetric analysis (TGA) techniques were used to assess the microstructural changes and to evaluate the chemistry of blended mixes. The results obtained from this study were encouraging in terms of compressive and flexural strength. The maximum compressive and flexural strength was recorded at a 22.5% replacement level of slag. Although the results obtained at 30% replacement were also better than the control mix. Resistance of slag made concrete against adverse condition i.e. CO<sub>2</sub> penetration, chloride penetration, and water



penetration was far better than conventional ones. The results obtained from TGA indicated that the productivity of calcium silicate gel of slag concrete is better than control concrete.

*Journal of Ambient Intelligence and Humanized Computing: Springer*

***Fuzzy Analysis of a Queueing System Featuring an Unreliable Service Provider and Geometric Arrivals by Incorporating Constant Retrial Policy and Delayed Threshold Recovery***

Anjali Ahuja, Anamika Jain

***Abstract***

This finite buffer model and finite source model are studied by incorporating a constant retrial policy and delayed threshold recovery. The concept of geometric arrival of units, along with exponential service by a single server, is measured for the estimation of performance indices. If the service provider is idle at the time of arrival of the unit, the service begins instantaneously; otherwise, the unit joins the retrial orbit. The unit at the first position in the orbit can repeat the service request. There is a delay in the repair when the breakdown of the service provider occurs since the server first takes some setup time and then waits for  $k$ ,  $1 \leq k \leq N$  arriving units to accumulate before starting the repair. Where  $N$  stands for the buffer (capacity) of the system and total source (population) for finite buffer model and finite source model respectively. To acquire the neat and closed-form solutions at a steady state, the recursive technique is utilized. Parametric non-linear programming approaches have been applied for the estimation of system characteristics in fuzzy surroundings by taking the system parameters as triangular fuzzy numbers. The impact of the sensitive system parameters on the functioning of the finite buffer model and finite source model is studied by estimating numerical outcomes. Moreover, a function of cost is formulated to attain the optimum rate of service at the least possible cost by using the direct search approach.

***4th International Conference on Inventive Research in Material Science and Technology (ICIRMST 2023)***

***An Experiment Study on Mechanical and Rheological Properties of SCC with Glass and Carbon Fibre***

Hemant Kumar Sain , Mohsin Khan Agwan , Jitendar Kumar Prajapat,  
Prince Goyal , Sonu Saini and Vishram Gujar

***Abstract***

Self-compacting concrete (SCC) is the concrete which possess the ability to flow and consolidate under self-weight. Its placement in difficult and congested conditions due to its flowing ability is possible. SCC is defined as highly deformable and provides better resistance to segregation. Its main characteristic is the higher cement matrix aggregate ratio as compared to ordinary concrete. In this paper, present the different experiments investigation on compression strength, split tensile strength, flexural strength, that are performed for different combination of glass and carbon fiber with SCC.

***4th International Conference on Inventive Research in Material Science and Technology, Publisher-Springer***

***FEM Analysis of Turning Operation using Deform 3D***

Kapil Karadia , Hemant Kumar Sain , Simran Yadav , Shivam Sharma , Rahul Sharma and  
Rajpal Singh Chuahan

***Abstract***

In the FEM method, the loading conditions in the design can be simulated and its response can be determined. Components of separate building pieces are used to model the design. For each element, there are unique formulas that describe how a certain load reacts to that particular element. This work will feature the impact of the temperature and cutting forces created on the single point cutting tool (SPCT) tip while working. Modelling of SPCT will be finished by PRO-Engineer Wildfire-4 software. In this paper present the investigates effect of the spindle speed, feed rate and cut depth on stress, deformation, temperature and cutting forces in turning of AISI 1045 steel using a coated cutting tool. Then the temperature readings and the forces will be determined at various depths of cut are given



as a input to the software. Results demonstrate that feed rate is the most important determinant in dry turning stress, temperature and cutting force values. Feed rate, cut depth , and spindle speed all effect stress, cutting forces, deformation, and temperature. ANOVA analysis reveals that spindle speed, feed rate, and cut depth all influence stress, cutting forces, deformation, and temperature.

