UCRD NEWSLETTER (2021)

University Center of Research and Development 2021-22

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The Galgotias University, Uttar Pradesh, sponsored by Smt. Shakuntala Educational and Welfare Society, has been established by state of Uttar Pradesh under section 2(f) of the UGC Act, 1956 vide The Galgotias University Uttar Pradesh Act, 14 of 2011. The University commenced its operation from the academic session 2011-12.Galgotias University opened its door to the first batch of approximately 1,700 undergraduate and post-graduate students in July of 2011. Now in year 2021, the university has grown to more than 15000 students. Galgotias University aspires to be and is on a fast-track to become an internationally recognized university that excels in multidisciplinary and interdisciplinary education, research and innovation,.The 'students-first' philosophy is a big reason why Galgotias University is consistently ranked among India's top universities. The focus of Galgotias University is on lowdent-to-faculty ratio that promotes plenty of personal attention and mentoring opportunities.The record-breaking placement at Galgotias this year is an apt testimony to its focus on upholding the highest academic standards right from selecting top faculty, introducing world-class pedagogical practices to personality development of the students.We have 13 schools, 19 Departments with 53 UG programs 36 PG programs and 25 PhD programs. We have approvals from various Councils [Pharmacy: Pharmacy Council of India (PCI); Law: Bar Council of India (BCI); Nursing: Indian Nursing Council (INC); Architecture: Council of Architecture (COA); Education: National Council for Teacher Education (NCTE); Hotel Management: Norms of National Council for Hotel Management (NCHM)].

This year, Galgotias University by virtue of its meticulous planning and through religious and relentless efforts have been placed in Excellent Band by ARIIA-2021, granted with UGC-12B status, listed in 151-200 top universities of India, 177th in Engineering Category, in the band of 76-100 for Pharmacy and Management in NIRF INDIA RANKINGS 2021 as declared by MHRD. The accreditation of three undergraduate programs has been granted by National Board of Accreditation (NBA) under Tier (I). Galgotias University is youngest in the country to get such accreditations by NBA. More than 7000 Publications, 200+ Patents Published and many in pipeline.With around 800 plus faculty members, 3 Academic Blocks having Construction Area of 64,879 Sq. Mt, the university also have in campus five-star Boys Hostel accommodating around 1400 students and off-campus girls' hostel to accommodate 200 plus girls.

Milestones by GU

o ARIIA Ranking 2021: Placed in the Band of Excellent under the Category "University & Deemed to be University (Private/Self-Financed) (Technical)" in Atal Ranking of Institutions on Innovation Achievement (ARIIA) 2021

GALGOTIAS UNIVERSITY

o UGC-12B Status granted to the University in 2021

o Awarded 4 Star Rating by Institution Innovation Council (IIC) for 2020-21

o NIRF 2021 Ranking

o Ranked in the Band 151 - 200 in Overall University category in India

o Ranked in the Band 151 - 200 in Overall category in India

o Ranked 177th in Engineering Category

o Ranked in the Band 76 - 100 in Pharmacy category in India

o Ranked in the Band 76 - 100 in Management category in India

o Engineering Programs in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering are accredited by NBA (National Board of Accreditation), India

o Ranked 3rd in India and 1st in Uttar Pradesh in OBE Ranking 2021 by R World Institution Ranking

o 1st amongst Private Universities and 3rd amongst all Universities in Uttar Pradesh for uploading maximum E-Contents on Online Digital Library Uttar Pradesh Portal

o Galgotias University is ranked 10th across India and is positioned in the 'A1 Band: Institution of Excellence' category in MHW Ranking 2021 by R World Institutional Ranking

o Among Top 5 Mass Communication Colleges in Uttar Pradesh by India Today Rankings 2020

o 6th Rank in the Category of Excellence and 2nd in Uttar Pradesh in GHRDC Hotel Management Institute Survey 2021

o 10th Rank of Top BBA Colleges in India and 5th Rank in Northern Region in GHRDC_BBA Colleges Survey 2021

o India Today-MDRA Survey Ranking 2021:

o BBA - 73rd in India and 5th Among Private Universities in UP

o BCA – 49th in India and 5th Among Private Universities in UP

o Engineering - 49th in India and 6th Among Private Universities in UP

o Law - 37th in India and 5th Among Private Universities in UP

o Mass Communication – 32nd in India and 4th Among Private Universities in UP

o Hotel Management – 43rd in India and 3rd among Private Universities in UP

o Times Engineering Ranking 2021: 23rd in India and 2nd among Private Universities in UP

o Best Private Hospitality & Tourism Institute of the Year by Brands Impact for 2021-22

o E-Learning Excellence for Academic Digitisation by QS I-Gauge E-Lead Certification for Excellence in Online Learning – 2020

o NIRF Ranking in the Band 151 - 200 among the Universities in India

o School of Pharmacy ranked 76 - 100 in NIRF ranking among all Pharmacy Colleges in India

o NIRF Ranking in the band 251-300 for overall Category in 2020

o Excellence in Academics and Placement by Dataquest Cybermedia ICT awards

o India Excellence Award – for best Private University in Academics and Placement

o Placement and Excellence Award by Times Business Award 2019

University Center of Research and Development 2021-22

Message from Chancellor

At Galgotias University, we want to ensure that we are providing students with a deeply transformative experience –intellectually, socially and personally – that will prepare them for a life of citizenship and leadership. The focus on 360-degree transformation is because we function as an institution that's committed to excellence at all levels. Over the years, it has been our deep and rich value system that has made Galgotias University synonymous with quality education. By design, learning at Galgotias University is cross-disciplinary and integrative. Our students experience considerable flexibility, freedom, and independence in their academic programs. Given our domain-expert faculty, state-of-the-art infrastructure, international quality teaching pedagogies, excellent nurturing environment for learning and thinking, Galgotias University is emerging as the institution of choice for students of caliber pursuing higher studies. We constantly endeavor to offer world-class educational facilities and practices, and this has ensured that Galgotias University is the favored recruitment destination for blue-chip corporates. Students who thrive in our programs are passionate about their subjects. Many are recognized nationally for their scholarship, research, and public engagement, and make original and substantial contributions to their disciplines. It is our commitment to continuously explore new opportunities, by creating new centres of thinking, learning and growth. We believe that we begin in the classroom with exposure to new ideas, new ways of understanding, and new ways of knowing and then our students embark on a journey of intellectual transformation. Once again, I welcome you to this seat of learning, and I wish you success as you experience an unparalleled educational journey.

Mr. Suneel Galgotia,
Chancellor, Galgotias University

GALGOTIAS UNIVERSITY

Message from CEO

With a vision to be known globally for value-based education, research creativity and innovation, Galgotias University is continuously striving to establish state -of-the art facilities for world class education and research. Research is the epicanthic agenda of the twenty-first century. Our New Education Policy has also ensured a boost to research in the Indian Educational System. Galgotias University has also promised to be a part of the journey to increase the R&D index of our Country. I am happy to share with the readers that Galgotias University is contributing very gracefully in it. Faculties from top class institutions are recruited at Galgotias University. A very comprehensive research ecosystem is established at Galgotias University. A well-defined research targets are given to all the faculty members in order to help them to strive in a positive direction towards research. A University Centre of Research and Development is established to help all the faculty members to strive in their journey of research. I really want to congratulate the University Centre of Research and Development for providing a basic platform for stimulating, mentoring and facilitating research. University is also providing grants for research in the form of Seed Money. Every year, after rigorous scrutiny of research proposals, grants are provided to faculties. This helps to establish a good research culture in Galgotias University. Efforts of the researchers are also acknowledged at the University Level by giving research awards.

Mr. Dhruv Galgotia
CEO, Galgotias University

University Center of Research and Development 2021-22

GALGOTIAS UNIVERSITY

Message from the Vice Chancellor

Academic Excellence is the dream of every University. One of the prime facets of academic excellence is to strive higher in research and innovation. To nurture the research ecosystem in Galgotias University through faculty and student-driven research, is our new endeavor. With this vision and mission University Center of Research and Development has been established. The University Center of Research and Development has formulated a research mandate. In research mandate emphasis is given to various aspects of research and innovation and accordingly research targets are set. These targets are roadmaps of Galgotias University's research journey. The UCRD is a mentor of various research efforts of various faculties of the Galgotias University. UCRD is also encouraging the faculty to attract external research funding by providing linkages and collaborative support and streamlining the procedural guidelines.

I am confident that all the collective research efforts of our faculty members, researchers and students will help Galgotias University to reach a new height of excellence globally in the area of research and development.

Prof (Dr). Preeti Bajaj
Vice Chancellor, Galgotias University

University Center of Research and Development 2021-22

GALGOTIAS UNIVERSITY

Message from the Dean UCRD

Galgotias University has been envisioned to emerge as a globally recognized university with a mission to create academic environment conducive for research, consultancy and innovation-based projects. With this objective in mind and to provide adequate research guidance and resources University Centre of Research & Development (UCRD) has been established right in the first year of the inception of the University. The UCRD is devoted to coordinating research & consultancy activities in collaboration with industries. UCRD provides research facilities to promote the research & development in all schools/departments of the University. The mission of the UCRD is to contribute to the research and innovation practices in the University and provide practical solutions to improve the research-based problems. The UCRD develop, test, and disseminate new approaches to improve the research and innovation outcomes. Some of the key functions of UCRD are development and Revision of Research policy, Research Ethics policy, Research Mandate, Research Guideline policy and Innovation Policy. The UCRD is also regulate the Consultancy projects, Seed Grant Projects to the Faculty members of the university and encourage them to apply for the same. GU offers a plethora of opportunities for research funding in vibrant multidisciplinary environment. To support and cultivate a culture of excellence, Galgotias University has established University Centreof Research & Development (UCRD). The UCRD facilitates and coordinates in a variety of research programmes, initiatives and activities that are available locally and internationally. Academic Research Programs (ARP) at Galgotias University relate to Research work undertaken by individual faculty or specific research groups in the departments running Masters or Doctor of Philosophy (Ph. D) programs.GU researchers are working in some of the thrust areas like advanced materials, biomedical engineering, clean energy and environment, computational biology, intelligent systems, micro-nanotechnology, wireless and broadband communication to name a few. For theoretical as well as experimental research, the resources are available in different laboratories of the University. Galgotias University students are immersed in the best of learning environments, with all academic courses grounded in a strong research culture where innovation and critical enquiry are key features.

Prof (Dr). Meenakshi Sharma,
Dean UCRD, Galgotias University

University Center of Research and Development 2021–22

Message from Dean PG/Ph.D

Galgotias University has been a research and innovation driven private university since its inception in 2011. It stands for a confluence of several interrelated disciplines, from technology and basic sciences to humanities and social sciences catering to both academia and industry. Our aim is to encourage basic, applied and developing ☐research conducted both by students and members of faculty alike. Post graduate and Doctoral programs are the main stimulator for research and innovations in any University. So in Galgotias University we are running Post Graduate Programs in 43 streams in 18 Schools and Doctoral program in 23 streams in 12 schools.Our encouragement clearly reflects in the policies we have set up for research activities for PG students and PhD Research Scholars. Although the needs of our faculty are as diverse as the disciplines they represent, they, however, share the common goal of building their capacities to generate new ideas and ways of understanding the world.The Office of Dean PG & Ph.D supports the research efforts of all faculty members in the university provides mentoring for our new research faculty, facilitates and fosters industrial collaboration and research programming, and identifies and disseminates research opportunities and collaborations.

Prof(Dr.) Naresh kumar
Dean PG/Ph.D

University Center of Research and Development 2021-22

GALGOTIAS UNIVERSITY

Research Advisory Committee

Prof.(Dr.)Preeti Bajaj	Vice Chancellor	Chairman

External Members

Prof. Milind Atrey	Dean (R&D), IIT, Bombay	Member
Dr. Bhim Singh	Professor, IIT, Delhi	Member
Dr. Bhaskaran Raman	Professor, IIT, Delhi	Member
Prof. Anil Roy	DAIICT, Ahmedabad	Member
Dr. A Mukhopadhyay	Advisor/Scientist, SERC, DST	Member

Internal Members

|		
Dr. Nitin Gaur	Registrar	Member
Dr. Pramod Kumar Sharma	PVC & Dean, SMAS	Member
Dr. Avadhesh Kumar	PVC & Dean Planning	Member
Dr. Sanjay Kumar	Dean IQAC	Member
Dr. Meenakshi Sharma	Dean UCRD	Member
Dr. Namita Malik	Dean, School of Law	Member
Dr. Kavita Mathad	Dean, School of Business	Member
Dr. A K Jain	Dean, SBAS	Member
Dr. Ambika Prasad Pandey	Dean, School of Liberal Education	Member
Dr. Munish Sabbarwal	Dean, SCSE	Member
Dr. Satyendra Gupta	Dean, School of Education	Member
Dr. Naresh Kumar	Dean PG & PhD	Member Secretary

University Center for Research and Development 2021-22

University Center for Research and Development (UCRD)

About UCRD

At Galgotias University, research is at the core towards teaching and learning, keeping our courses contemporary, relevant and cutting edge. Faculty Members and Students are actively pursuing interdisciplinary and socially relevant research in thrust areas with state -of-art equipment's in addition to teaching, consultancy and extension activities.

Organization Chart

GALGOTIAS UNIVERSITY
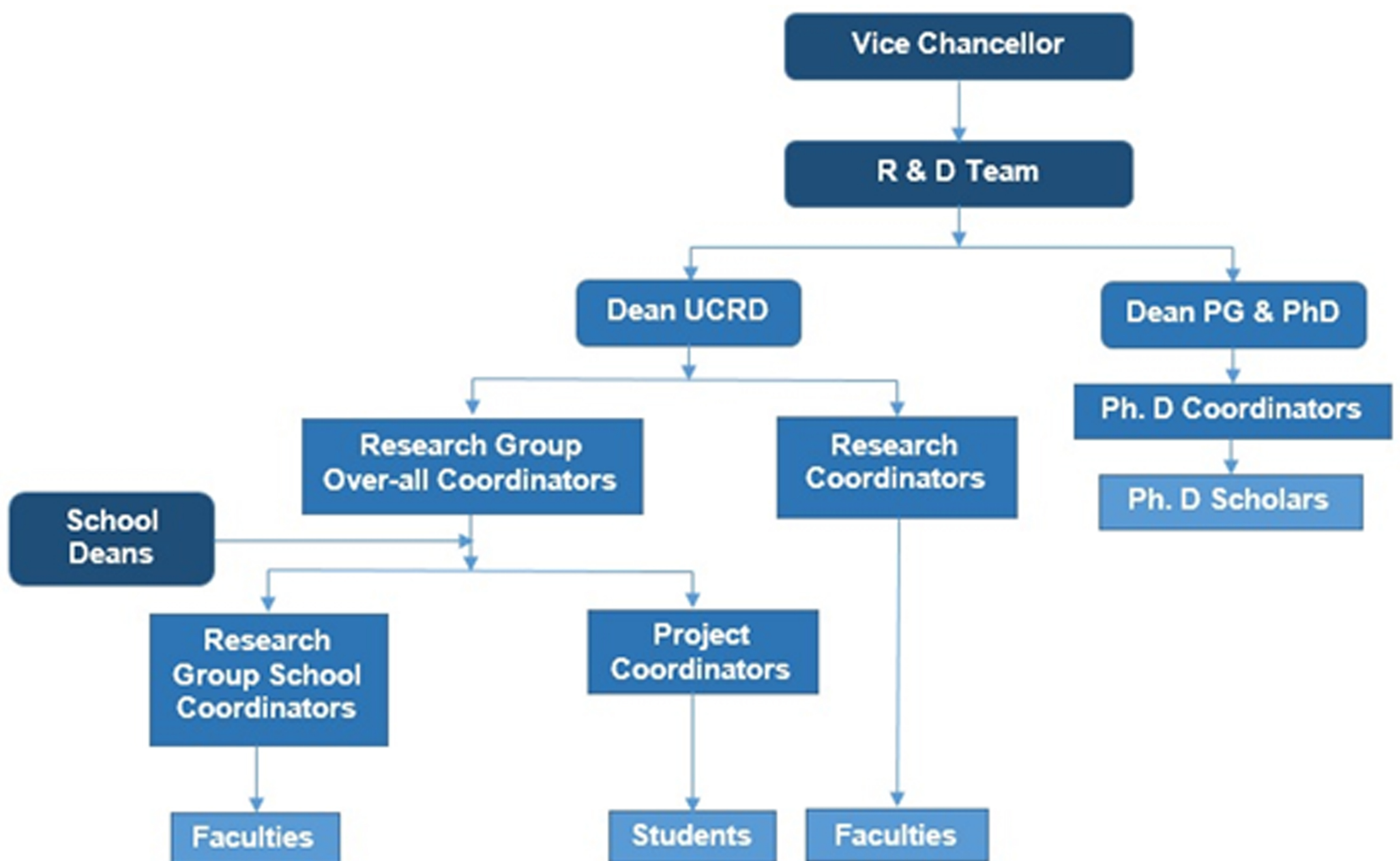
UCRD Team

Prof. Dr. Meenakshi Sharma
Dean UCRD

Prof. Dr. Naresh Kumar
Dean PG & Ph.D

Mr Gokul Rajan V,
Assistant Professor,
School of Computing Science and Engineering,

Prof. (Dr.) Md. Aftab Alam
Incharge, IPR

Dr. Gaurav Kumar
Incharge, IIC

Dr. Sheetla Prasad
Research Group Coordinator

University Center of Research and Development 2021-22

GALGOTIAS UNIVERSITY

School Research Coordinators

Dr. B. Balamurugan, SCSE

Dr. Usha Chauhan DEECE

Shrikant Vidya DOME

Mr. Rikshit Kumar DOCE

Dr. Rishabha Malviya, SMAS

Dr. Pramod, SOB

Dr Susmita Majumdar, SBAS

Dr. Tasha Singh Parihar, DOMC

Ms. Surabhi Verma SON

Dr. Mohammad Shamshad, SFC

Ms. Kusum Choudhary, SOA

Dr. Apeksha SOLE

Dr. Ganesh Datt SOA

Mr. Vikas Sharma SOH

Dr. Shweta Thakur SOL

Dr. Shri Kant Dwivedi SOE

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GALGOTIAS UNIVERSITY

Policies at GU

Research Policy

https://www.galgotiasuniversity.edu.in/pdfs/Research-Policy-2019-V1.pdf

Seed Money Policy

https://www.galgotiasuniversity.edu.in/pdfs/Research-Seed-Grant-Money.pdf

Ethical Policy

https://www.galgotiasuniversity.edu.in/naac-pdfs/Ethical%20Policy.pdf

Consultancy Policy

https://www.galgotiasuniversity.edu.in/pdfs/ConsultancyProjectPolicy.pdf

Innovation Policy

https://www.galgotiasuniversity.edu.in/pdfs/Research-Innovations-Policy.pdf

IPR Policy

https://www.galgotiasuniversity.edu.in/pdfs/IPR-Policy-9.7.pdf

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Research Groups at GU

Department Name	Research Group Name	Group In charge Name
DEECE	Communication Systems	Dr. Indu
	VLSI Circuits, Embedded System, IoT	Dr. Jeba das
	Power electronics & renewable energy	Dr. Gitanjali Mehta
DOCE	Geotech & Environmental Engineering	Mr. Jagan J
	Transportation Engineering	Ms. Priyanka Priyadarshni
	Structural Engineering	Mr. Anil Kumar Choudhary
DOME	Thermal Engineering	Dr. Sudhir Kumar Singh
	Manufacturing and Production	Dr. S.Kennedy
	Design Engineering	Dr. P. K. S. Nain
Dept. of Bio Science	Applied Biological Research	Dr Sarita Mallik
	Forensic Science & criminalistics	Dr. Suneet Kumar
	Applied Healthcare Research	Prof. Ranjana Patnaik
Dept. of Basic Science	Modelling and Simulation	Dr S K Kundu
	Pure & Applied Mathematics	Dr Varsha Gautam
	Advanced Materials	Dr. Pooja Agarwal
	Synthetic Chemistry	Dr Anjali Gupta
SCSE	Computer Networks	Dr. Shobha Tyagi
	Core and Emerging Technologies	Dr.Thirunavukkarasan
	Cloud Computing and Distributed Systems	Dr. A Daniel
	Data Science and AI	Dr. Shrddha Sagar
	Cyber Security & Privacy Research	Dr Srinivasan
	Computer Graphics and Digital Image Processing	Dr. Pallavi Jain
SFC	Finance and Accounts	Mr. Bhawana Rawat
	General Management	Mr. Tej Singh
	Finance and Banking	Dr.Anurag Kumar Saxena
SLE	Applied Psychology	Dr Kumar Ashutosh
	Economics	Dr Manju Dahiya
	English	Dr Archana Rathore
	Foreign Languages	Mr. Santanu Mukerji
	Political Science	Dr Manasi Sinha
	Sociology	Dr Ambika Prasad Pandey
SMAS	New Outlook on Well Being (NOW)	Dr Kalpana Rahate
	Nanotechnology, Drug Delivery System and Targeting (NDDST)-	Dr. Shaweta Sharma
	Galgotias Novel Pharmaceutical Research (GNPR)	Dr Amit Singh
	Sensor Based Smart Analysis of CVA	Dr. Rituraj Verma
	Advanced Physiotherapeutic	Dr. S.Zafar
SLE	Media	Dr. Harish Kumar
	Communication	Dr. A. Ram Pandey
SOA	ARCHITECTURE-1	Ar. Abhishek Kumar Srivastava
	ARCHITECTURE-2	Ar. Naved Ariyana
SOAG	Horticulture	Dr. Parveen Kumar Jain

Department Name	Research Group Name	Group In charge Name
SOA	ARCHITECTURE-1	Ar. Abhishek Kumar Srivastava
	ARCHITECTURE-2	Ar. Naved Ariyana
SOAG	Horticulture	Dr. Parveen Kumar Jain
	Agronomy	Dr. Ganesh D. Bhatt
SOB	Marketing and Branding	Dr. Mujibur Rahman
	General Management and Entrepreneurship	Dr. Ranjul Rastogi
	Banking and Financial Market	Ms Rashmi Sharma
	Leading and Team building	Dr.Alka Agnihotri
	Data Analytics	Dr. Ramarcha Kumar
	Operation, HCM and specialized	Dr. Aijaz Ahmed
SOE	Teacher Education Research Forum	Dr. Satyendra Gupta
SOH	Room Division	Ms. Jyoti
	Food & Beverage Division	Mr. Vikas Sharma
SOL	Human Rights	Dr. Sandhya
	Gender Studies	Ms. Priyam Singh
	Criminal Law	Dr. Narender Singh
	IPR Studies	Ms. Paramita Choudhary
	Corporate Law & A.D.R.	Prof. Seema Yadav
	International Law	Dr. Aruna Kamalli
SON	Medical Surgical Nursing	Dr. S.P Subashini
	Maternal and Child Health Nursing	Ms. Prempati Mayanglambam
	Child Health Nursing	Ms. Deepika Bajwan
	Mental Health Nursing	Ms. Sonia Rani

Research Group of Each Schools

SOL 10% · SON 7% · DEECE 5% · SOH 3% · Dept. of Basic Science 7% · SOE 2% · Dept. of Bio Science 5% · SOB 10% · DOCE 5% · SOAG 3% · DOME 5% · SOA 3% · SMAS 8% · SLE 13% · SFC 5% · SCSE 10%

Legend: DEECE, Dept. of Basic Science, Dept. of Bio Science, DOCE, DOME, SCSE, SFC, SLE, SMAS, SOA
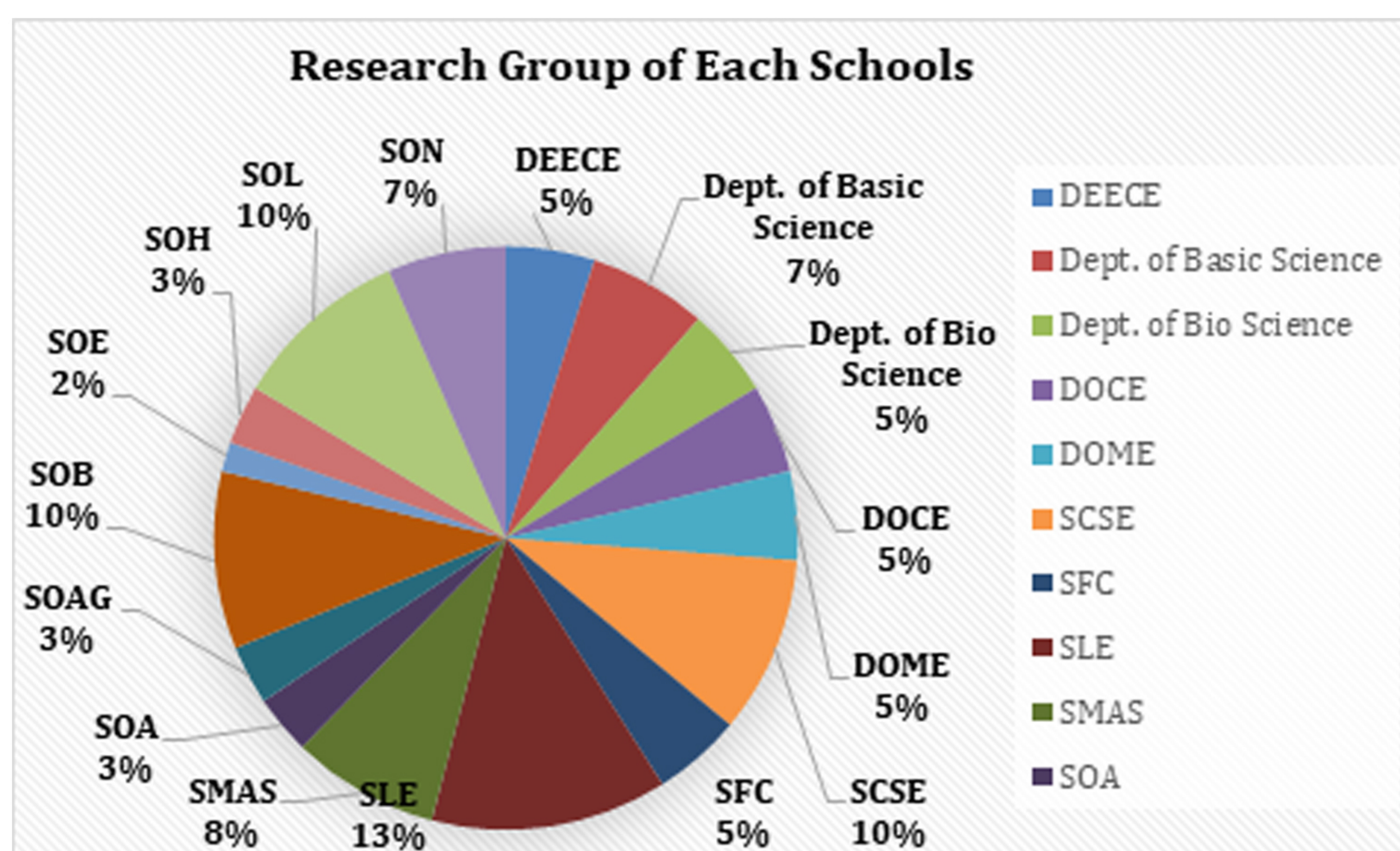
Publication Summary 2020 – 21

Based on Type pf Publication	
Type	Papers Published
Journal	773
Conference	314
Book	37
Book Chapter	224
Edited Book	20
Copyright	0
Patent	46
Total	**1414**

Based on Type of Publication Number of Papers Published
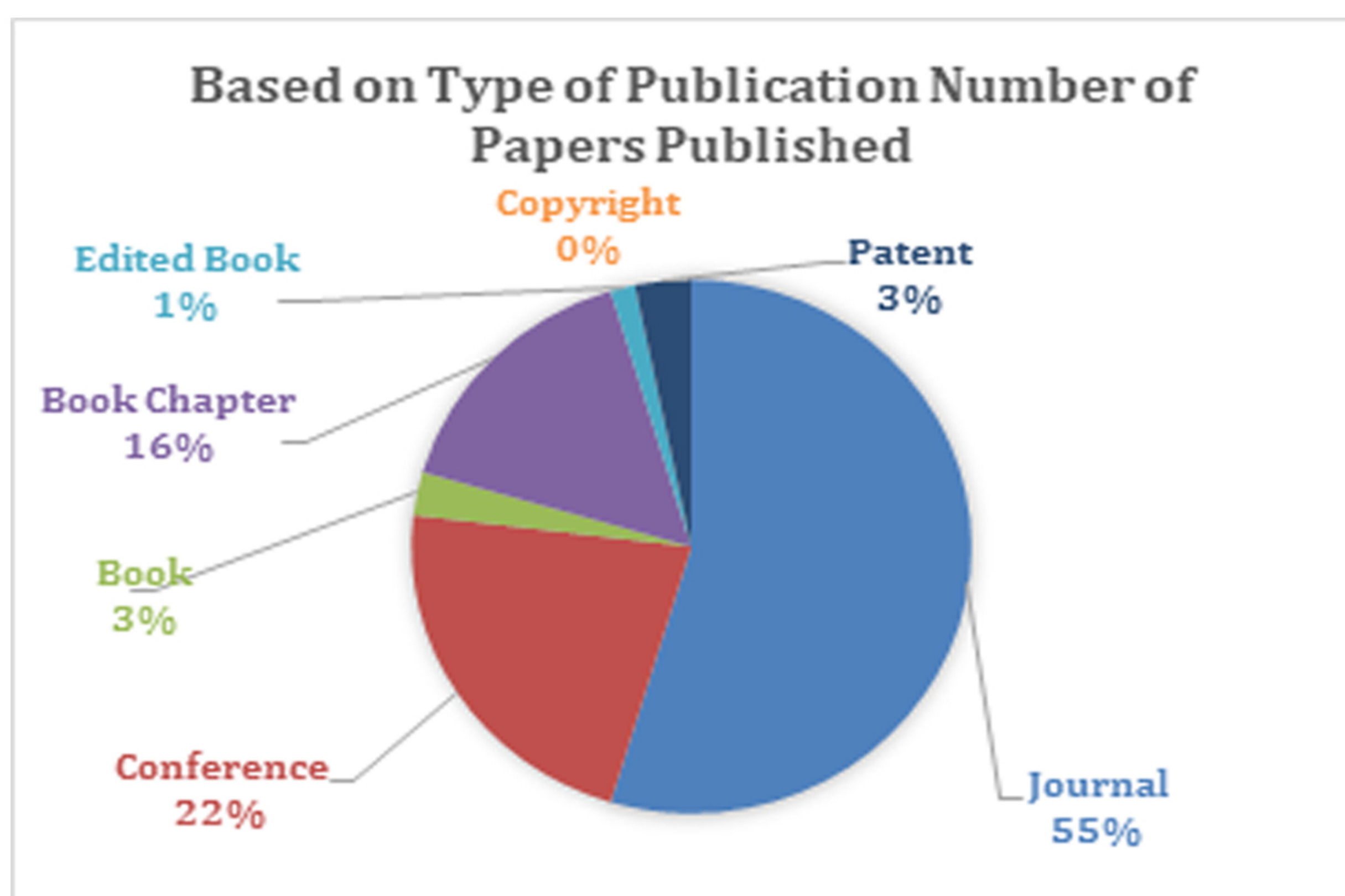
Based on Indexing	
Indexing	Papers Published
Scopus	538
Web of Science	7
Scopus-web of Science	79
UGC-CARE	74
Scopus NIC	0
Scopus-N	126
Web of Science-N	27
Scopus-Web of Science-	6
Others (Journals)	274
Others (Conferences)	55
Others (Books)	133
Others (Patents)	39
Total	**1358**

Based on Indexing Number of Papers Published

University Center of Research and Development 2021–22
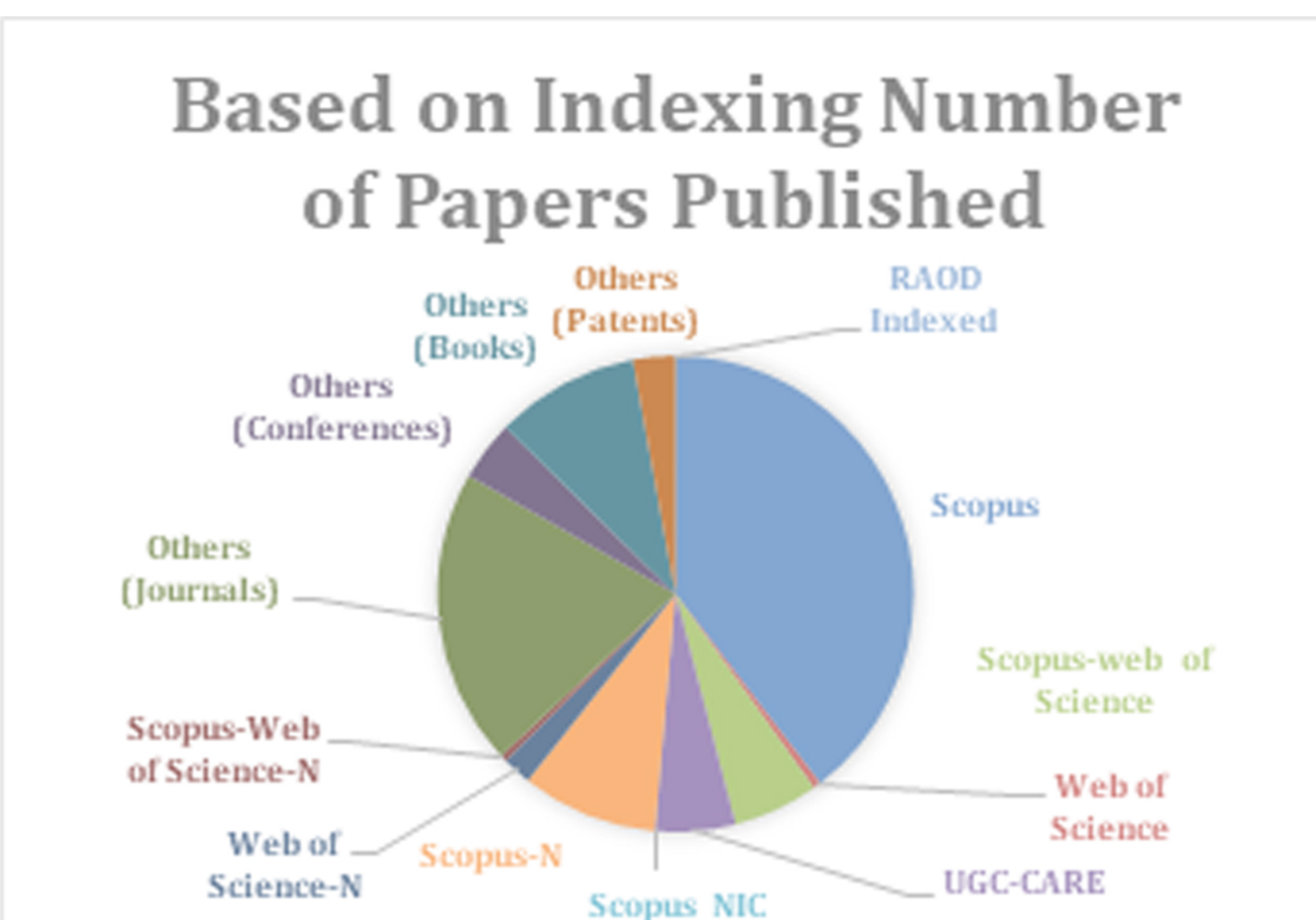
Faculty Publications

Department	Papers Published
Department of Computer Science and Engineering	529
Department of Computer Applications	29
Department of Civil Engineering	11
Department of Mechanical Engineering	101
Department of Electrical Electronics and Communication Engineering	142
Department of Architecture	1
Department of Education	35
Department of Humanities	47
Department of Mass Communication	15
Department of Bio-Sciences	54
Department of Basic Sciences	66
Department of Pharmacy	54
Department of Paramedical and Allied Health Sciences	51
Department of Management	66
Department of Finance and Commerce	21
Department of Hospitality and Tourism	12
Department of Law	113
Department of Agriculture	28
Department of Nursing	35
Department of Polytechnic	2
Total	**1413**

Department Wise Summary Number of Papers Published

University Center for Research and Development 2021-22
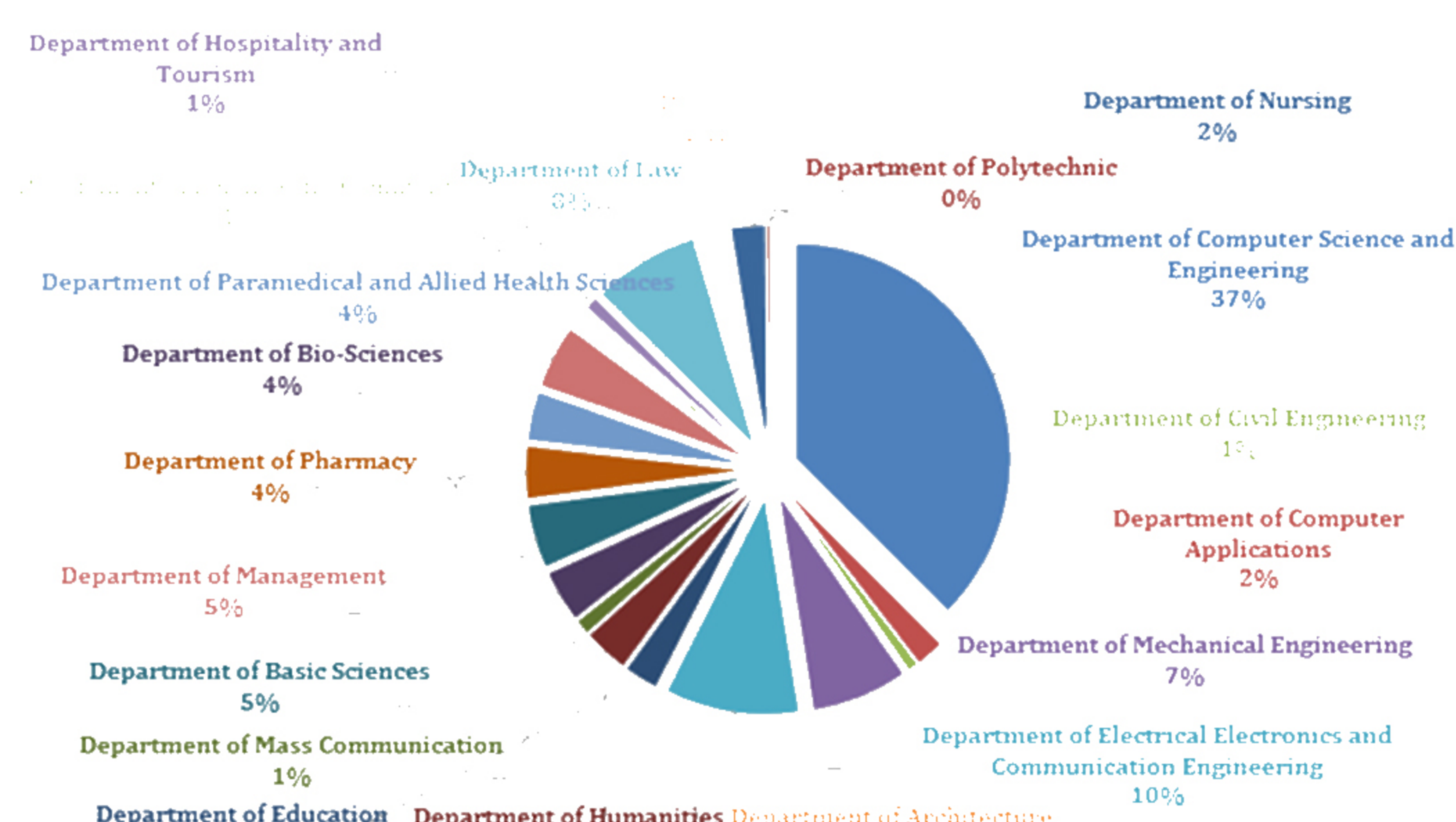
Student Publications

SL. NO	Name of the school	Grand Total
1	School of Computing Science & Engineering	394
2	School of Electrical, Electronics & Communication Engineering	36
3	School of Mechanical Engineering	77
4	School of Civil Engineering	36
5	School of Business	1
6	School of Education	6
7	School of Medical and Allied Sciences	41
8	School of Nursing	9
9	School of Basic & Applied Sciences	49
10	School of Finance & Computing	81
11	School of Media & Communication Studies	1
12	School of Law	13
13	School of Liberal Education	2
Total Students Publication		**746**

Students Publication 2020-21

Student Publications

Faculty Guide Name	Students Name(s)	Title of the project	Type of Publication
School of Basics and Applied Science			
Dr. Rajeev Kumar	Mahipal Singh Sankhla	Estimation Of Zinc Concentration In Yamuna River (Delhi) Water Due To Climatic Changes	Journal
Dr Suneet Kumar	Das Anamika	Effect Of Thermo chromic Ink On Different Types Of Papers	Journal
Dr.Suneet Kumar	Geo Mariyam Joseph	Computational Examination Of Signature Using Digitizer	Journal
Dr. Gaurav Kumar	Agrim Jain	Effects Of Herbal Constituents On Neurological Dysfunction	Journal
Dr. Gaurav Kumar	Shruti Gupta, Jaspreet Kaur Malhotra	Association Of Gut Microbiota With Metabolic Diseases	Journal
Dr. A. K. Jain	Ashi Singh	Synthesis Of Silver Nanoparticles Via Chemical Reduction Method	Journal
School of Computing Science and Engineering			
Mr.Gautam Kumar	Joy Guha, Rishi Kumar, Saumya Kumar	Student Assistant	Book Chapter
Mr.Himanshu Sharma	Prabhat Mishra, Stephen Arnold, Vishesh Kumar Sharma	Focaltheorem – A Portfolio Web Application	Book Chapter
Mr. Hradesh Kumar	Harsh Mishra, Suraj Kumar, Yash Khare	Movie Recommendation System	Book Chapter
Mr. Lalit Sharma	Danyal Zaidi, Md Sahil Raza	Artificial Intelligence Based Career Counselling Chatbot A System For Counselling	Book Chapter
Mr. Padmanabhan P.	Sarthak Agarwa	A Guide On How To Implement Analytics Support In Oppia-Android	Book Chapter
Mr. Padmanabhan P.	Subodh Kumar, Shristi Kiran, Afridi Akhlaq	Iot Waste Clearance Machine For Smart Cities	Book Chapter
Mr. Pratyush Kumar Deka	Ashwini Kumar, Devanshu Saroha, Jyoti Mishra	Nimbus:A Modern Solution For Server Management	Book Chapter
Dr. Prashant Johri	Saharsh, Sarvjeet Kumar, Zabiullah Waseq	Plant Disease Identification And Detection Using Machine Learning And Computer Vision	Conference
Dr. A. Daniel	Farheen Ali, Himanshu Rathor, Wasim Akram	License Plate Recognition System	Journal
Dr. Sampath Kumar K.	Ashu Meena, Kartikey Dwivedi, Lakshay Chauhan	Keep Track (Tenant Management System)	Journal
Dr. Sanjay Kumar	Divik Sethi, Faizan Choudhary, Jatin Gulati	An Analysis And Research On Sentiments Of Twitter Data	Journal

School of Electrical, Electronics and Communication Engineering

Dr. Sheetla Prasad	Ishika singh	Sliding Mode Control based Frequency Regulation and System Stabilization for a Microgrid	Journal
Dr. Sheetla Prasad	Suhaib Khan And Naiyyar Iqubal	Design of a Centralized Controller for an Islanded Microgrid to Enhance Stability and Synchronization Capability	Book Chapter
Dr. Usha Chauhan	anurag yadav, gaurav singh	Web-page interfaced real-time object detection using TensorFlow	Conference
B. Mohapatra	Khusboo	Performance Evaluation of Partition Based Leach Protocol	Conference
Dr Mohammad Rashid Ansari	Alok Verma, Md. Furquan Khan	Design Of Smart Trolley Or Cart For Shopping Mall	Conference
Dr Yogesh Kumar	Abhay Chauhan and Ankit Harsh	Intelligent Traffic Control System For Ambulance Clearance	Journal

School of Finance & commerce

Poonam Singh	Pawan Dadoria, Ajitanshu Yadav, Ashish Teotia	A study on consumer satisfaction with reference to Flipkart	Journal
Girish Garg	Manoj Kumar, SHAHNAWAZ ALAM	Impact of Behaviour Biases on Investor's Decision Making in Greater Noida	Journal