***4th International Conference on Inventive Research in Material Science and Technology Publisher-Springer***

***Analysis of Seismic Behavioural of Single Bay Structure with Composite Beam and RCC Columns***

\* Hemant Kumar Sain , Mohsin Khan Agwan , Aditya Kumar , Gomant Raj ,Sanjay Kumar and Mohit Jangir

***Abstract***

In India, Indian standard measures for earthquake resistant design of structures IS 1893 (Section 1): 2002 is the fundamental code that gives blueprint to working out seismic design force. Wind forces are determined utilizing code IS-875 (Section 3). In this examination of single cove structure having composite pillar with seismic zone V as per IS 1893:2016 has been completed and correlation is made between shape factor, bending moments, Due to response spectrum shear force for seismic load, deflections at different beam point, dead load and blend of this. All the simulation analysis of this work is done using the SAP 2000 software.

***JETIR Research Journal ISSN-2349-5162 2022 JETIR***

***A Study on Fiber Reinforced Concrete Using Different Types of Geo-Polymer Fiber In Preparation of Concrete Sample***

Nikhil Goyal, Hemant Kumar Sain, Mohsin Khan Agwan

***Abstract***

Portland cement is very malleable, but weak from stress and cracking. Weaknesses and stresses can be prevented by using standard steel reinforcements mixed to some extent with various special fibers. The addition of fiber increases the strength of the fiber matrix composite, which will change its behavior after failure. The purpose of this document is to provide information on the quality and compatibility of common fibers and their use in the

production of concrete with specific properties. In this paper given an overview and related work details on fiber reinforced concrete using different types of geo-polymer fiber in preparation of concrete sample.

***JETIR Research Journal ISSN-2349-5162 2022 JETIR***

***A Review on Partial Replacement of Cement With Brick Dust***

Shoyab Khan, Hemant Kumar Sain

***Abstract***

Brick is the most important building construction material which is widely used in residential and commercial structures. In load bearing structure the most important component of masonry walls is nothing but a brick. Brick dust is a luxurious substance produced as waste in brick kilns and building sites. This waste is dumped and utilized as landfills, which is harmful to the environment. Several creative and waste materials are used in concrete by investigators all around the world to solve environmental and economic challenges. In this we studied about the brick dust, effects of brick dust on environment and use of brick dust as cement replacement material.

***International Research Journal of Engineering and Technology (IRJET)***

***A Review on Utilization of Pareva Dust and Quartz Sand in Concrete***

Sneha Mathew , Hemant Kumar Sain

***Abstract***

Concrete the soul of infrastructures and it's a concoction of cement, sand, coarse aggregate's, water. Sand and cement is considered as major material in concrete mix design due to the fact that manufacturing of cement and excavation sand is booming out. If we consider cement the manufacturing of it releases out CO<sub>2</sub> and other greenhouse gases and on the other hand sand excavation also leads us to river bed declination, so the best alternative for both of these materials must be taken into vital notes. Through this paper an innovative study on utilization of Pareva Dust as a replacement to cement and "Quartz Sands replacement to sand is utilized and helps to secure mother-earth. Through this paper review is provided for both materials which guide us to utilization for both materials as alternative in concrete.