School of Medic l and Allied Sciences

Dr. Md. Aftab Alam	Safeena Parwez	Smart Platform for brain targeted drug delivery system	Journal
Dr Md Aftab Alam	Anshu Tiwari	Herbal Druga to Target in the treatment of Cancer - A futuristic Approach	Journal
Dr. Amrish Kumar	Mr. Keshav Singhal	Cubosomes: Versatile Nanosized Formulation for Efficient Delivery of Therapeutics	Journal
Dr. Chhavi Arora Sehgal	Pushpendra Rajpoot	Disability and Pain Grades of Low Back Pain In Physical Demanding College Academic Programs	Journal
Dr. Chhavi Arora Sehgal	Priyanka Chauhan	The Study Of Sleep Quality And Daytime Sleepiness Among College Students From Different Metropolitian Cities Of India'	Journal
Rishabha Malviya	Nandan Gupta	Synthsis and characterization of supramolecular hydrogel for pharmaceutical applications	Journal

School of Civil Engineering

Deepak kumar soni	Akash madan Kunal Sahu Akash Yadav Shivam Aks	Parking Management System for Galgotias University Campus: A Case Study	Conference
Deepak kumar soni	Prabhat Ranjan, Shubham Agrahari, Saurav Shivam, Shivam Singh	Low-Cost Rainwater Harvesting System For Small Houses In Urban Areas- A Case Study	Conference
deepak kumar soni	Saumitra Tripathi	Identification Of Suitable Indicators For Assessment Of Sustainability Of Transportation System In India Number	Conference

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Jagan J	Babita Pandey	Utilization Of Intelligent Models For Determing The Daily Ground Water Table	Conference
Rikshit Kumar	Shalini Bahukhandi	Analysis and Design of Composite Multi-Storey Building (G+15) Using Etabs Software	Conference
Akash Malik	Deborah Wadzani Dauda	Reliability of a Timber Truss considering its Joints	Conference
Akash Malik	Amrita Rani Nayak	Prediction of Buckling of Plates with cutouts	Conference
Md. Amir Jafri	Sadique Ansari, Devanshu Singh Millennium, Deepak Kumar Maurya, Mukul Kumar Kashyap	Study Of Surface Water Bodies And Its Treatment Using Biocoagulants	Conference
Akash Malik	Mohammad Umar Khan	Prediction of compressive strength of recycled aggregate concrete: Genetic Programming & GRNN approach	Conference
Deepak Kumar Soni	Akash, Akash Madan, Kunal Sahu, Shivam Aks	Designing Of Parking Management System For Galgotias University – A Case Study	Journal
School of Educati n			
Dr. Shri Kant Dwivedi	Masooda Haseeb	Relevance of social media and virtual platforms in higher education: As a new pedagogical tool during pandemic	Journal
School of Law			
Victor Nayak	Ms. Vani Garg	Environmental Crisis Is Also A Human Rights Crisis: The Dependency Of Human Rights On The Environment.	Copyright
School of Liberal Education			
Ambrien Ahmed	Lata Bajaj	Adjustment Difficulties In Adolescents With And Without Learning Disability: An Exploratory Study	Journal
Shikha Srivastava	Meenu Sharma	Family Psycho education as an Intervention tool in the management of Schizophrenis and the Psychological wellbeing of care givers.	Journal
School of Mechanical Engineering			
Mr. Kaushalendra kumar Dubey	Agraj Pandey	Heat Transfer Analysis of Recuperator for Waste Heat Recovery Purpose Using LMTD & NTU Method	Conference
Mr. Brahma Nand Agrawal	Siddhant Bhadouria	Study and Modal Analysis of Induction Motor by using ANSYS	Conference
Mr. K S Srikanth	Sanjeev kumar, Abhijeet Tiwari	Improvement in the objective looking through the capacity of Swarm drones by utilizing a mix of stigmergic and Flocking practices of drones	Conference
Mr Manoj Kumar Shukla	Harsh Singh, Kamlesh Kumar jha	Development and Performance analysis of Hybrid Based Polymer Composite	Conference
Mr. Lavepreet Singh	Rishabh kumar, Manish singh	Green power generation from road traffic using speed breaker	Conference

Dr. Suresh P	Pradyum Chaubey	A review on abrasive water jet machining process and optimization of its parameters.	Conference
School of Nursing			
Ms. Surabhi Verma	Mr. Suraj Singh, Mr. Jubaid Khan	Mainspring of Deaths in Women-PPH	Journal
Sonia	Suraj, Vinay, Shabaj, Shweta, Yogita, Shivani	A Study to Assess the Challenges Faced by Health Worker's During Covid-19 Crisis in Government Institute of Medical Sciences (GIMS) Hospital of Uttar Pradesh	Journal

Some Prominent Publication

Ensemble Classification and IoT-Based Pattern Recognition for Crop Disease Monitoring System

Gayathri Nagasubramanian , Rakesh Kumar
Department of Computer Science and Engineering, Galgotias University

Introduction

Internet of Things (IoT) in the agriculture field provides crops-oriented data sharing and automatic farming solutions under single network coverage. The components of IoT collect the observable data from different plants at different points. The data gathered through IoT components, such as sensors and cameras, can be used to be manipulated for a better farming-oriented decision-making process. This work proposes a system that observes the crops' growth and leaf diseases continuously for advising farmers in need. To provide analytical statistics on plant growth and disease patterns, the proposed framework uses machine learning (ML) techniques, such as support vector machine (SVM) and convolutional neural network (CNN). Zhis framework produces efficient crop condition notifications to terminal IoT components which are assisting in irrigation, nutrition planning, and environmental compliance related to the farming lands. In this regard, this work proposes ensemble classification and pattern recognition for crop monitoring system (ECPRC) to identify plant diseases at the early stages. The proposed ECPRC uses ensemble nonlinear SVM (ENSVM) for detecting leaf and crop diseases. In addition, this work performs comparative analysis between various ML techniques, such as SVM, CNN, naïve Bayes, and K-nearest neighbors. In this experimental

section, the results show that the proposed ECPRC system works optimally compared to the other systems
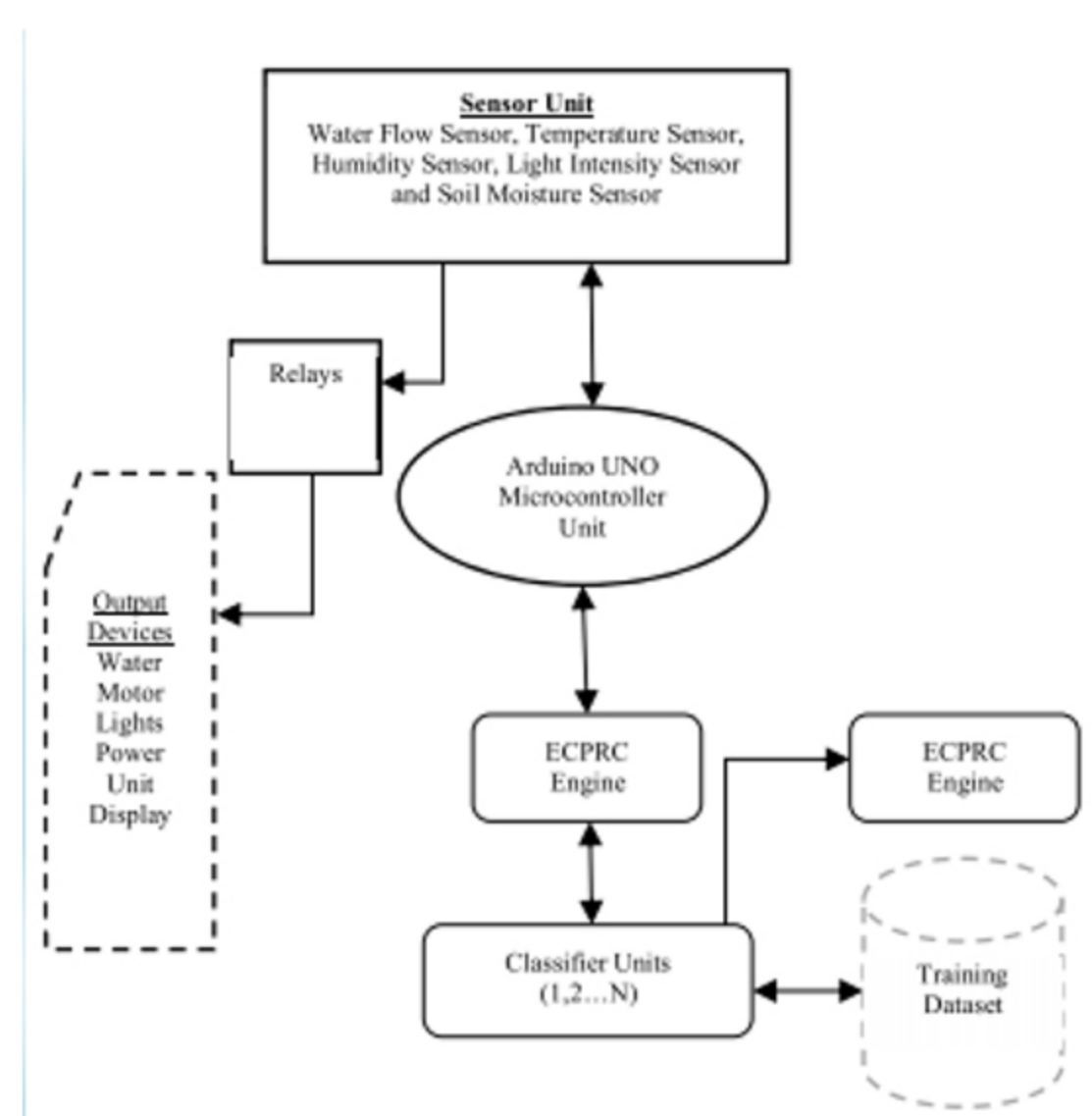
ECPRC process for crop disease monitoring
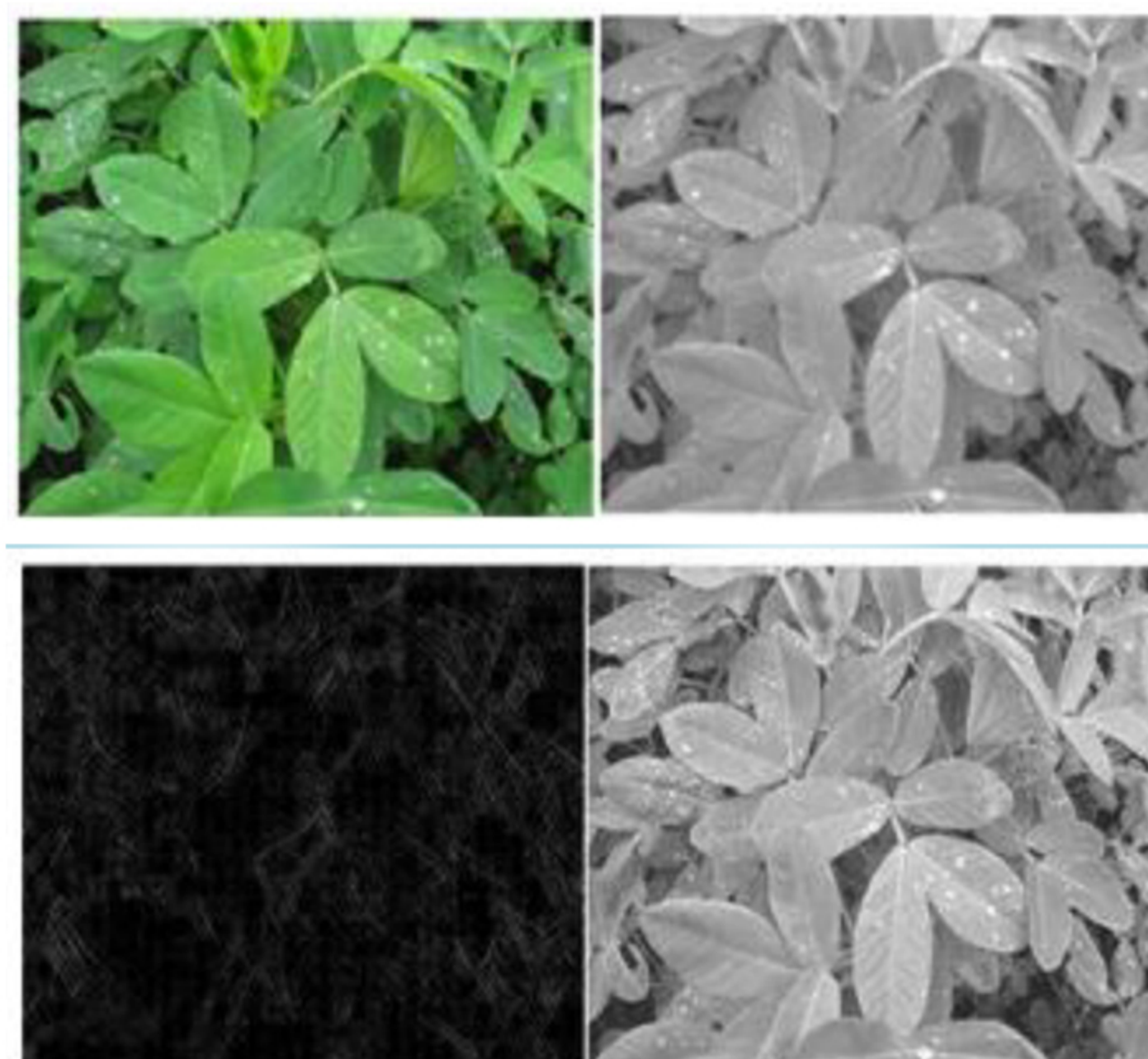
Input image patterns & Image recreation

Algorithm 1 ENSVM-Based Disease Detection

Input: DatasetP_L, Classifier Splits, Samples m;
Output: Classified data instances

Step 1: Split the image data into subsets $\left\{I_{kj}\right\}_{j=1}^{s}$
Step 2: Find sample disease instances, I_D
Step 3: Acquire ENSVM AS_j from each subset I_{kj}
Step 4: A representation of sample estimation$\in \mathbb{R}^{t\times s}$

$$M = est\ (samp,\ AS_n) \qquad (4)$$

Step 5: Learn the EMSVM samples
Step 6: Return the samples
Step 7: Execute Smoothening function, SENSVM,

$$S(n,a) = n + \sum_{n=1}^{\infty} \frac{1}{B(log(1+Bn))} \qquad (5)$$

B-log distribution
Step 8: Redo for all observed leaves, L_n.

ENSVM-Based Disease Detectio

Algorithm 2 CNN-Based Disease Detection

Input: Image dataset, Samples
Output: Disease Detections

Step 1: Input image I_m (raw image) has 32X32X3 size with RGB band (spectral bands)
Step 2: Each image segments are weighted by convolutional layer function and form the neurons
Step 3: Image filters are applied (15 Filters)
Step 4: Relu activation function is applied on leaf elements with respect to a computed threshold value.
Step 5: The down sampling operations have been activated using the pooling procedure using spatial details, $SP_1,..., SP_m$.
Step 6: Compute classes and scores for different leaves and create CIFAR-10 set.
Step 7: Create score-based disease symptoms in each leaf.
Step 8: Redo the operations
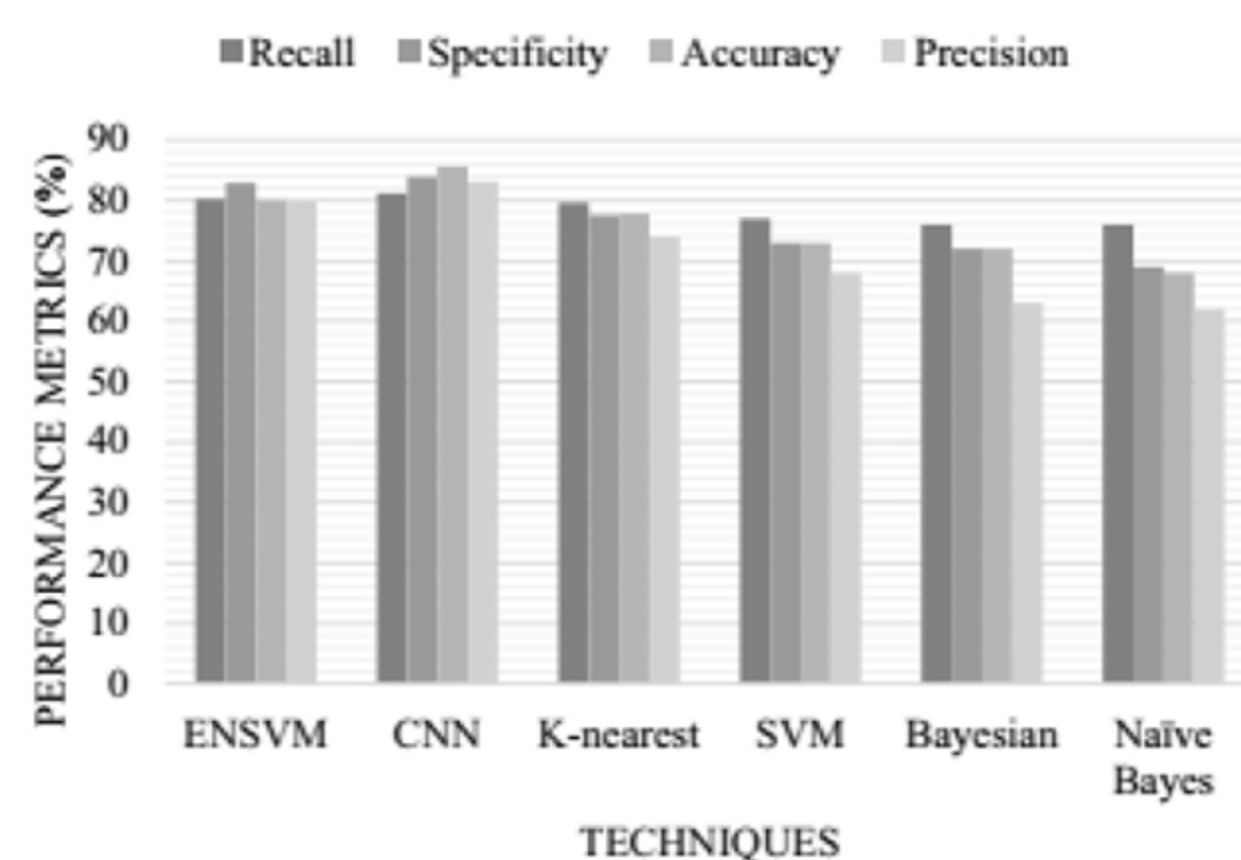
CNN-Based Disease Detection

Quality measurements
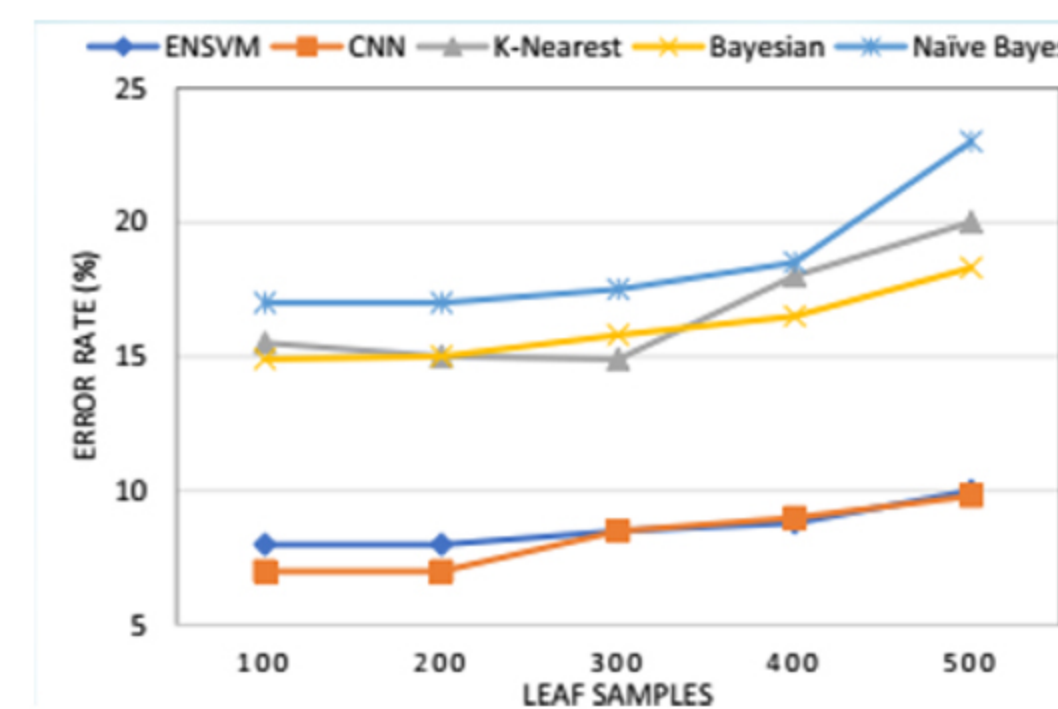
Error rate

Conclusion

The ECPRC system was implemented to provide both environmental observance-based crop disease monitoring system. In this work, IoT infrastructures were deployed to monitor and capture the leaf images in hyperspectral modes. The hyperspectral images of the leaves were processed to track the disease points. These images were stored in cloud storage systems to be handled by ENSVM and CNN. CNN and ENSVM were used to train the IoT infrastructures to detect the various types of leaf diseases. In addition, the other ML techniques, such as K-nearest, Bayesian, Naïve Bayes, and conventional SVM techniques, were compared with each other for ensuring the real-time application of the intelligent crop disease monitoring system. In the future, this work is to be extended using a huge data set of multiple plants and its parts using the deep learning approaches

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Scar free healing of full thickness Diabetic wounds: A unique combination of silver nanoparticles as antimicrobial agent, calcium alginate nanoparticles as hemostatic agent, fresh blood as nutrient/growth factor supplier and chitosan as base matrix

Meenakshi Choudhary, Priyanka Chhabra, Amit Tyagi, Harpal Singh
Department of Biosciences, Galgotias University

Introduction

Healing of diabetic wounds present a big challenge due to insufficient vascular supply and bacterial infection. We developed chitosan based biodegradable polymeric hydrogel containing silver nanoparticles (AgNPs) as antimicrobial agent and calcium alginate nanoparticles (Ca-AlgNps) as hemostatic agent to address this problem. The prepared Chitosan/Ca-AlgNps/AgNPs hydrogel showed broad spectrum antimicrobial properties against both Gram negative (E. coli, P. aeruginosa) and Gram positive (B. subtilis, S. aureus) bacteria. Taken into account the blood as a vital material containing various circulatory fibrocytes, growth factors, cytokines, platelets and macrophages etc., we incorporated the fresh blood of the same animal to the prepared Chitosan/Ca-Alg Nps/AgNPs hydrogel. In-vivo animal studies of Chitosan/Ca-AlgNps/AgNPs hydrogel and blood mixed Chitosan/Ca-AlgNps/ AgNPs hydrogel exhibit $83.5 \pm 4.4\%$ and $99.8 \pm 2.0\%$ closure of wound respectively, on day 15 as compared to $41.5 \pm 3.2\%$ in diabetic control and $60.3 \pm 2.2\%$ in commercially available wound healing cream, Silverex Heal. The incorporation of fresh blood to the prepared hydrogel has advantage in terms of supplying growth factors, platelets, circulatory fibrocytes and cytokines which further enhanced the wound healing mechanism in diabetic rats. This work opens a novel idea to formulate hydrogels based dressings for diabetic wound healing.
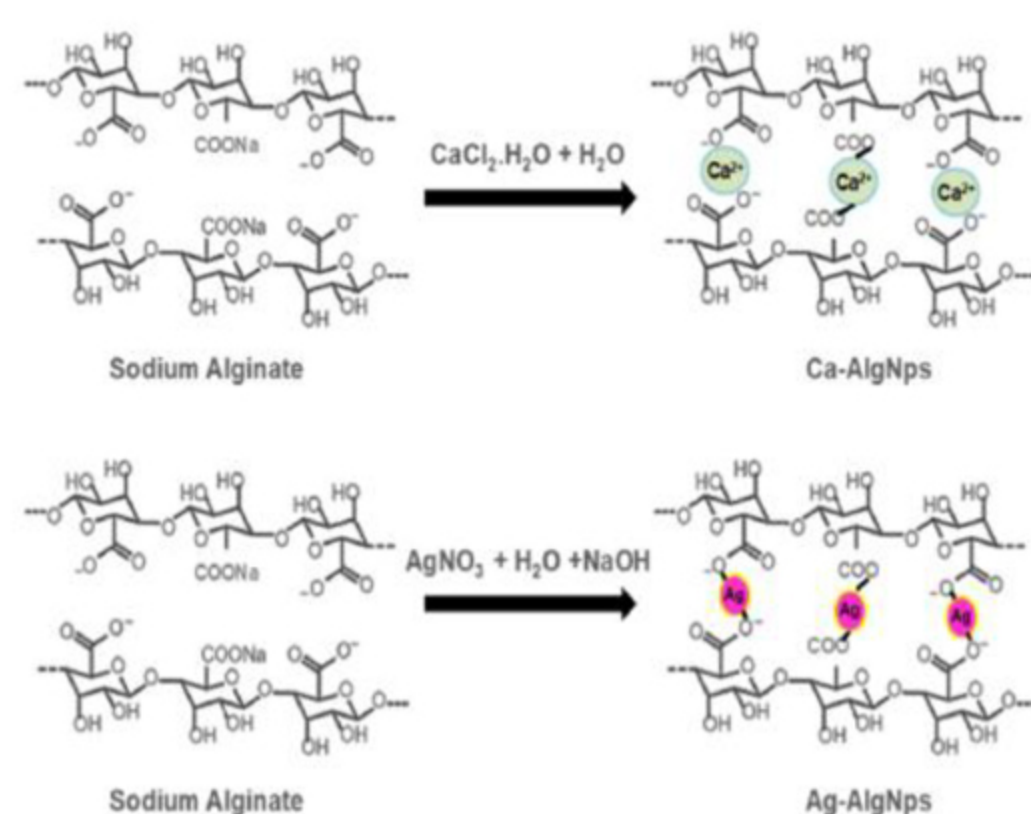
Diagrammatic representation of synthesis of calcium-alginate nanoparticles (Ca-AlgNps) and silver nanoparticles (AgNps
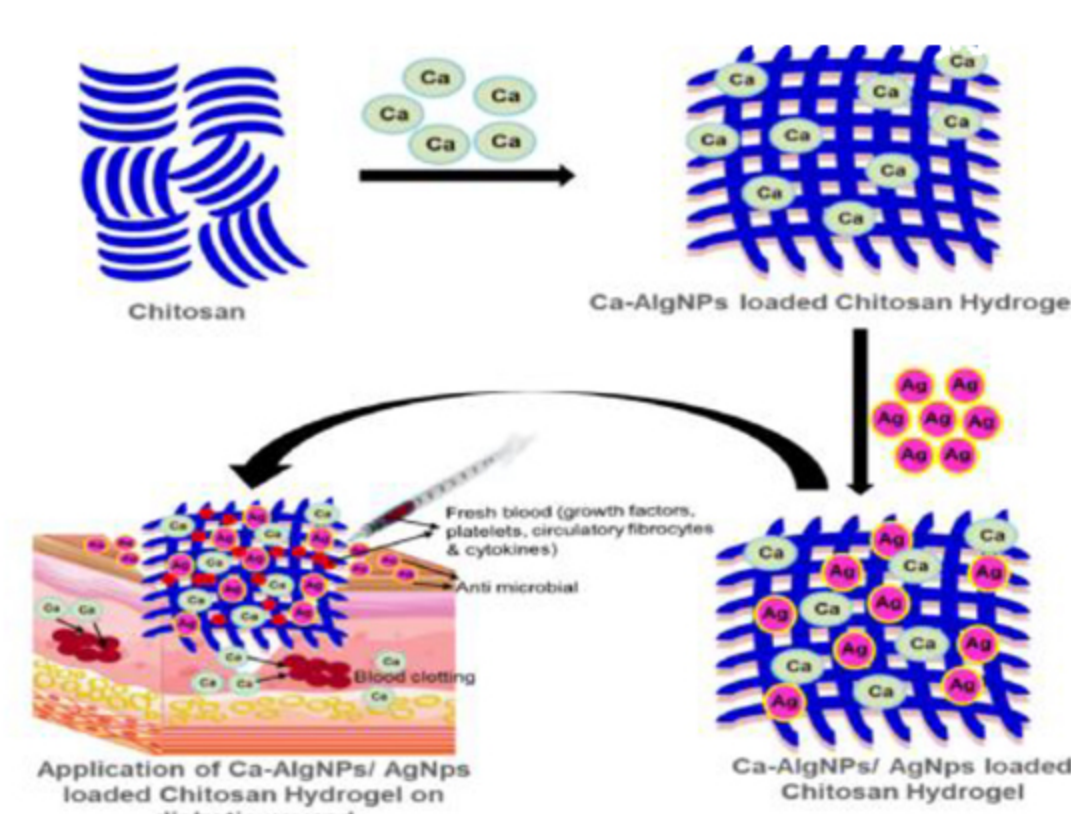
abrication design of Ca-AlgNps and AgNps loaded hydrogel.

Characterization studies
1. Particle size analyzer
2. Scanning Electron Microscope
3. Tranmission Electron Microscop

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Animal studies

Any contraction in wound size was measured by standard method by tracing the wounded margin on a tracing paper and calculating percentage reduction in wound area post-treatment. Area of the wound at day 0 was considered as 100% for the calculations of percentager eductionin wound area. The percentage wound contraction was calculated using the following equation:

%Wound contraction ¼ ½Healed area=Total area 100

Conclusions

The prepared hydrogels exhibit distribution of bioactive components in appropriate proportions, leading to enhanced wound healing in terms of mimicking ECM, assists in collagen synthesis and acts as a protective layer frommicrobial contamination for diabeticwounds. In conclusions, the presentwork offers a unique combination of fresh blood containing chitosan hydrogel loadedwith antimicrobial and hemostatic agent as a potential candidate for wound dressing for chronic diabetic patients.

Results
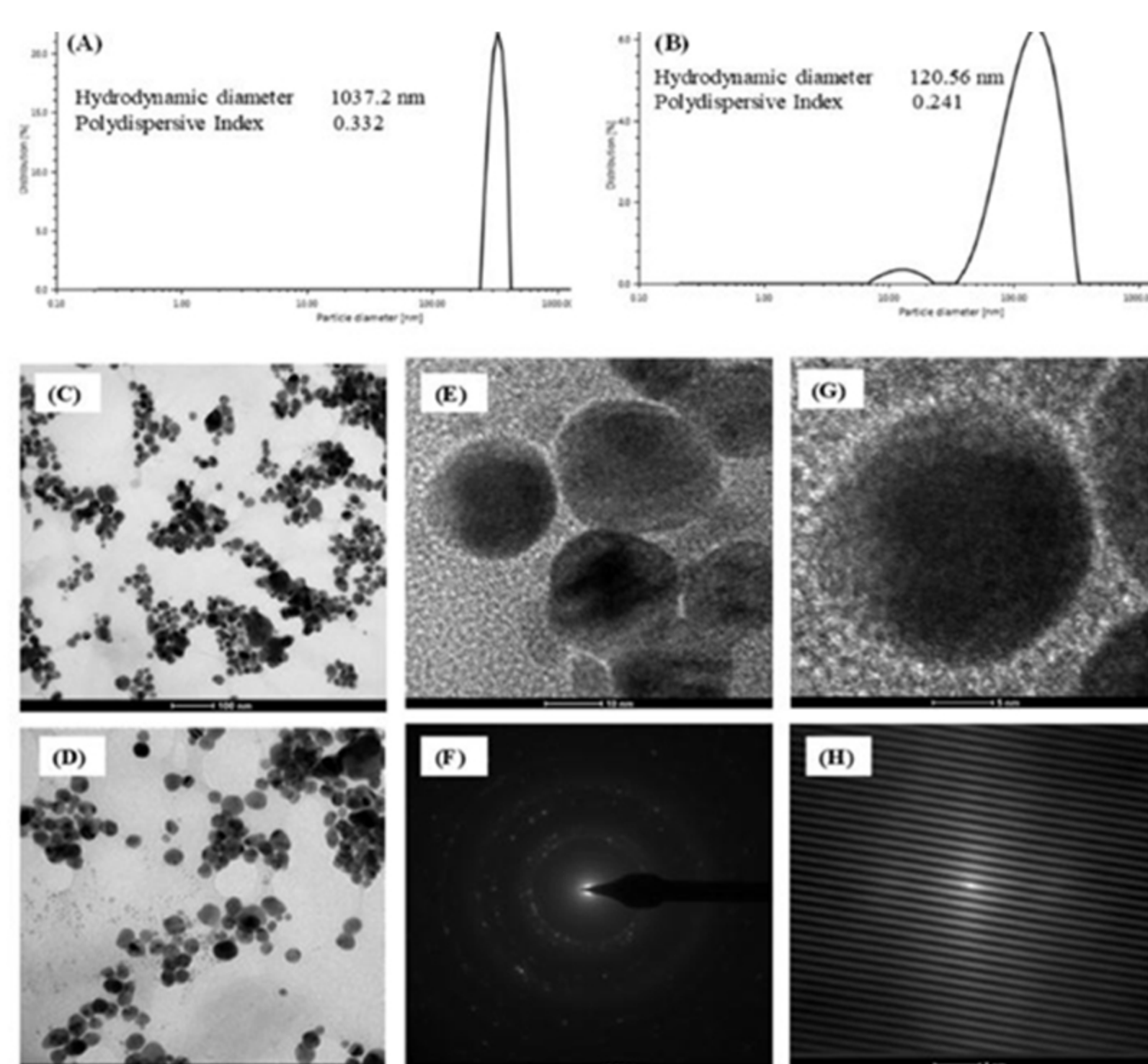
Particle size analysis of (A) Ca-AlgNPs, (B) AgNPs using DLS; HR-TEM micrograph of silver nanoparticles at scale bar of 100 nm (C), 50 nm (D), 10 nm (E), SAED pattern (F), high resolution image at scale bar of 5 nm (G) and characteristic d-spacing (H).
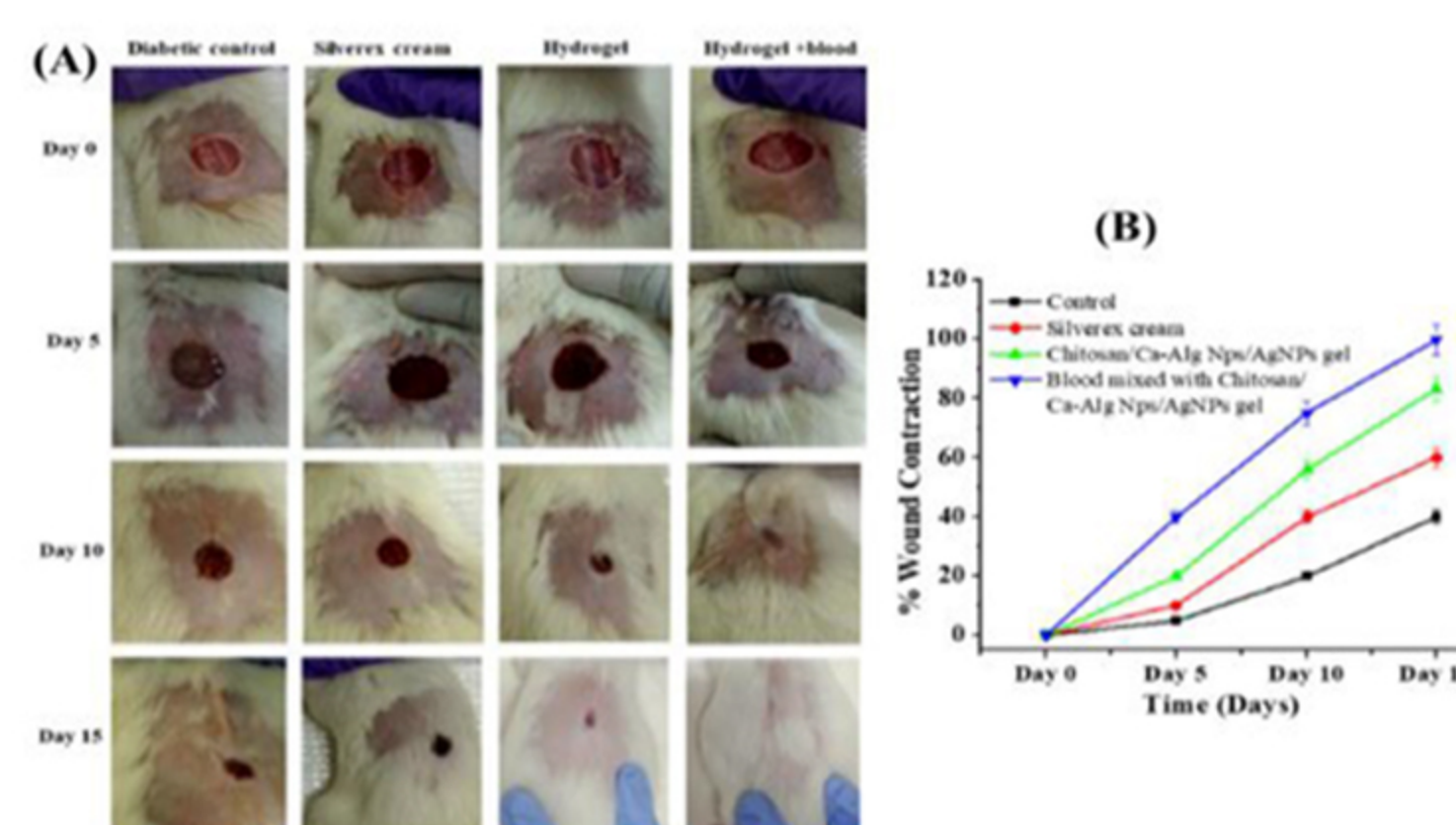
Wound contraction in different wound dressings groups at day 0, day 5, day 10 and day 15 post excision injury and (B)Wound reduction area (%) in different wound healing groups

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Energy Efficient Ambience Awake Routing with OpenFlow Approach

Hima Bindu Valiveti, SNV Ganesh, Budati Anil Kumar and Dileep Kumar Yadav
Department of Computer Science and Engineering, Galgotias University

Introduction

A major problem in networking has always been energy consumption. Battery life is one parameter which could help improve Energy Efficiency. Existing research on wireless networking stresses on reducing signaling messages or time required for data transfer for addressing energy consumption issues. Routing or forwarding packets in a network between the network elements like routers, switches, wireless access points, etc., is complex in conventional networks. With the advent of Software Defined Networking (SDN) for 5G network architectures, the distributed networking has embarked onto centralized networking, wherein the SDN Controller is responsible for decision making. The controller pushes its decision onto the network elements with the help of a control plane protocol termed OpenFlow. The Ambience Awake mechanism relies on the power consumption of the network elements during the packet transmission for unicast and multicast scenarios. The signalling load and the routing overhead witnessed an improvement of 30% during the routing procedure. The proposed routing mechanism run on the top of the decentralized SDN controller proves to be 19.59% more efficient than the existing routing solutions

Figure 1: Packets split for forwarding ($\lambda = 0$) and ($\lambda = 1$)
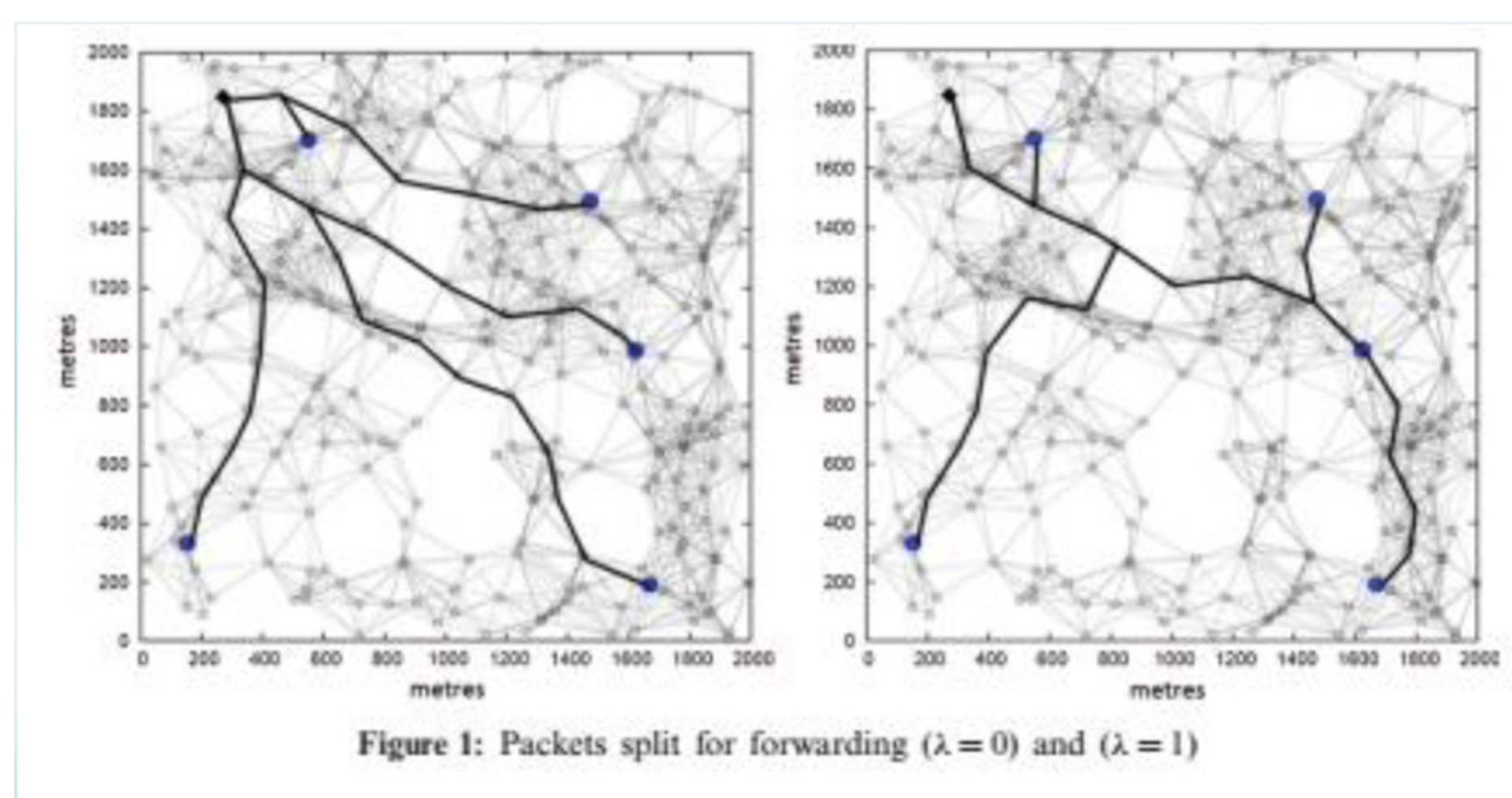
Packets split for forwarding
($\lambda = 0$) and ($\lambda = 1$
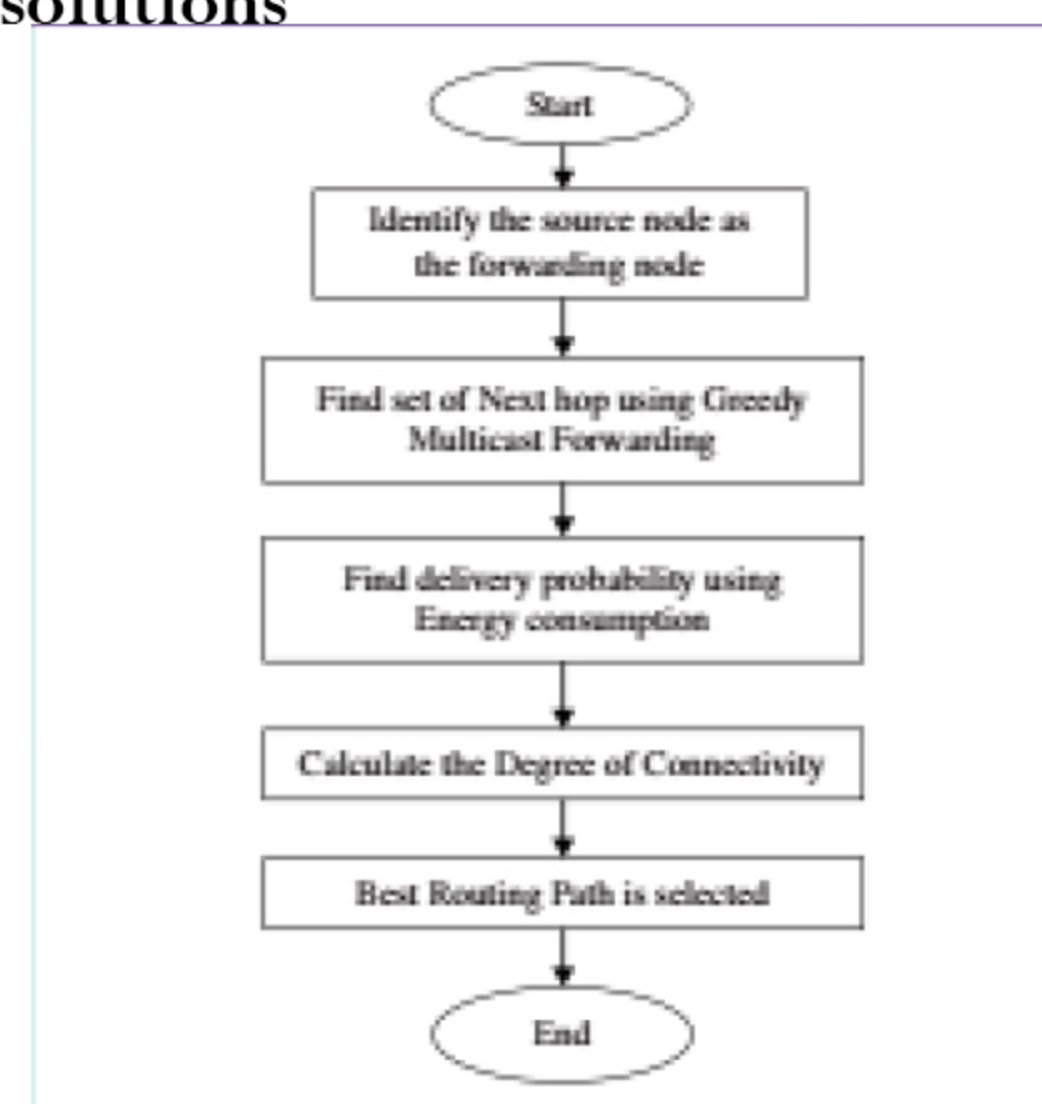
Flowchart for the routing process