***Analytical Study on Fiber Reinforced Concrete Using Different Types of Virgin Polypropylene Fiber in Preparation of Concrete Sample***

Nikhil Goyal, Hemant Kumar Sain , Mohsin Khan Agwan

***Abstract***

Fiber-reinforced concrete (FRC) has become popular in recent years due to its superior performance compared to ordinary concrete. Fire resistance is an unavoidable risk when the FRC is used in residential and municipal buildings and other structures. Based on the known test results, the FRC varies with different fiber types, fiber configurations, and cement matrix patterns. This paper provides a comprehensive overview of current FRC fire resistance research. Permeability, delamination, compressive strength, tensile strength, modulus, strength and loss ratio are some of the temperature dependent load parameters reported for steel fiber reinforced, polypropylene fiber reinforced and hybrid fiber reinforced concrete. In particular, the current FRC policy framework is described. In this research work using two different types of Virgin Polypropylene fiber in preparation of concrete sample. First geo-polymer fiber is BC-48 (Virgin Polypropylene) as an Admixtures- HRWR also used in concrete at various percentage like 0.0%, 0.2% and 0.4%. Using Virgin Polypropylene fibers at various percentages like 0.0, 0.3, 0.6, 0.9, 1.2 and 1.5. Testing of concrete samples for some parameters like workability and strength of cubes.

*International Journal of Recent Research and Review*

***A Detailed Study on Partial Replacement of Cement with Various Percentages of Brick Dust from Different Varieties of Brick***

Shoyab Khan, Hemant Kumar Sain

***Abstract***

Brick is the most important building construction material which is widely used in residential and commercial structures. In load bearing structure the most important component of masonry walls is nothing but a brick. Brick dust is a luxurious substance produced as waste in brick kilns and building sites. This waste is dumped and utilized as landfills, which is harmful to the environment. Several creative and waste materials are used in concrete by investigators all around the world to solve environmental and economic challenges. Brick dust from

several varieties of brick was used in this study project. Mainly cement replacement done with various percentage like 0%, 8%, 16%, 24%, 32% and 40%. Several number of mix are prepared with different percentage of brick dust and cast cubes, beams cylinders to perform some specified experiment Slump Test, Compressive strength Test, Flexural Strength Test and Split Tensile Test.

### ***International Journal of Recent Research and Review***

#### ***A Detailed Study on Alccofine 1203 with Its Benefits, Advantage, Physical and Chemical Properties***

Mohmmad Shahrugh Sarkhel , Hemant Kumar Sain , Vikas Yadav

#### ***Abstract***

The motive of the current study is to understand the effects of the addition of cementitious materials like Alccofine-1203. In this paper gives detailed overview about the Alccofine-1203 with its benefits, advantage and applications. Also discussed the physical and chemical properties of the Alccofine-1203.

### ***International Journal of Engineering Research and Generic Science (IJERGS)***

#### ***A Review on Concrete Containing GGBFS and Meta kaolin with Calcium Carbide Residue***

Hemant Kumar Sain, Basant Kumar Meena,

#### ***Abstract***

In recent years, some investigations are reported on Ground-granulated blast-furnace slag (GGBFS) and Meta kaolin with calcium carbide residue (CCR) can be used as a partial replacement of cement and concrete. A lot of literatures have already proved that GGBFS, Meta kaolin and CCR are one of the mostly use cement or concrete supplementary material. Different literatures suggested different percentage of GGBFS, Meta kaolin and CCR as a cement replacement material. In this paper provide the detailed overview about the GGBFS, Meta kaolin and CCR with their chemical and physical properties to experimental analysis on cement and concrete.



***Effects of Alccofine-1203 and Foundry Sand on Properties of Concrete Mix***

Mohmmad Shahrukh Sarkhel , Hemant Kumar Sain , Vikas Yadav

***Abstract***

The motive of the current study is to understand the effects of the addition of cementitious materials like Alccofine-1203, fly ash and foundry sand on the concrete. Cement is replaced by Alccofine-1203 in amount of 0, 5, 10,15% and the fine aggregate is replaced by foundry sand in amount of 0, 5, 10, and 15% for preparing mix design of M30 grade. The overall performance of concrete mix is characterized by the test Flexural Strength (FS), Compressive Strength (CS), split tensile strength (STS), at the curing period of 7, 14 and 28 days. The entire test Results of concrete carrying Alccofine-1203 and foundry sand has greater compressive strength, enhanced durability and reduced dispersion property. It is observed that the maximum compressive, tensile and flexural strength scan be achieved by addition of 10% of Alccofine-1203 and 10% foundry sand in the mixture of concrete with fixed water cement ratio 0.45. The project results suggested that reasonable high performance concrete can be obtained by replacing fine aggregate with 0% to 10% of foundry sand along with partial replacement of cement with 10% of the A.F-1203.