Conclusion

The Ambience Awake routing devised for an SDN framework with decentralized server for managing mobility and gateway functions proves to be cost efficient when compared to the existingnetworks. The decentralized framework with the energy efficient algorithm, when compared to SoftNet and LTE networks, is formulated for choosing the best path of routing has decreased the signaling load of the network by 30%. The Routing overhead has been reduced by 30% after introducing a new routing technique based on SDN principles in the proposed framework. The new routing mechanism proposed with LCRP route discovery and data route confirmation considering the battery life of the nodes, claims to be 19.59% more energy efficient than the OpenFlow routing

An improved statistical approach for moving object detection in thermal video frames

Mritunjay Rai1, Rohit Sharma, Suresh Chandra Satapathy, Dileep Kumar Yadav, Tanmoy Maity, R. K. YadavDepartment of Computer Science and Engineering, Galgotias University

Introduction

In a video surveillance system, background modeling is assumed to be a fundamental technique for moving object detection. The surveillance system based on thermal video overcomes many challenges, such as background variations, varying light intensity, external illumination source, and so on. This paper presents a new method for background modeling and background subtraction. The method utilizes the combined approach of Fisher's Linear Discriminant and Relative Entropy for pixel based classification and detection of moving objects in thermal video frames. The experimental results show the higher average value of various performance indicators like Accuracy, ROC, and F-measure. In contrast, the percentage of false classification and total error is minimum and also has lesser execution time. The method outperforms when compared with the other existing method

Datasets

Thermal Image sequence of dining Room from Change Detection dataset

Methodology

The proposed methodology, as shown in Fig. 2, is further classified into three-phase: the first is the training phase in which the background model is constructed using a trimmed mean based averaging method. In the second phase, the generation of the threshold is done by calculating the average of relative entropy and FLD. Frame difference is calculated between the reference frame (i.e., background frame) and test frame (i.e., current frame). Pixel classification can be done using the generated threshold and differenceframe. In the third phase, some morphological operation is performed to boost the quality of the detectedfram

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Detected foreground Frame
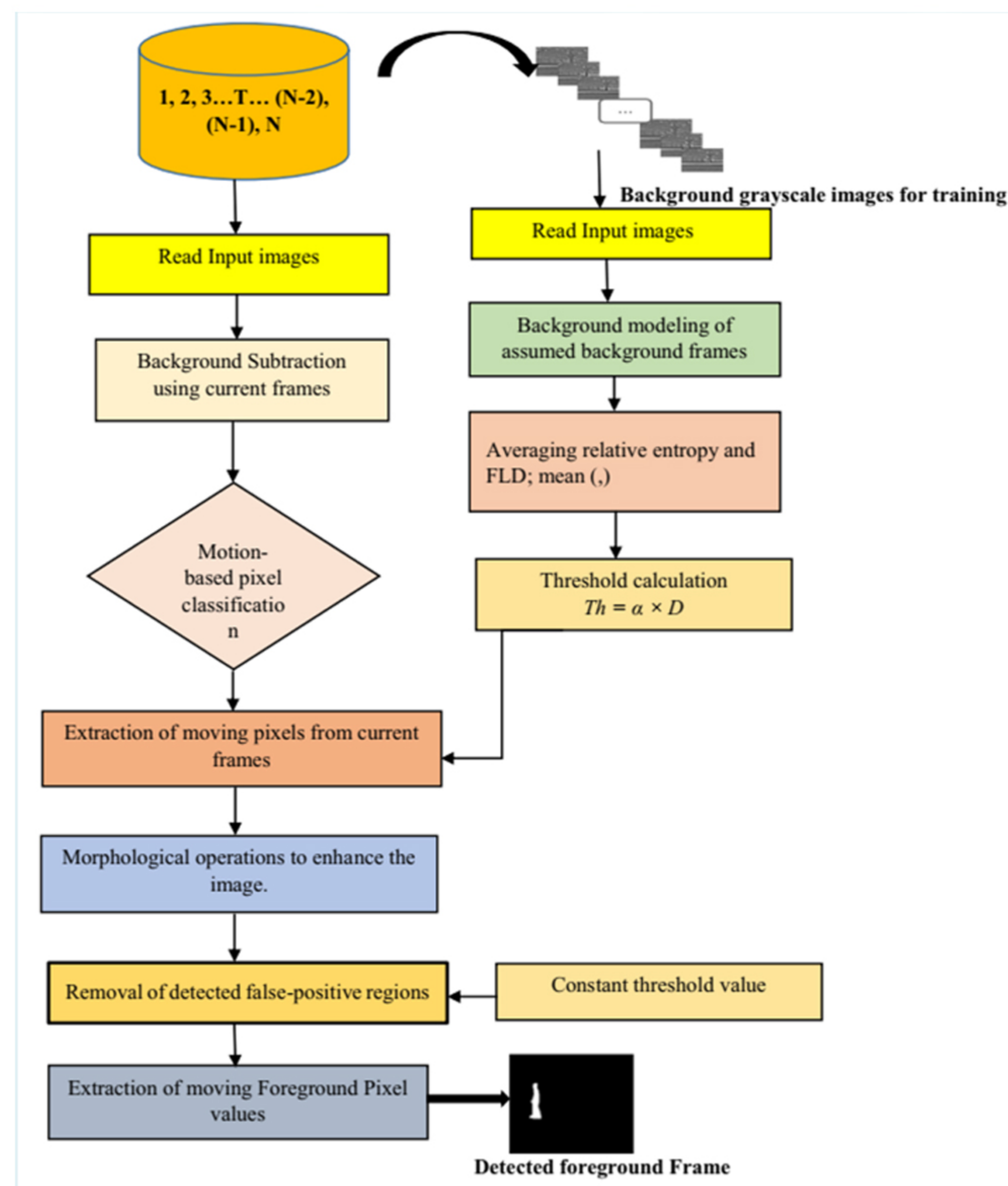
Conclusion

The Background Subtraction (BGS) technique proves to be an effective and popular method for the motion-based surveillance system. In the machine vision system, this technique finds its limitations due to the assumption of a fixed camera position. In the suggested work, a useful background model is developed, enhancing the surveillance system's functionality

Algorithm 1: Background Modeling

if $|\mu_1 - P_t| \geq T1$

{
Pixel = foreground
else
Pixel = background
}
end

Algorithm 4: Motion based pixel classification

if $|f_c(x) - f_b(x)| \geq Th$
{
pixel_out = 1;   → foreground frame
else
pixel_out = 0;   → background frame
}
end

Algorithm 3: Testing Model

Initializing the foreground frame = 1: N
Reading all FG frame = read ("...frame", n_{fg})
Mean value of the current frame = mean2 (C_{frame})
The standard deviation of pixels from the current frame = std2 (C_{frame})
Mean of pixels from foreground frame = mean2 (BGM)
Standard deviation of foreground frame = std2 (BGM)
end

Algorithm 2: Training Model

Initializing the background frame = 1: M
Reading all BG frame = read ("...frame", n_{bg})
Background model (BGM) = $F_b = F_b + BG_{frame}/M$
end

Change Detection Dataset: Park [15]						
Frame No.	Frame_254	Frame_263	Frame_290	Frame_297	Frame_300	Frame_320
Original Frame						
Ground Truth						
Proposed Result						

Result obtained on Park frame sequence by the proposed method

The background model so developed is adequately capable of eliminating the consequences due to noise and the varying background. In most of the related articles, a predefined value of the threshold is assumed for pixel classification, but in the proposed work, the auto generated threshold resolves this issue. The average numerical value of F-measure, PCC, and MCC presents the maximum accuracy and robustness of the suggested method. It is also observed that the average run time of an algorithm is comparatively less than the existing methods. With the use of advanced hardware systems, the execution time could be improved further. Thus, the overall analysis and the quality of results itself states that the proposed method is robust, vastly intuitive, and has the discerning ability for real-time based surveillance applications for the detection of moving objects

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Cost-enabled QoS aware task scheduling in the cloud management system

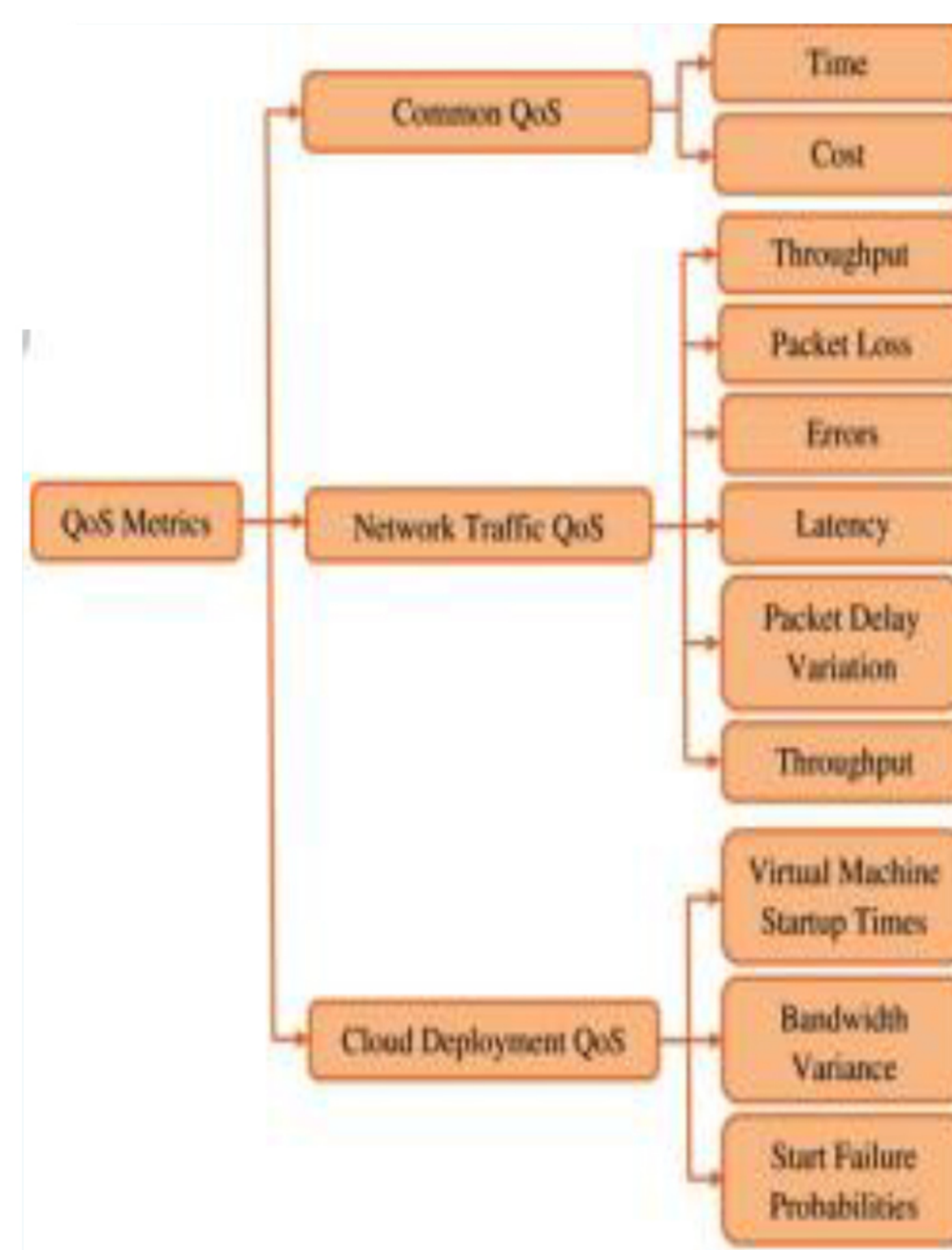### Partheeban Nagappana and Sivakumar Venu
### Department of Computer Science and Engineering, Galgotias University

Introduction

Maintaining the quality of service (QoS) related parameters is an important issue in cloud management systems. The lack of such QoS parameters discourages cloud users from using the services of cloud service providers. The proposed task scheduling algorithms consider QoS parameters such as the latency, make-span, and load balancing to satisfy the user requirements. These parameters cannot sufficiently guarantee the desired user experience or that a task will be completed within a predetermined time. Therefore, this study considered the cost-enabled QoS-aware task (job) scheduling algorithm to enhance user satisfaction and maximize the profit of commercial cloud providers. The proposed scheduling algorithm estimates the cost-enabled QoS metrics of the virtual resources available from the unified resource layer in real-time. Hence, the proposed approach guarantees profit for cloud providers in addition to providing QoS parameters such as make-span, cloud utilization, and cloud utility, as demonstrated through a comparison with existing time-and cost-based task scheduling algorithm
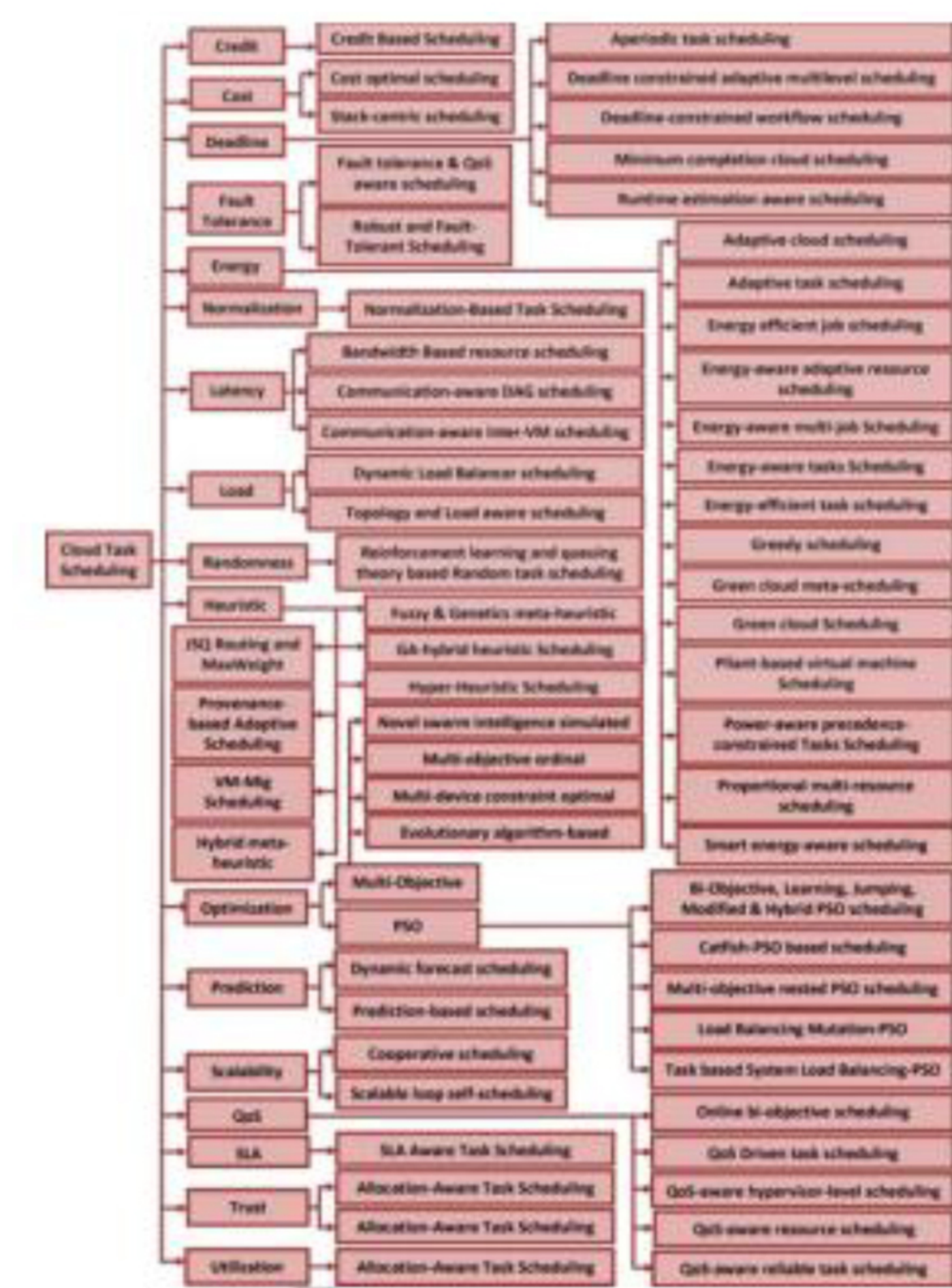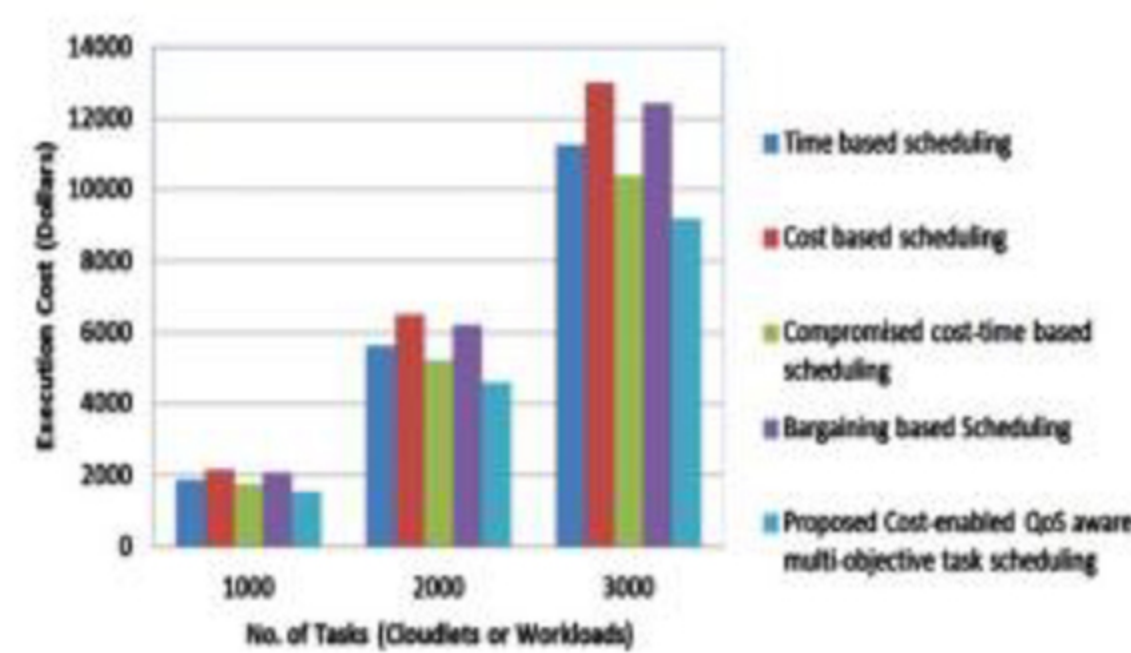