## Sample of Certificates



### Certificate of Presentation

This certificate is awarded to

**Abhinav Agarwal**

for successfully presenting the paper entitled

**Security and Privacy in Social Network**


at the


2nd International Conference on

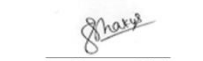
Sentiment Analysis and Deep Learning (ICSADL - 2022)

organized by Tribhuvan University, Pulchowk Campus, Nepal

held on 16-17, June 2022.

  
Session Chair

  
Organizing Secretary  
Dr. S. Smys

  
Conference Chair  
Prof. Dr. Subarna Shakya



### Certificate of Presentation

This certificate is awarded to

**Dr. Himanshu Arora**

for successfully presenting the paper entitled

**Security and Privacy in Social Network**

at the

2nd International Conference on


Sentiment Analysis and Deep Learning (ICSADL - 2022)

organized by Tribhuvan University, Pulchowk Campus, Nepal

held on 16-17, June 2022.

  
Session Chair

  
Organizing Secretary  
Dr. S. Smys

  
Conference Chair  
Prof. Dr. Subarna Shakya





## Certificate of Presentation

This certificate is awarded to

**Shilpi Mishra**

for successfully presenting the paper entitled

**Infrastructure as Code (IaC): Insights on Various Platforms**

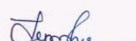
at the


2nd International Conference on


Sentiment Analysis and Deep Learning (ICSADL - 2022)

organized by Tribhuvan University, Pulchowk Campus, Nepal

held on 16-17, June 2022.

  
Session Chair

  
Organizing Secretary  
Dr. S. Smys

  
Conference Chair  
Prof. Dr. Subarna Shakya



## Certificate of Presentation

This is to certify that

**Kshitiz Agarwal**

have successfully presented the paper entitled

**An IoT-Enabled Autonomous Fire Suppression Robot**

at

8th International Conference on

Communication and Electronics Systems (ICCES 2023)

organized by PPG Institute of Technology,

Coimbatore, India on 1-3, June 2023.

  
Session Chair

  
Prof.S.V. Ramanan  
Organizing Secretary

  
Dr. V. Bindhu  
Conference Chair



### Certificate of Presentation

This certificate is awarded to

**Shilpi Mishra**

for successfully presenting the paper entitled

**Security and Privacy in Social Network**


at the

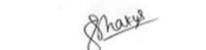
2nd International Conference on

Sentiment Analysis and Deep Learning (ICSADL - 2022)

organized by Tribhuvan University, Pulchowk Campus, Nepal  
held on 16-17, June 2022.

  
Session Chair

  
Organizing Secretary  
Dr. S. Smys

  
Conference Chair  
Prof. Dr. Subarna Shakya



### Certificate of Presentation

This is to certify that

**Abha Sharma**

have successfully presented the paper entitled

**Microstrip Patch Antenna Design For Brain Tumor Detection**

at

8th International Conference on  
Communication and Electronics Systems (ICCES 2023)

organized by PPG Institute of Technology,  
Coimbatore, India on 1-3, June 2023.

  
Session Chair

  
Prof.S.V. Ramanan  
Organizing Secretary

  
Dr. V. Bindhu  
Conference Chair





XPLORE COMPLIANT ISBN  
978-1-6654-5630-2



## Certificate of Presentation

This is to certify that

Naveen Kumar Tiwari

have successfully presented the paper entitled

Prediction of Heart Disease Using Machine Learning

at

2nd International Conference on  
Applied Artificial Intelligence and Computing (ICAAIC 2023)  
organized by Narasu's Sarathy Institute of Technology,  
Salem, India on 4-6, May 2023.