Classification of task scheduling algorithm

Classification of QoS Metrics

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32
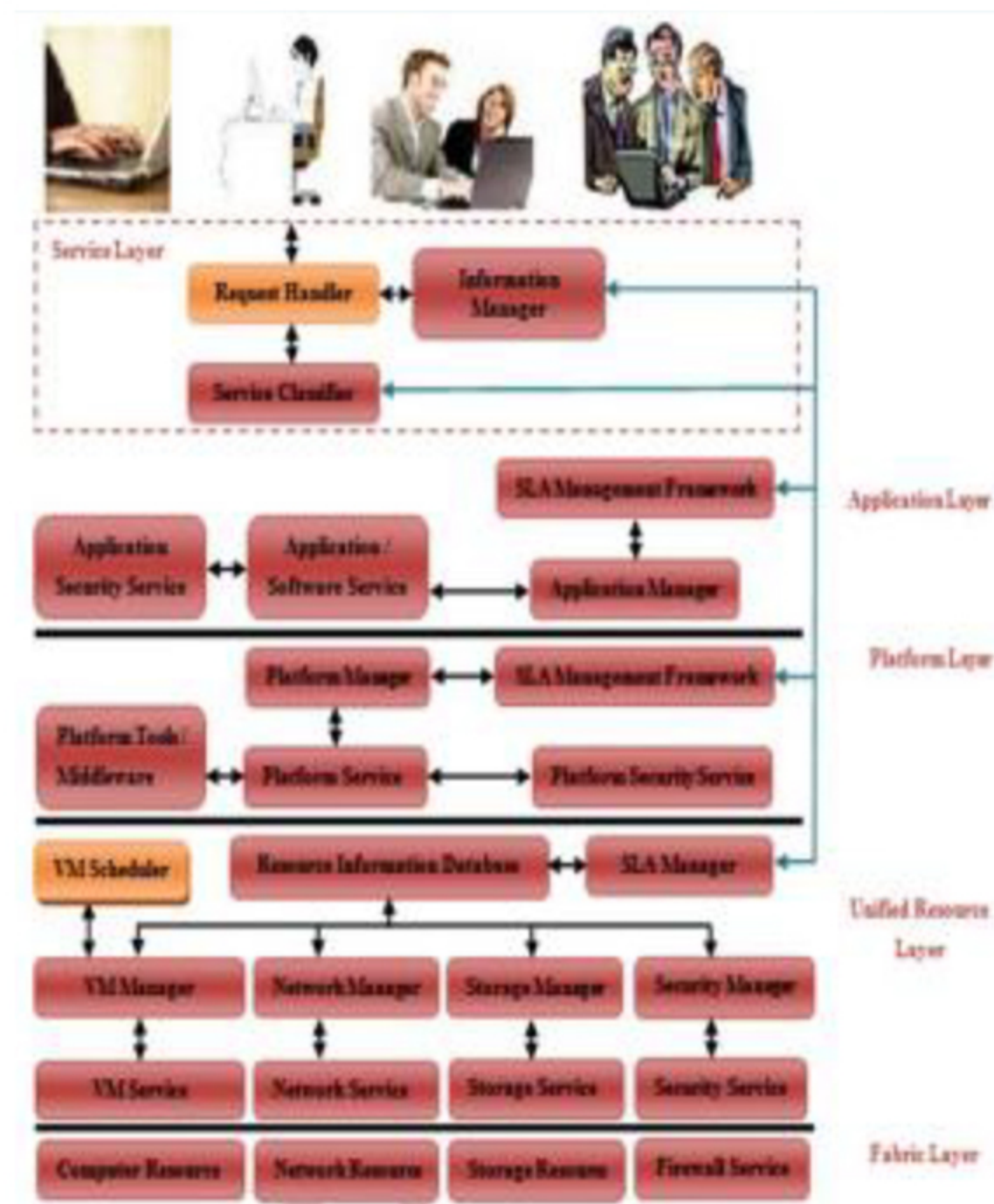
Architecture of agent based cloud service negotiation framework

Cost-enabled QoS Aware Multi-objective Task Scheduling

Performance of scheduling algorithms in terms of Task Execution Cost
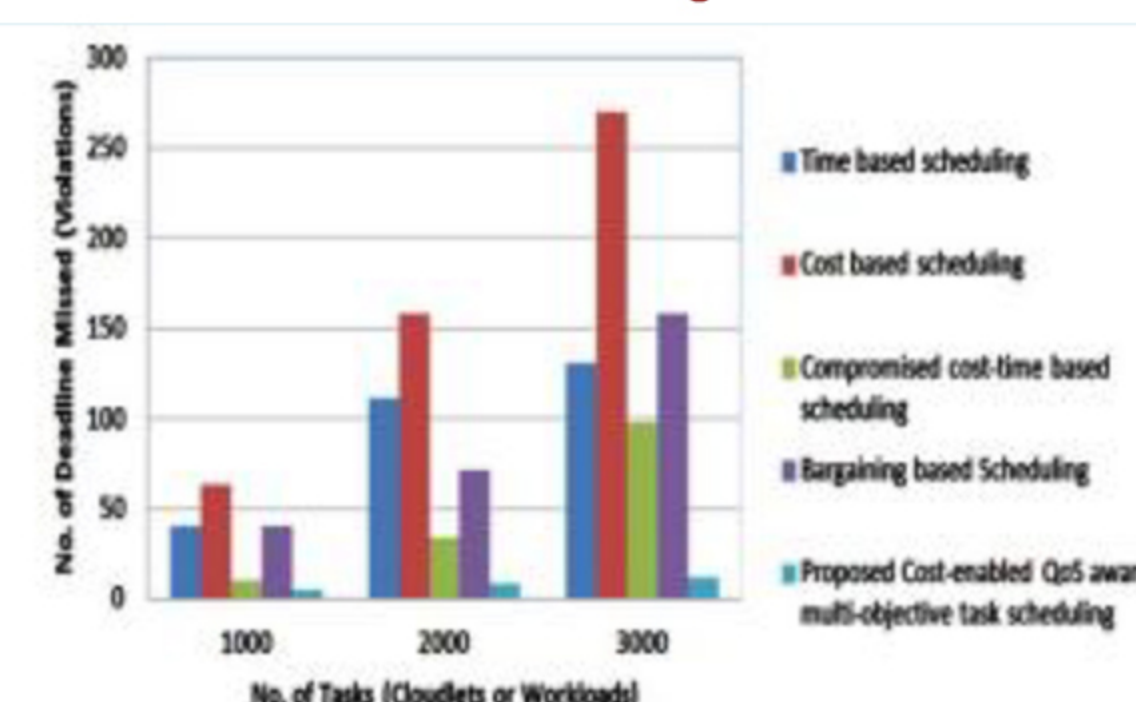
Performance of scheduling algorithms in terms of Task Deadline Missed

Conclusion

The proposed scheduling approach reduces the task completion time and task execution cost in a dynamic cloud environment to a greater extent compared with the existing time- based, cost-based, compromised-cost-time-based, and bargaining-based scheduling algorithms. Simi- larly, in the proposed cost☐enabled QoS-aware task scheduling approach, the number of deadline missed tasks is very low compared with existing scheduling algorithms. As revealed by the experimental results, the dynamic tasks can be easily managed and effectively executed through the proposed cost-enabled QoS-aware task scheduling algorithm, according to the agreed SLA and QoS requirements.

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Sample Project Posters

Implementation of 12T and 14T SRAM Bitcell Using FinFET with Optimized Parameters

Rajesh Kr Raushan, M. R. Ansari, Usha Chauhan, M Khalid, B Mohapatra
Department of Electrical, Electronics and Communication Engineering, Galgotias University

Introduction

The paper has implemented 12T and 14T SRAM bitcell using FinFET with optimized parameters. Optimized parameters are related in terms average power consumption, delay, power delay product (PDP), and energy delay product (EDP). Simulation results of all parameters of 12T and 14T SRAM bitcell are reported with 22 nm FinFET technology. All parameters of 12T and 14T SRAM using FinFET are compared to conventional 12T and 14T SRAM and found that the results have improved in average power consumption, PDP, EDP, and propagation delay. Parameters for 12T SRAM using FinFET includes average power consumption, propagation delay, PDP and EDP, which are improved by 99%, 79.2%, 99.7% and 99.7%, respectively. Similarly, designing 14T SRAM using FinFET, gets improvements of 99% in Average Power consumption, 76.5% in propagation Delay, 99.4% in PDP, and 99.5% in EDP.

Methods

Sequence of operation of 12T and 14T SRAM are presented first write then read and last hold. In write operation for both circuits, we have considered as q = "1" and qb = "0" as well as the bitlines BL and BLB have to set to "0" and "1," indivisibly. Whenever the WL has activated, q and qb become change to "0" and "1," indivisibly. Further, WL becomes discharge to "0," the new bit of the both circuit is stored. Read operation for both circuit, both the BL and BLB become precharge to "1". Whenever the WL is selected for enable, in Fig. 1, the transistors T1 and T12 have turned on, BLB become discharge through transistors T12 and T10.

14T SRAM Bitcell using FinFET 22 nm

Similarly, in Figure, the transistors T1 and T14 have turned on, BLB become discharge through transistors T14 and T12. Result is obtained in the differential voltage of the BLs. And it is amplified by the sense amplifier. The hold operation, WL has deactivated and the storage nodes have isolated from the BLs.
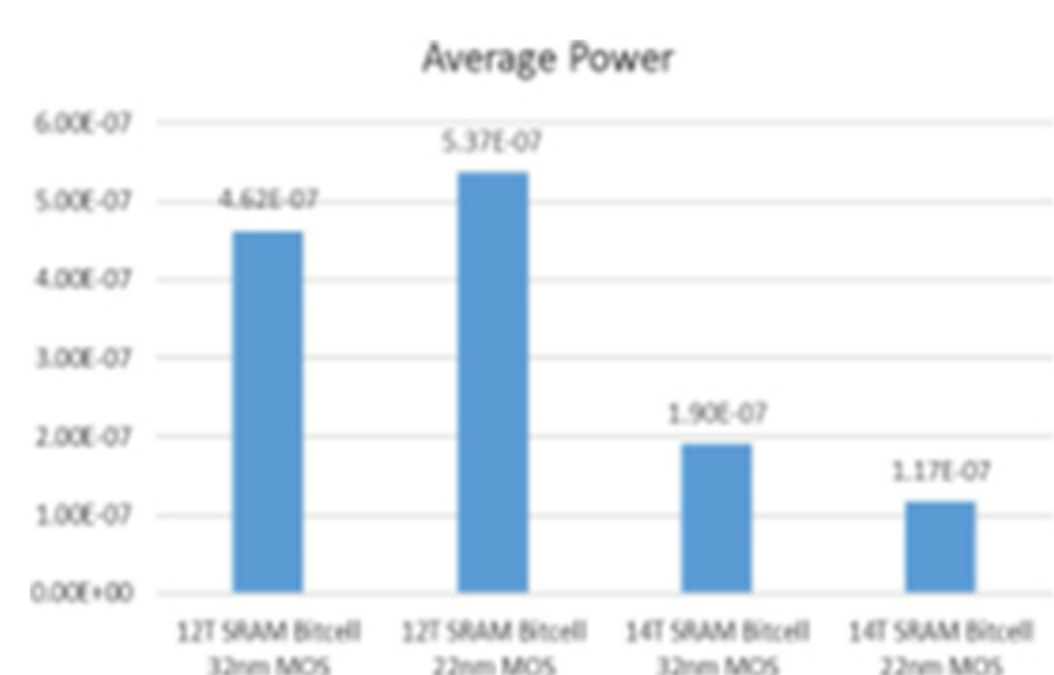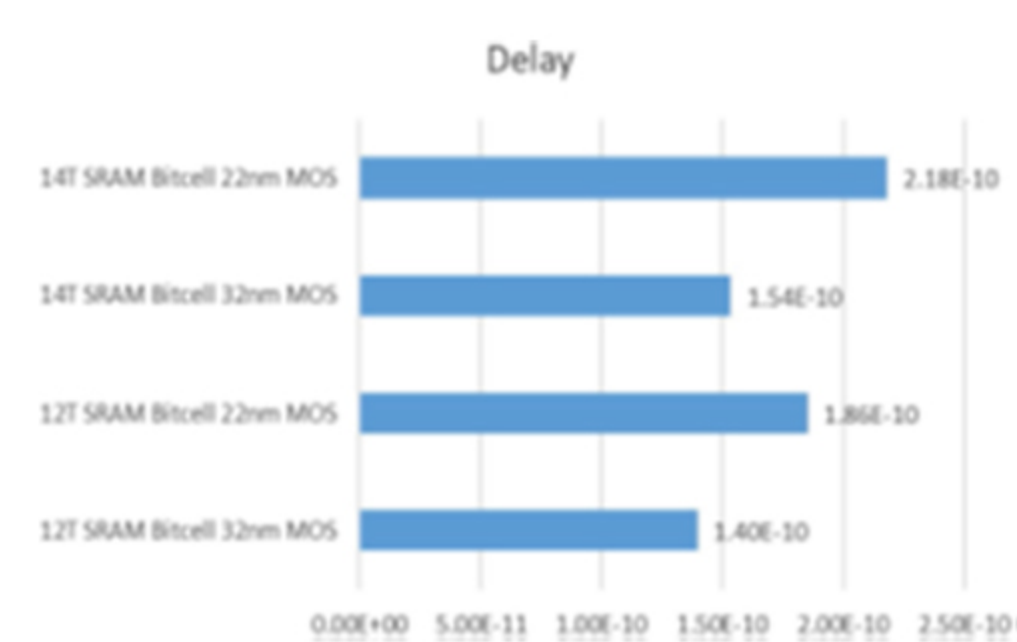
Results
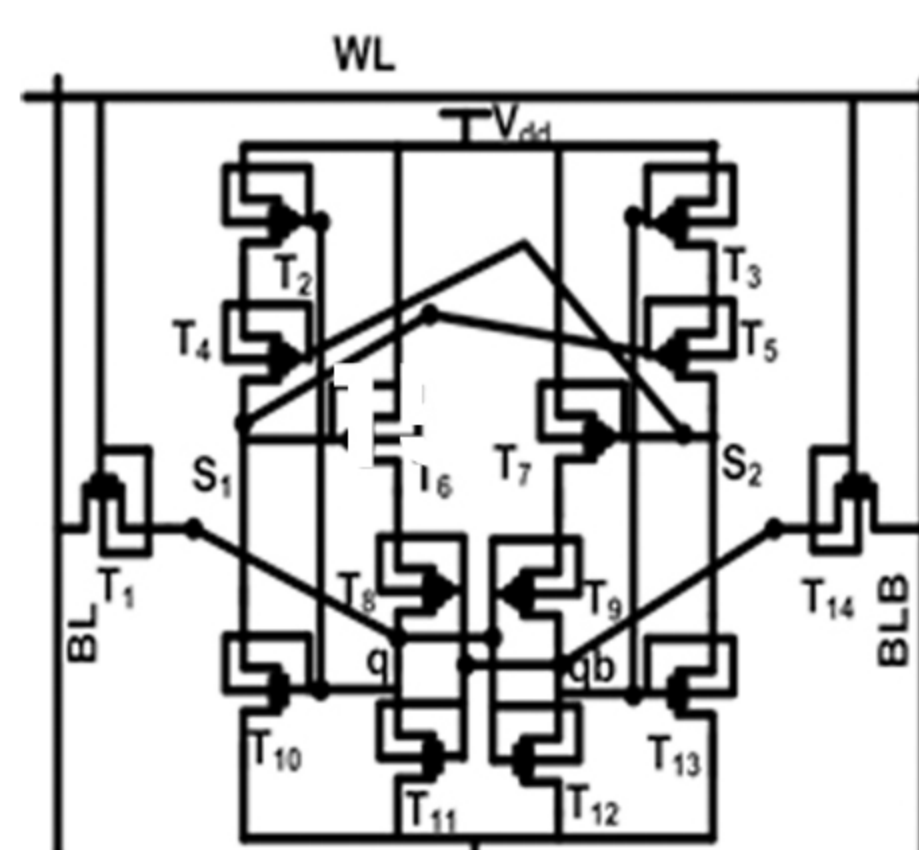
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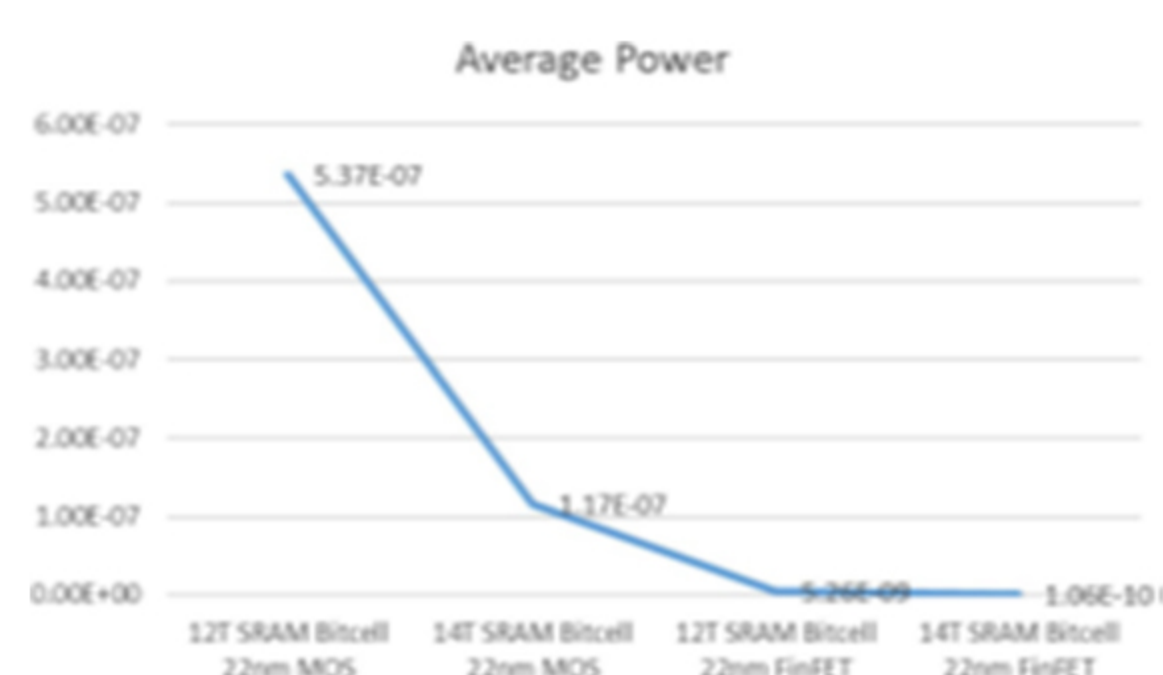
Sample Project Posters

Results

Average power comparison result for SRAM Bitcell

Delay result for SRAM Bitcell

Average power comparison result for SRAM Bitcell with proposed FinFET

	12T SRAM Bitcell 22 nm MOS	14T SRAM Bitcell 22 nm MOS	12T SRAM Bitcell 22 nm FinFET	14T SRAM Bitcell 22 nm FinFET
Average power	5.37E–07	1.17E–07	5.26E–09	1.06E–10
Delay	1.86E–10	2.18E–10	3.86E–11	5.12E–11
PDP	9.96E–17	2.55E–17	2.03E–19	5.45E–21
EDP	5.34E–23	5.56E–27	7.84E–30	2.79E–31

Imulation output results

Conclusions

In this paper, we have successfully implemented 12T and 14T SRAM bit-cell using FinFET. Parameters, such as, power consumption, propagation delay, PDP, and EDP are optimized. Simulation results for both circuits have been presented with justification. Performances of these four parameters for both circuits are significantly improved. Comparative analysis with conventional SRAM bit-cell is also discussed.

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Dr. Mohammad Rashid Ansari, Associate Professor, DEECE, Galgotias University

Dr. Usha Chauhan, Professor, DEECE, Galgotias University

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Stability Abhishek Saraswat, Mohsin K. Siddiqui and Sheetla Prasad
Department of Electrical, Electronics and Communication Engineering, Galgotias University

Introduction

The modern wind power plants interfaced with the power electronics convertor and required to operate according to grid codes. The wind power plant acts closely as much as possible to the conventional power plants, which allows us the wide range of power output control. As the infiltration of wind turbine is continuously increasing in the grid, there is a reduction in the power grid inertia that is extract from the traditional power plant generators. The converter of rotor side controls the output power and voltage of generator that is measured at the grid terminals. while the grid side converter helps in keeping the DC link voltage at constant level by generating and absorbing active power from the grid. It noticed that existence of high infiltration of wind power might results in the depletion of grid virtual inertia of the power systems. While designing the structure of wind turbine, the most difficult issue is to construct the control system which is capable of tolerating the fluctuating the structural load. Hence, researcher faced multiple challenges in control aspect due fluctuating nature of wind energy that continuously makes changes within very less period of time. However, the SMC technique is a more efficient to control various industrial applications against disturbances

Methods

In this study, the wind power fluctuations are minimized using first order sliding mode control strategy in coordination with pitch angle mechanism even in the presence of wind speed variation. The optimal wind power and corresponding generator speed is obtained using "fminsearch" function in the MATLAB. The power error and generator speed error are calculated and applied to sliding mode controller and pitch angle control mechanism respectively.
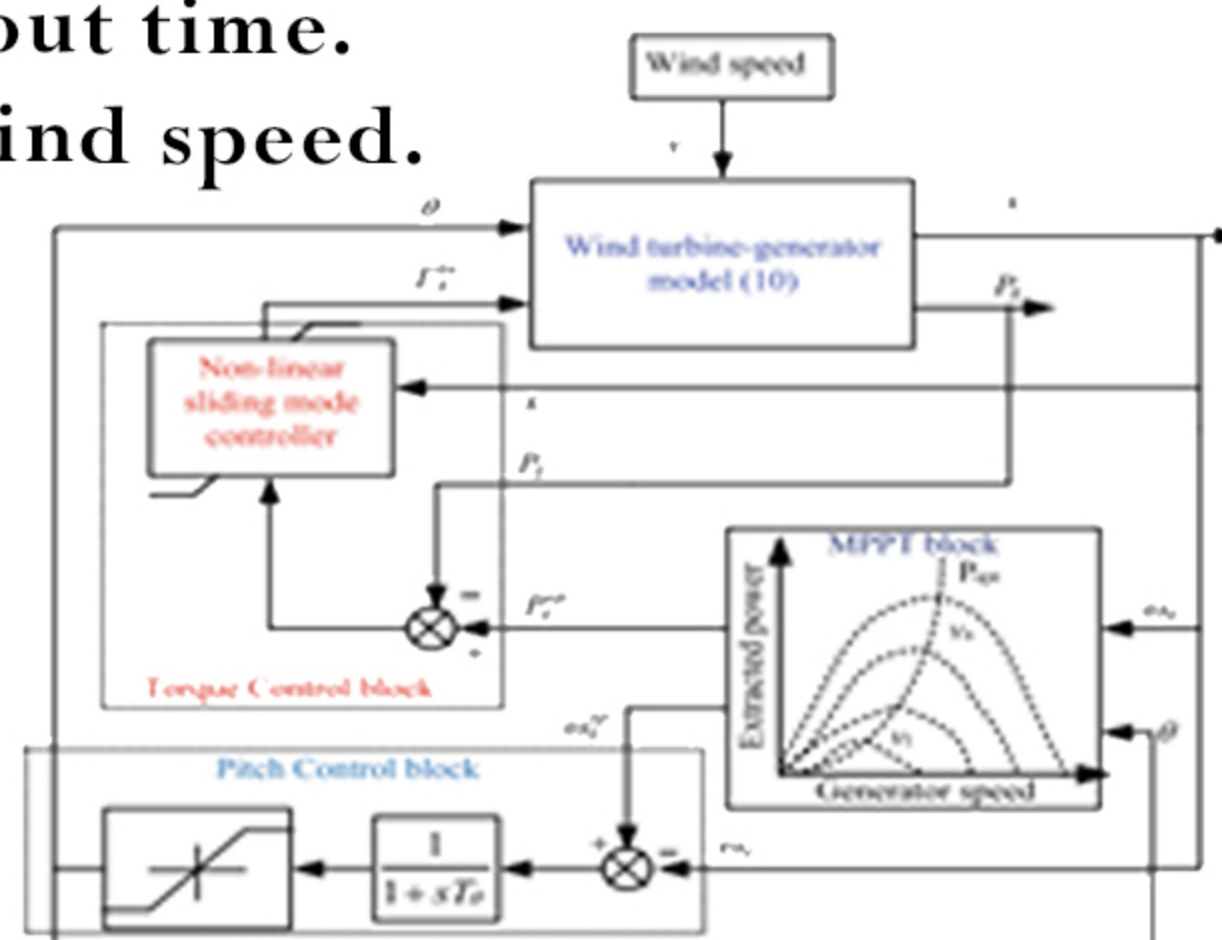
The proposed control strategy schematic representation

The controller changes system damping ratio by use of nonlinear function through LMIs "mincx" optimization tools and pitch angle control mechanism varies pitch angle to maintain constant tip-speed ratio. Thus, a variable system damping characteristics obtains using non-linear function and switching plane against wind uncertainty. Hence, wind power remains invariance against wind turbulence thrust change and ensures asymptotic convergence.

Results

The SMC strategy is applied on wind energy system and demonstrated its performance through MATLAB© simulation. Proposed control strategy aims to minimize fluctuations in wind power output against unpredictable nature of speed of wind and applied on three blades 3.6 MW energy systems. The wind energy system matrices and its parameters are given in appendix. Three simulation scenarios are considered to show effectiveness of the proposed control scheme and described as:

1. Constant wind speed profile throughout time.
2. Step increasing change variation in wind speed.

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Department of Electrical, Electronics and Communication Engineering, Galgotias University

Conclusion

To reduce power oscillation, a SMC based control scheme was proposed in this study for variable wind speed energy system. The control scheme asymptotic convergence strategy was proved using the Lyapunov theorem. A variable system damping property was achieved through nonlinear function and switching plane. The variable matrix P was obtained using LMIs optimization function "mincx" and finally state feedback gain calculated. The optimal power and corresponding generator speed was obtained using "fminsearch" function in MATLAB and applied to SMC and pitch angle control scheme respectively. The nonlinear function and pitch angle varied according to minimize power oscillations at constant tip-speed ratio. In addition, SMC and pitch angle control schemes were able to minimize power oscillations and protect wind energy system against wind speed uncertainty. From simulation response analysis, the proposed control strategy is capable to reduce power oscillations as well as enhanced closed loop stability against wind unknown nature uncertainty and also compared with existing techniques.

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B.Tech. EE, DEECE,
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Mr. Abhishek Saraswat
B.Tech. EE, DEECE,
Galgotias University

Compressive Strength Prediction of Fly Ash Concrete by Using MachineLearning Techniques

Suhaila Khursheed, J Jagan, Pijush Samui, Sanjay Kumar
Galgotias University & NIT Patna

Introduction

Concrete is one of the topmost preferred materials for constructing any kind of structures, which has immense applications in the construction industries. The methodology of choosing proper elements for cement and its relative sum with the point of creating cement of required quality, functionality, and toughness as cost-turning as conceivable is named mix design. The point of any proportioning procedure is to decide a sufficient and financially savvy material to make up the solid, which can be utilized in its manufacture, as close as conceivable to the picked properties. The building properties of bond-based materials and uncommon cements rely upon different parameters including the no homogeneous idea of their segments and the naturally various properties of different components and now and again on the twin or potentially conflicting impacts of certain fixings on the general performance of the concrete. The objective of this study was to evaluate the capability of various machine learning methods for determining the 28 days compressive strength of fly ash concrete with the dataset framed from the literature. The perplexing interconnection between the ingredients proportion and the compressive strength of fly ash concrete was acquired based on the experiment. From the literature, it was observed that machine learning techniques could be utilized as the gadget to endorse the verdict making by revamping the efficiency of the process.
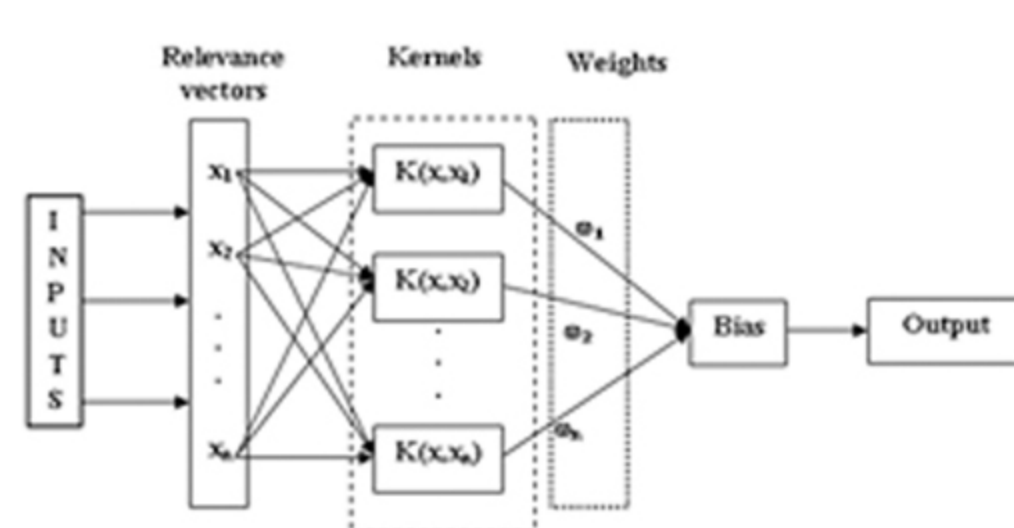
Methods

General pattern of relevance vector machine

Common structure of machine learning technique

The machine learning techniques are viable methods for solving various technical problems, and in this study, MPMR, RVM, GP, ENN and ELM were adopted for determining the 28 days compressive strength of concrete which was incorporated by fly ash. The compiled dataset comprises of cement, fine aggregate, coarse aggregate, water, water binder ratio, fly ash and their experimented compressive strength.

Elementary structure of ENN

General pattern of relevance vector machine

Common structure of machine learning technique
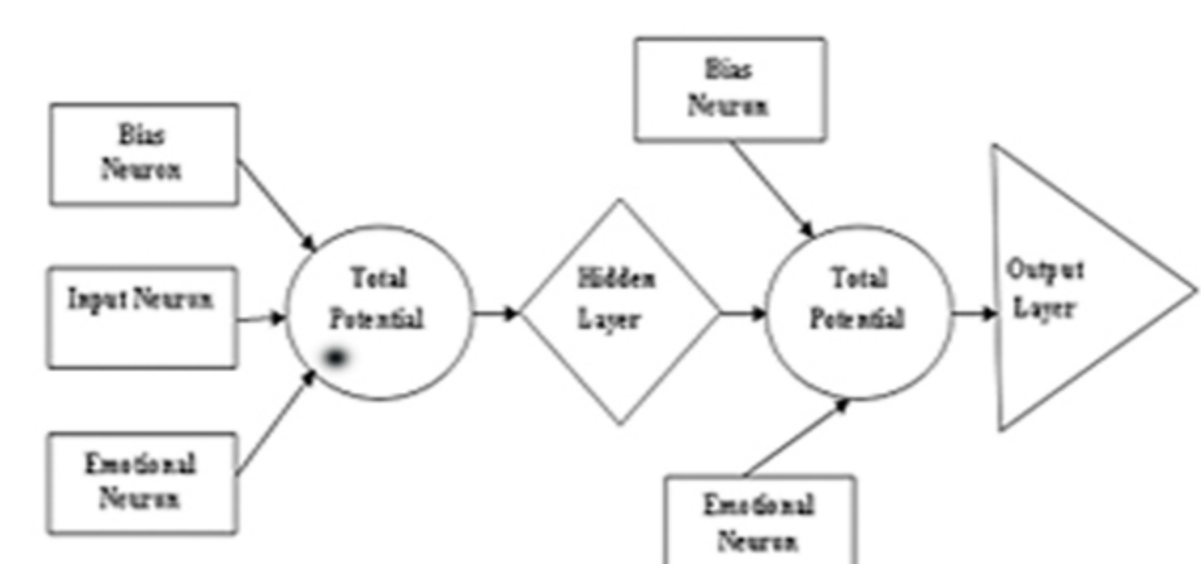
Elementary structure of ENN

Jagan, J., Samui, P. et al. Compressive strength prediction of fly ash concrete by using machine learning techniques. Innov. Infrastruct. Solut. 6, 149 (2021). 2364-4184. Scopus Publication. Journal Publication. Springer

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Results

The MPMR method utilized two tuning parameters by hit and trial approach and the correlation of this model exposed the best value among the adopted models. The RVM model provides the better output next to the MPMR model and also provides the equation. Even GP model provides the equation whereas the R value of GP model is less than the other models. The deciding parameters of ENN, ELM models were determined by trial-and-error method RSR was used to evaluate the capability of the adopted machine learning methods.
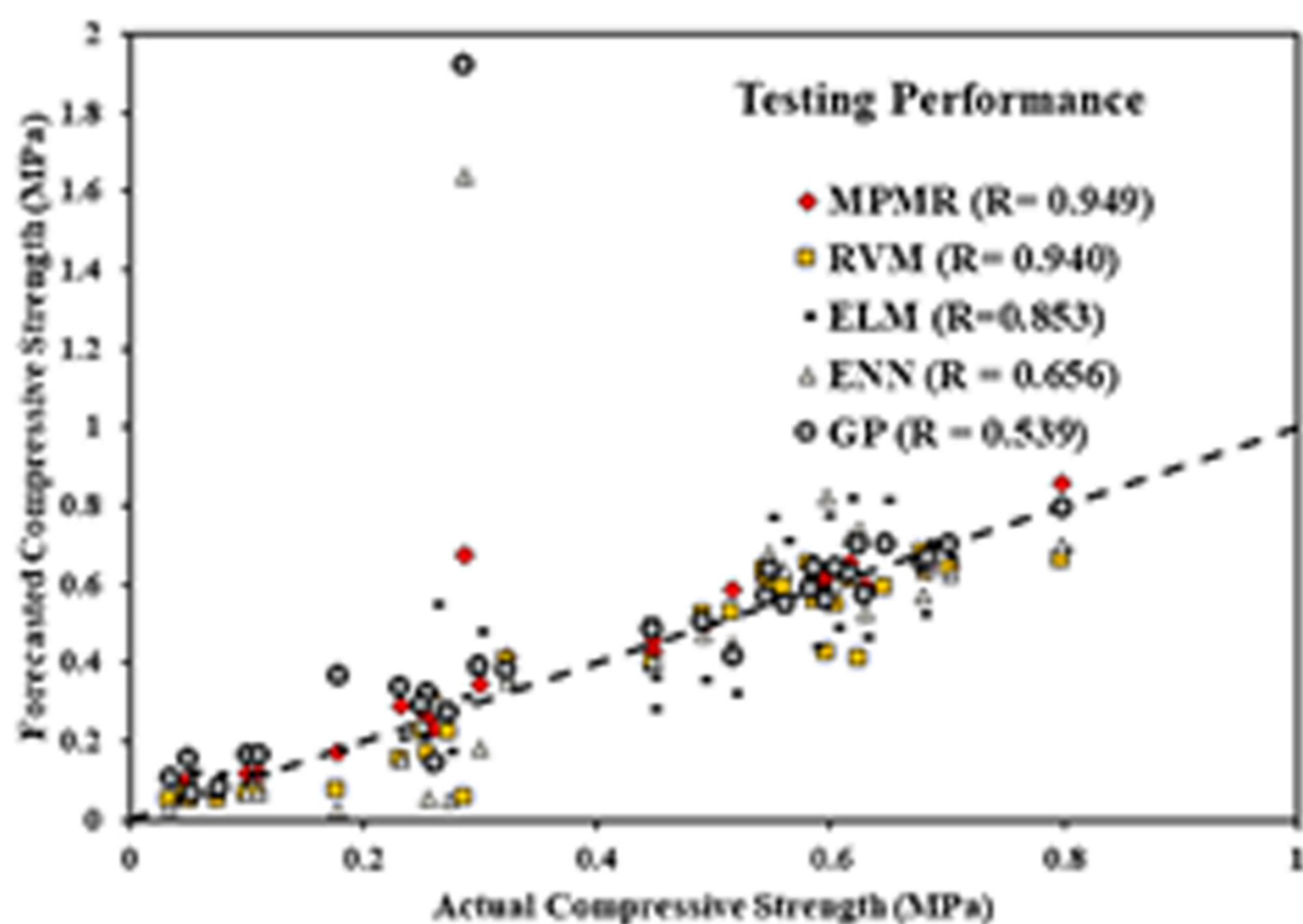
Measured Compressive Strength (MPa)
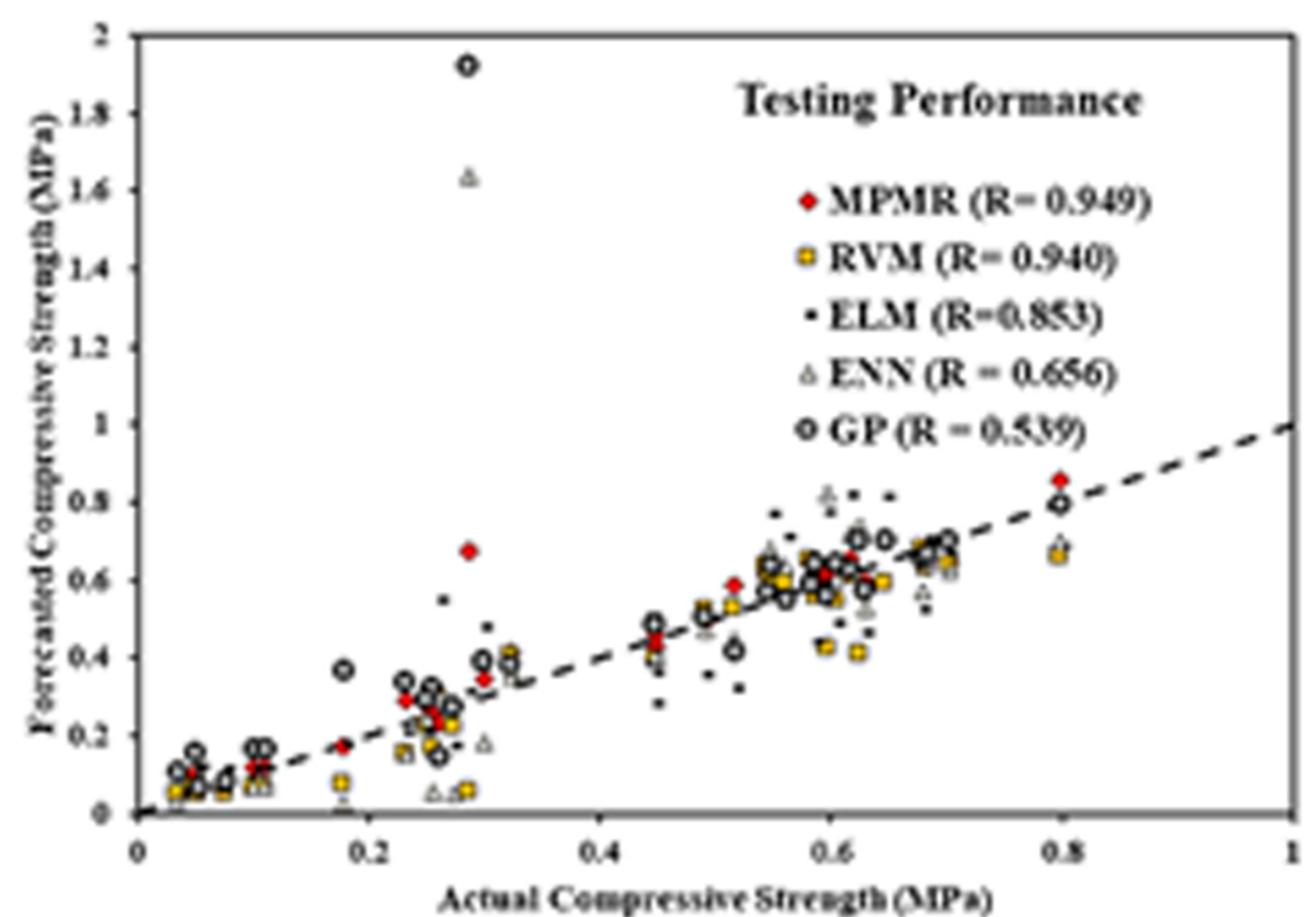
Actual Compressive Strength (MPa)

Statistical parameters	MPMR		RVM		GP		ENN		ELM	
	Training	Testing	Training	Testing	Training	Testing	Training	Testing	Training	Testing
RMSE	0.027	0.078	0.032	0.084	0.042	0.287	0.109	0.250	0.123	0.126
MAPE (%)	9.499	16.509	13.276	20.738	16.644	45.680	47.313	37.064	68.187	38.050
WMAPE	0.042	0.105	0.054	0.154	0.070	0.235	0.173	0.266	0.216	0.251
NS	0.986	0.877	0.980	0.860	0.964	−0.656	0.765	−0.251	0.698	0.683
VAF	98.580	89.608	97.967	87.846	96.433	−53.914	76.518	−23.848	69.786	68.421
R^2	0.9841	0.9006	0.9781	0.8836	0.9643	0.2905	0.7639	0.4303	0.6972	0.7276
Adj R^2	0.983	0.879	0.976	0.858	0.961	0.133	0.744	0.304	0.672	0.667
PI	1.942	1.696	1.924	1.704	1.666	−0.449	1.400	−0.044	1.246	1.228
NMBE (%)	0.125	7.511	−0.100	−7.392	−0.001	18.462	−0.001	5.998	0.031	1.935
RSR	0.119	0.351	0.143	0.375	0.189	1.287	0.485	1.118	0.550	0.563

Statistical indices for developed models

This predictive technique is highly malleable and resilient for the engineers by performing very less trial experiments, and hence it saves more time and money during the constructions.

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EFFECT OF VORTEX GENERATORS & REAR SPOILER ON A LOW-END SEDAN PASSENGER CAR

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Introduction

The frictional force of aerodynamic drag increases significantly with vehicle speed. As early as the 1920s engineers began to consider automobile shape in reducing aerodynamic drag at higher speeds. By the 1950s German and British automotive engineers began analysing the effects of automotive drag for the higher performance vehicles.

Aerodynamic Forces

Thrust - which assists with pushing an object ahead.

Drag - which keeps it down.

Lift - which keeps it airborne.

Problem Statement

Increased Fuel consumption now-a-days is a great concern for customers as well as for carmakers. To overcome this problem carmakers often try to improve the aerodynamics of the car so that fuel consumption can be minimized. Aerodynamics can be improved by making design changes to the car or adding some aerodynamics components like spoilers, roof rails or vortex generator to the car. Components like vortex generators and spoilers offers great drag resistance and reduce the lift of the car. They also increases the mileage of a car.

To increase fuel efficiency and performance to greater extent some design changes can be made to the existing designs of Spoilers and vortex generator.