  
Session Chair

  
Organizing Secretary  
Dr. G. Ranganathan

  
Conference Chair  
Dr. Munusami Viswanathan



## Certificate of Presentation

This is to certify that

Shailesh Kapoor

have successfully presented the paper entitled

Microstrip Patch Antenna Design For Brain Tumor Detection

at

8th International Conference on  
Communication and Electronics Systems (ICCES 2023)  
organized by PPG Institute of Technology,  
Coimbatore, India on 1-3, June 2023.

  
Session Chair

  
Prof.S.V. Ramanan  
Organizing Secretary

  
Dr. V. Bindhu  
Conference Chair



XPLORE COMPLIANT ISBN  
978-1-6654-5630-2

ICAAIC



## *Certificate of Presentation*

This is to certify that

**Shilpi Mishra**

have successfully presented the paper entitled

**Prediction of Heart Disease Using Machine Learning**

at

2nd International Conference on  
Applied Artificial Intelligence and Computing (ICAAIC 2023)  
organized by Narasu's Sarathy Institute of Technology,  
Salem, India on 4-6, May 2023.

  
Session Chair

  
Organizing Secretary  
Dr. G. Ranganathan

  
Conference Chair  
Dr. Munusami Viswanathan



## **Certificate of Presentation**

This is to certify that

**Shilpi Mishra**

have successfully presented the paper entitled

**An IoT-Enabled Autonomous Fire Suppression Robot**

at

8th International Conference on  
Communication and Electronics Systems (ICCES 2023)  
organized by PPG Institute of Technology,  
Coimbatore, India on 1-3, June 2023.

  
Session Chair

  
Prof.S.V. Ramanan  
Organizing Secretary

  
Dr. V. Bindhu  
Conference Chair



## Certificate of Presentation

This is to certify that  
**Shilpi Mishra**  
have successfully presented the paper entitled  
**An IoT-Enabled Autonomous Fire Suppression Robot**  
at  
8th International Conference on  
Communication and Electronics Systems (ICCES 2023)  
organized by PPG Institute of Technology,  
Coimbatore, India on 1-3, June 2023.

  
Session Chair

  
Prof. S.V. Ramanan  
Organizing Secretary

  
Dr. V. Bindhu  
Conference Chair

## 2<sup>ND</sup> INTERNATIONAL CONFERENCE OF UNDERGRADUATE STUDENTS



### ICUS 2023



Organized By

SAU Center for Research and Innovative Learning, South Asian University, New Delhi

<https://scril.sau.int/icus23/>

## CERTIFICATE OF PRESENTATION

**Ayan Mallick Choudhury, Abhishek Yadav, Shweta Saraswat**  
presented the article titled  
**A Review on Artificial Intelligence (AI) Chatbot**  
in the 2<sup>nd</sup> International Conference of Undergraduate Students held during  
May 20-21, 2023.

  
Dr. Jagdish Chand Bansal  
(General Chair, ICUS 2023)

## 2<sup>ND</sup> INTERNATIONAL CONFERENCE OF UNDERGRADUATE STUDENTS



**ICUS 2023**



Organized By

SAU Center for Research and Innovative Learning, South Asian University, New Delhi

<https://scril.sau.int/icus23/>

### CERTIFICATE OF PRESENTATION

**Sagar Goyal, Vivek Ahir, Rajeev Yadav, Pawan Sen**

presented the article titled

**Develop a technology to code an image and text data using JAVA**

in the 2<sup>nd</sup> International Conference of Undergraduate Students held during  
May 20-21, 2023.

**Dr. Jagdish Chand Bansal**  
(General Chair, ICUS 2023)

## 2<sup>ND</sup> INTERNATIONAL CONFERENCE OF UNDERGRADUATE STUDENTS



**ICUS 2023**



Organized By

SAU Center for Research and Innovative Learning, South Asian University, New Delhi

<https://scril.sau.int/icus23/>

### CERTIFICATE OF PRESENTATION

**Sagar Goyal, Vivek Ahir, Rajeev Yadav, Pawan Sen**

presented the article titled

**Develop a technology to code an image and text data using JAVA**

in the 2<sup>nd</sup> International Conference of Undergraduate Students held during  
May 20-21, 2023.

**Dr. Jagdish Chand Bansal**  
(General Chair, ICUS 2023)



**2<sup>ND</sup> INTERNATIONAL CONFERENCE OF UNDERGRADUATE STUDENTS****ICUS 2023**

Organized By

SAU Center for Research and Innovative Learning, South Asian University, New Delhi

<https://scril.sau.int/icus23/>**CERTIFICATE OF PRESENTATION****Rahul Gupta, Neha Saxena, Shweta Saraswat, Sagar Pradhan**

presented the article titled

**Comparison of Java-based web frameworks**in the 2<sup>nd</sup> International Conference of Undergraduate Students held during  
May 20-21, 2023.**Dr. Jagdish Chand Bansal****(General Chair, ICUS 2023)****2<sup>ND</sup> INTERNATIONAL CONFERENCE OF UNDERGRADUATE STUDENTS****ICUS 2023**

Organized By

SAU Center for Research and Innovative Learning, South Asian University, New Delhi

<https://scril.sau.int/icus23/>**CERTIFICATE OF PRESENTATION****Nikhil Kumar, Pabitar Reddy, Manish Kumar, Pawan Sen**

presented the article titled

**Cyber Security Threats & Countermeasures**in the 2<sup>nd</sup> International Conference of Undergraduate Students held during  
May 20-21, 2023.**Dr. Jagdish Chand Bansal****(General Chair, ICUS 2023)**

## 2<sup>ND</sup> INTERNATIONAL CONFERENCE OF UNDERGRADUATE STUDENTS



**ICUS 2023**



Organized By

SAU Center for Research and Innovative Learning, South Asian University, New Delhi

<https://scril.sau.int/icus23/>

### **CERTIFICATE OF PRESENTATION**

**Harsh Raj, Mukesh Bansal, Manish Kumar, Purva Agarwal**

presented the article titled

**Smart Parking Exploration System in Real Time Environment Through IOT**

in the 2<sup>nd</sup> International Conference of Undergraduate Students held during  
May 20-21, 2023.

**Dr. Jagdish Chand Bansal**

**(General Chair, ICUS 2023)**



## ***MESSAGE FROM AUTHOR***

It gives us great pleasure and pride to present the research related magazine AIET Research & Technical Magazine. AIET provides a platform for every teacher and student to develop their thinking skills. In this fast changing world, every college needs a platform to showcase their work, research and achievements in a great way to know about our institute, its success as well as the various events and competitions conducted. It also portrays the outstanding achievements of teachers & students in various areas and hence encourages the mass to bring forth their talent and take it to the right direction with the help of our mentors.

This magazine should be viewed as a launch pad for those who have the potential to thrive ahead. We feel proud to declare that with the support and dedicated efforts of the college authorities, we are able to issue our college magazine.

I hope, our readers will find this magazine informative and inspiring.

The valuable support and guidance which we received from our President Dr. Arvind Agarwal Sir, Vice-President Dr. Puja Agarwal Ma'am, Principal Dr. Himanshu Arora Sir and other heads of college made it possible to the release the magazine.

***Dr.Himanshu Arora***

***Mr.Kshitiz Agarwal***

***Mr.Chirag Arora***



ISBN No.: 978-81-959727-2-2

**Author's Name:**

Dr. Himanshu Arora | Mr. Kshitiz Agarwal | Mr. Chirag Arora