Shapes can be modified to reduce the mass and to increase aerodynamics more effectively so that fuel consumption can decrease to a good extent even at higher speeds.
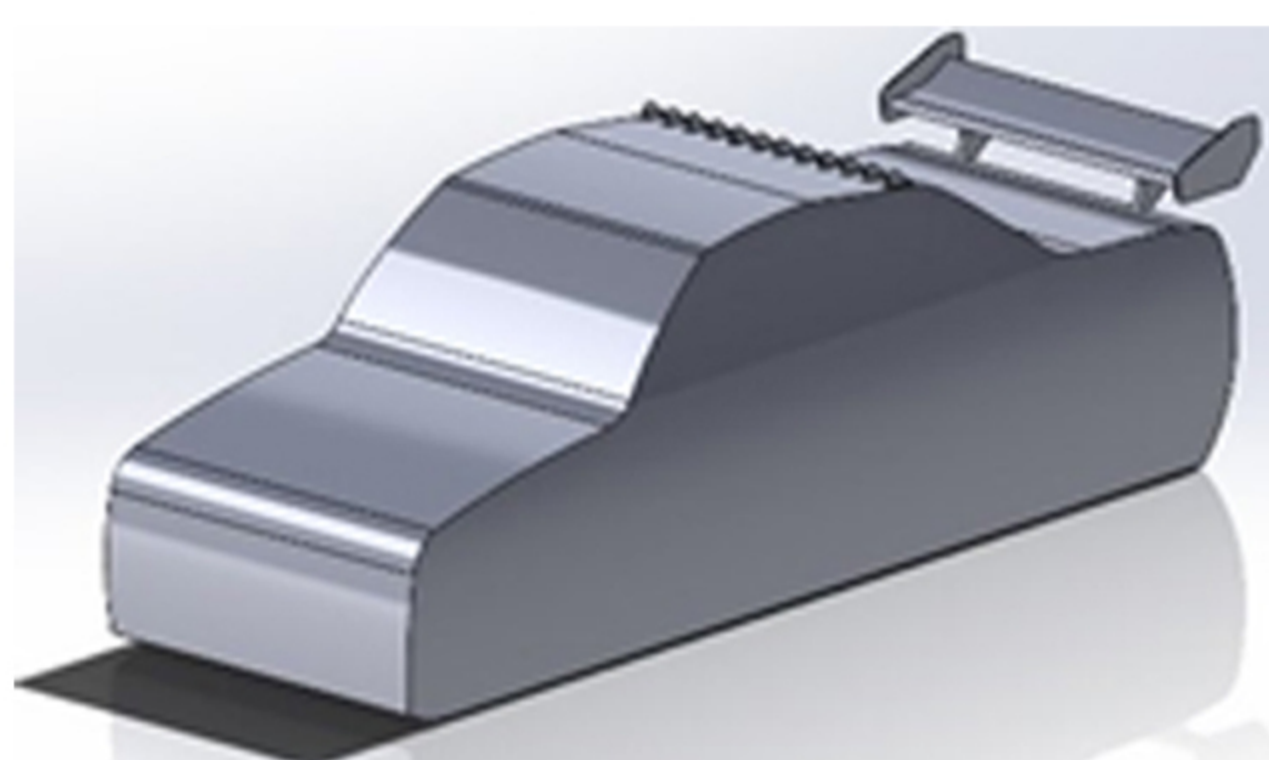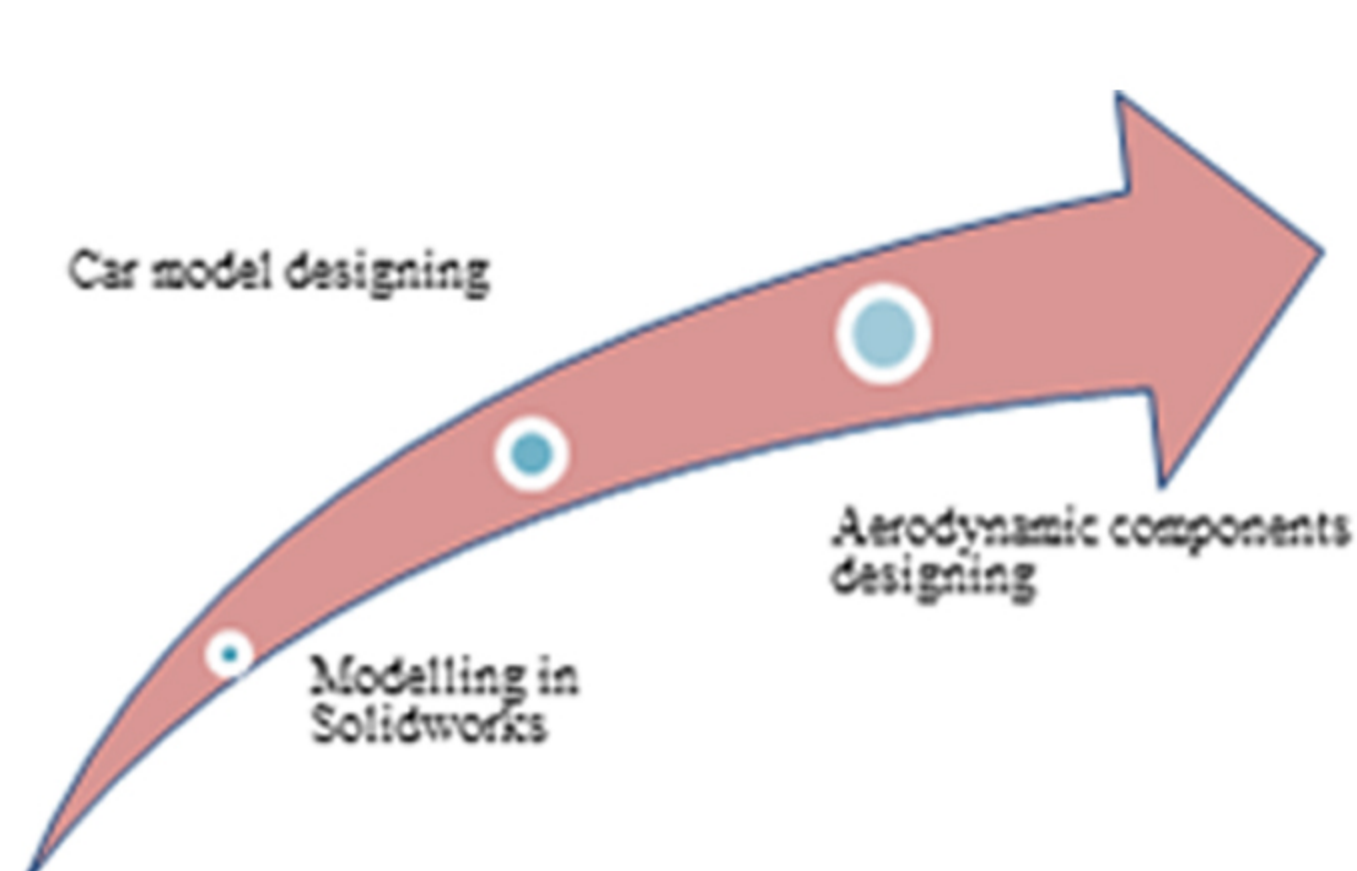
Effect of vortex generators on film cooling effectiveness Journal of Turbomachinery, 0889-504X, Published by American Society of Mechanical Engineers, Scopus and Web of Science Publication

Candle soot coating to intensify the pyroelectric Energy Conversion

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Introduction

For their unique thermo electric conversion ability as these materials have very high sensitivity towards temporal change in temperature and hence have large market for sensors, detectors and thermal imaging applications. In order to derive best performance out of pyro electric materials, there should be optimum tradeoff between pyro electric coefficient, dielectric constant, dielectric loss and specific heat which plays a detrimental role in enhancing their figure of merits (FOMs)

Fabrication

In this article, the candle soot coating over the sample (BZT) was performed and tried to find the open circuit and closed-circuit pyroelectric voltage was recorded applying infrared heating across the uncoated and candle soot-coated samples. We observed substantial enhancement in pyroelectric with the help of this experiment. In comparison to the uncoated sample, the maximum open-circuit voltage improves eight times for the candle soot-coated sample, and electric current increases by seven times across a resistance of 9 Ω.

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CO2-triggered switchable polarity solvents and their advancements

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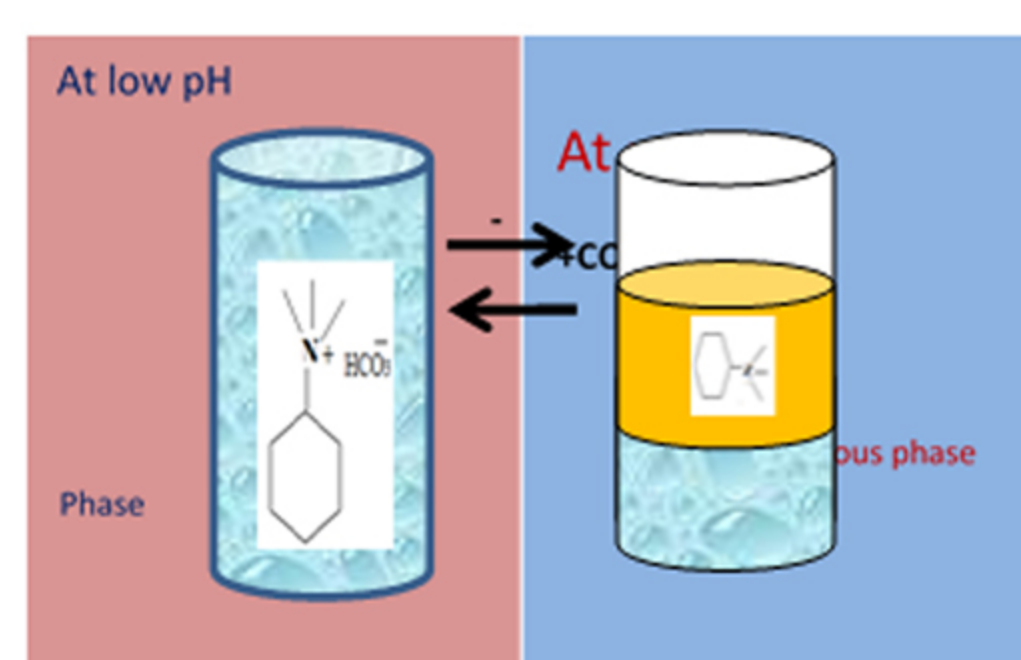
Introduction

First Carbon dioxide responsive material was prepared in 1986. Carbon dioxide as one of the trigger for the switching or to create "smart materials" is certainly an inexpensive, non toxic, ecofriendly and green choice in comparison to other possible alternatives. These CO2 triggered materials have drawn much attention of all due to two characteristic properties: These "smart materials" are helpful in increasing the efficiency in chemical processes and thereby reduces the environmental impact. Switchable solvents are generally tertiary or secondary amines whose structure and solubility changes with the change in pH values. At lower pH value, i.e. in acidic condition, ionic form predominates over non ionic form and forms a homogenous aqueous solution with high solubility. This is done by passing excess of CO2 which converts amines to quaternary ammonium cations. When the pH value increases by adding concentrated alkali solutions, CO2 is removed and amine gets de-protonated as a result, non ionic form dominates which have low solubities in aqueous media.
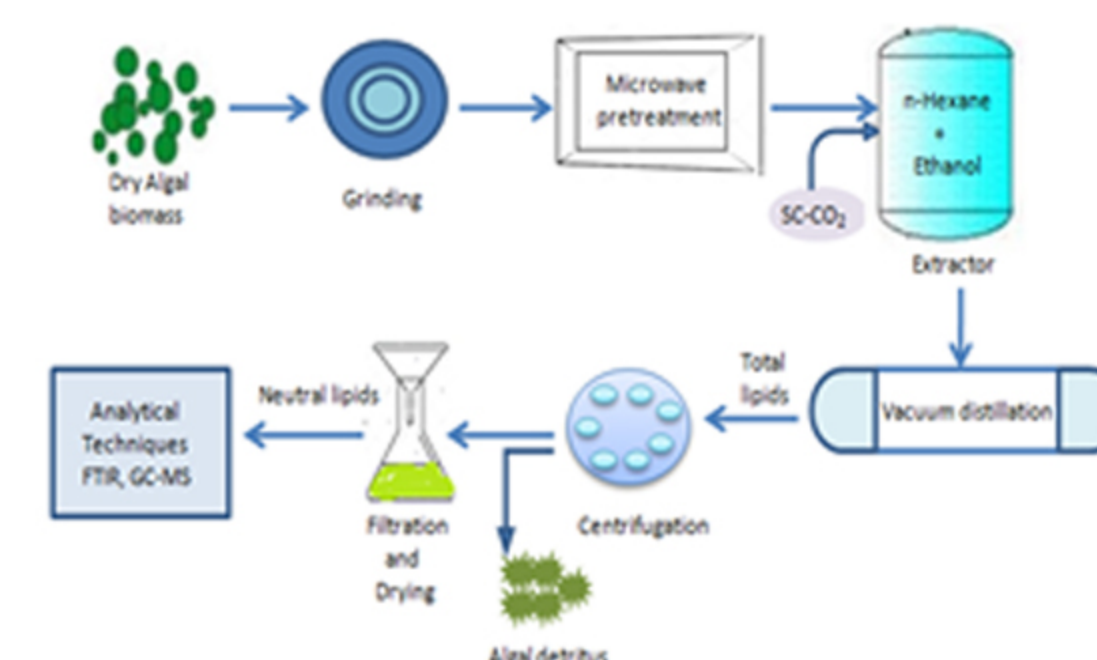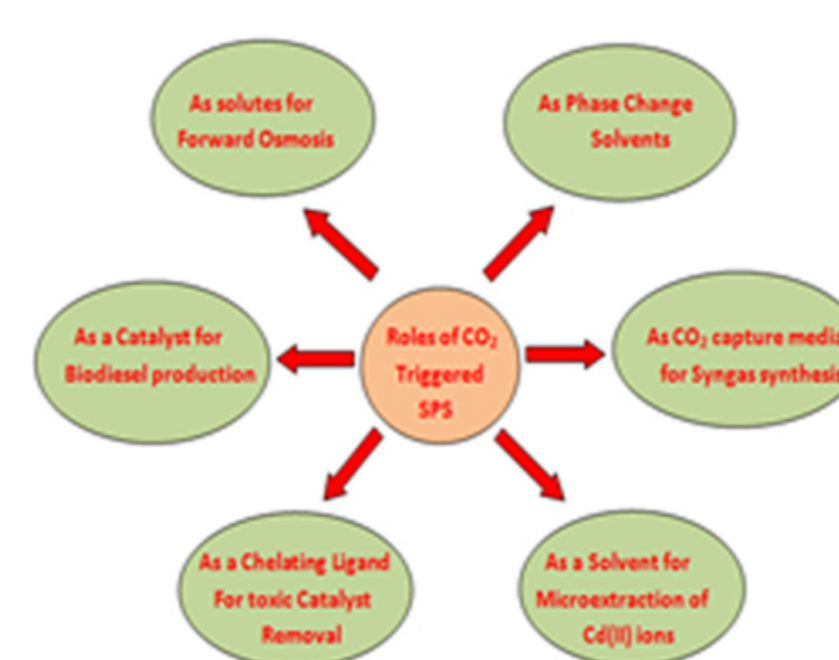
Roles of SPS

The famous green house gases Carbon dioxide (CO2). In fact, the human and natural activities are continuously enhancing its concentration in the atmosphere exponentially. The most common greenhouse gas, CO2 which is an environmental waste is one of the inexpensive and non-toxic trigger used to produce the Switchable Polarity Solvents (SPS). Thus Carbon-dioxide Capture and Sequestration (CCS) has potentially emerged out to be a most effective and efficient way to lower down the atmospheric CO2 levels as well as these greenhouse emissions. For controlling and minimizing the continual increase of atmospheric CO2 concentration, a very huge amount of CO2 has been sequestered in order to reduce the present global emission to pre- industrial levels. Switchable-polarity solvents (SPS) are "reversible ionic liquids" those transform between non-polar to polar form by the application of a trigger.

Role of SPS as a ligand for catalyst removal in ATRPs

Su et al had used N,N-dicyclo hexyl- methylamine (Cy2NMe) as a switchable solvent. The selection of Cy2NMe was based on the fact that it can switch between a non polar form that is sparingly soluble ein water and a polar form tha tis more soluble in water. In Atom Transfer Radical Polymerisation (ATRP), Cy2NMe as a switchable solvent, 2-bromoisobutyrate (EBiB) was used as an initiator, CuBr as catalyst, and tris[2-(dimethylamino)ethyl]amine Me6TREN as the major CO2-switchable ligand. In this study, there was aerial oxidation of Cu(I) to Cu(II) followed by the inclusion of CO2 and water. Polystyrene polymer was found to precipitate out which was filtered off and the soluble salts like CuBr2, Cy2NMe and Me6TREN remained in the solution. The removal of CO2, there is conversion of Cy2NMe to non-protonated form.

Conclusion and future Considerations

The switchable polarity solvents assumed to be promising solvents for CO2 gas capture. However, when practical aspect is taken into consideration it is found that industrial waste, accidental spills and waste obtained due to solvent degradation are found to be toxic and tend to produce serious concerns to health of human beings and on the environment as well. The gas also contains impurities such as HCl, NH3etc therefore the efficient absorption of the gas now becomes a matter of concern. In fact a few highly reactive ionic liquids may have the possibility to get reacted with the impurities which may led to the undesirable structural change in the switchable solvents. Moreover, Thitakamol and his coworkers has even reported certain inherent toxins evolved from the classical CO2capturing solvents with their probable implications on humans and environment after investigating their toxicological aspects that were collected from Material Safety Data Sheets . As SPS also possess these amine-based materials similar to classical single phase solvents for CO2 sequestration hence they may be significantly similar in their toxicity levels as well. However, SPS come into the light with great possibilities hence by acquiring a cognizance related to their toxicological aspects will be of great help for framing new solvents for capturing CO2 with less adverse effects on environment and bio-diversity.

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Stability facilitation of nanoparticles prepared by ultrasound assisted solvent antisolventmethod: Effect of neem gum, acrylamide grafted neem gum and carboxymethylated neem gum over size, morphology and drug Release

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Introduction

In present research, etoricoxib nanoparticles were prepared using newly developed ultrasonication assisted solvent-antisolvent method. Neem gum (NGP) and their semisynthetic derivatives NGP-g-Am (acrylamide graft copolymer of neem gum) and CMNGP (carboxymethylated neem gum) were used to provide stability to drug nanoprecipitates. In this research response surface methodology based on 32 factorial design was utilized to evaluate the effect of two independent variables (concentration of drug and polymer) over size and entrapment efficiency of nanoparticles (dependent variables).When compared with pure drug nanocrystals, polymer stabilized molecular composite nanoparticles were of smaller size and spherical shape. CMNGP stabilized composite nanoparticles shown smaller size hence better performance in terms of solubility and dissolution rate as compared to NGP and NGP-g-Am. As shown by zeta seizer analysis for the same concentration of drug and stabilizer, size of nanoparticles were found in the range of NGP-g-Am > NGP > CMNGP and reverse case was observed for dissolution rate. Contact angle determination easily predict better hydrophilicity of CMNGP than NGP followed by NGP-g-Am. DSC thermogram predict the amorphous nature of CMNGP than NGP and NGP-g-Am. SEM revealed spherical shaped and non-aggregation of nanoparticles.

Methods

1. Synthesis of NGP-g-Am

NGP derived graft copolymer was synthesized by free radical induced microwave assisted polymerization . Polysaccharide (1 g) was dissolved in 30 ml of double distilled water. Acrylamide solution was separately prepared by dissolving 6 g of acrylamide in 25 ml double distilled water. Prepared acrylamide aqueous solution was transferred into polysaccharide solution and stirred for 1 h at 200 rpm. Various concentrations of ceric ammonium nitrate were prepared in 30 ml double distilled water as shown in Table 1. To initiate free radical formation CAN solution was added in acrylamide-polysaccharide solution followed by stirring at 150 rpm for 30 min. Solution was kept aside for overnight and further irradiated using microwave (100 w) for different time period (Table 1) using 30 s heating and 30 s cooling cycle. After completion of microwave cycle, mixture was allowed to come at room temperature followed by precipitation using acetone. Precipitate was further washed with 20%v/v ethanolic aqueous solution to remove un-reacted acrylamide and homopolymer. Graft copolymer was dried at 40 °C in hot air oven until constant weight was

obtained. Dried polymer was powdered using domestic mixer grinder, passed with 20# sieve.

Synthesis of CMNGP

A constant amount of NG was combined with 4 ml doubly distilled. The polymer-water system was agitated for 15 minutes at 70 °C and cooled to room temperature (26 °C). During the next 45 minutes, a 25 ml ice-cold sodium hydroxide solution was added drop by drop to the polymer solution. In another beaker, double distilled water was used to make a 50% w/v monochloroacetic acid solution. Over 1 hour, 10 ml

Loronochloroacetic acid solution was added dropwise to NG-sodium hydroxide solution. Heated to 65°C and stirred for 1 hour. The obtained moist mass was then microwave irradiated (100 W) for 30 seconds heating and cooling. The wet bulk was rinsed with methanol for 15 minutes and then adjusted to pH 7 with glacial acetic acid. The modified polymer was dried at 50–55°C, powdered, sieved #60, and stored in an airtight container.

Results

1. IR Spectral analysis

NGP contains eCeOeCH3, cyclic ether and eCH2 region in their molecular structure. Characteristic wave numbers present in spectra were 1739 cm−1, 1440 cm−1 and 1350 cm−1 (eCeH deformation in eCH2). Wave number near 1420 cm−1 appeared in NGP-g-Am is due to CeN stretching. NGP-g-Am shows characteristic peaks of primary amide; peak 3400–3500 cm−1 shows NeH stretching and peak 3126 cm−1 shows NeH stretching due to hydrogen bonding. C]O stretching of amide was also found (1630–1650 cm−1) with CeN stretching near (1450 cm−1) in the spectra. A characteristic spectral peak at 1024 cm−1 was appear due to CHeOeCH2 group arises during grafting reaction between eOH group of NGP and pie bond

of acrylamide.

2. DSC thermogram analysis

Thermogram of NGP-g-Am (ANG1) shows a single sharp exothermic peak at 249 °C. Absence of peaks present in thermogram of NGP elicits the derivatization of NGP into NGP-g-Am. This exothermic peak is due to decomposition of NGP-g-Am. Sharp exothermic peaks of ANG1 shows crystalline nature of acrylamide graft copolymers. From the DSC thermogram of native and modified form amorphous nature of CMNGP was observed. It is already found in the literature that amorphous nature of polymer has better solubility than crystalline form. Same behavior was also supported by solubility data of NGP and CMNGP.

3. Surface morphology

The size of pores is ranging from 134.4 nm to 1.3 μm. After grafting of NGP structural morphology gets changed and seems like layered structure. SEM of NGP showed homogenous and smooth surface while N1 showed heterogeneous surface possibly due to grafting of acrylamide. SEM image of CMNGP showed fibrous nature of polymer. Fibrous nature and presence of small pores also provide better mobility of water molecules hence improved solubility.

Conclusions

Solubility resulting in dissolution rate of nanoparticles depends upon nature of stabilizer used. As the hydrophilicity of polymer increased, solubility hence dissolution rate also evoked. It was found that hydrophilicity of polymer also effect particle size and dissolution behaviour of formulations. From the findings of the SEM images it can be observed that drug without stabilizers form agglomerated nanoprecipitates having crystalline nature while polymer stabilized nanoparticles were composite in nature with spherical shape. Disassembling behaviour of nanoparticles in response to ultrasonication is demanded for the uniform distribution of particles and was easily achieved. Similarity factor value easily indicates the significant difference in the release profile of nanoparticles stabilized with NGP, NGP-gAm and CMNGP.

Flipping the script from venoms to drugs through computer aided drug designing

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Introduction

Enhanced computational approaches have made it easy to interpret and guide experiments regarding antibiotic drug designing. CADD - a major player in drug development & boost its process. SBDD and LBDD, 2 types of CADD, can be combined with MD simulations to study target-ligand interactions at an atomic level With increasing cases, CADD has proved to be a fast, reliable tool as it uses Virtual Screening and molecular docking It also cuts the cost of drug designing. It can be used to design the ACE inhibitor that directly inhibit ACE II and give a promising drug for COVID 19.

Use of Captopril in Covid 19

SARS-CoV-2 is the 4th zoonotic coronavirus to emerge in the past 20 years. It is spreading from man to man and is the causative agent of the ongoing COVID-19 pandemic. Main cause of death is refractory ARDS secondary to SARS-CoV-2 pneumonia Captopril can be an effective drug for COVID-19 patients; in liquid preparations and administered by nebulization. Using CADD, design ACE2 inhibitors from Captopril can be designed to prohibit entry of SARS-CoV2 into the cell. Antagonizes the effect of the RAAS (renin-angiotensin-aldosterone system) - a homeostatic mechanism for regulating hemodynamics, water and electrolyte balance. Leads to decreased plasma angiotensin II, vasodilation and decreased aldosterone secretion. Administration of captopril results in a reduction of peripheral arterial resistance in hypertensive patients. ACE also metabolizes bradykinin, resulting in vasodilation and a bradykinin-evoked cough

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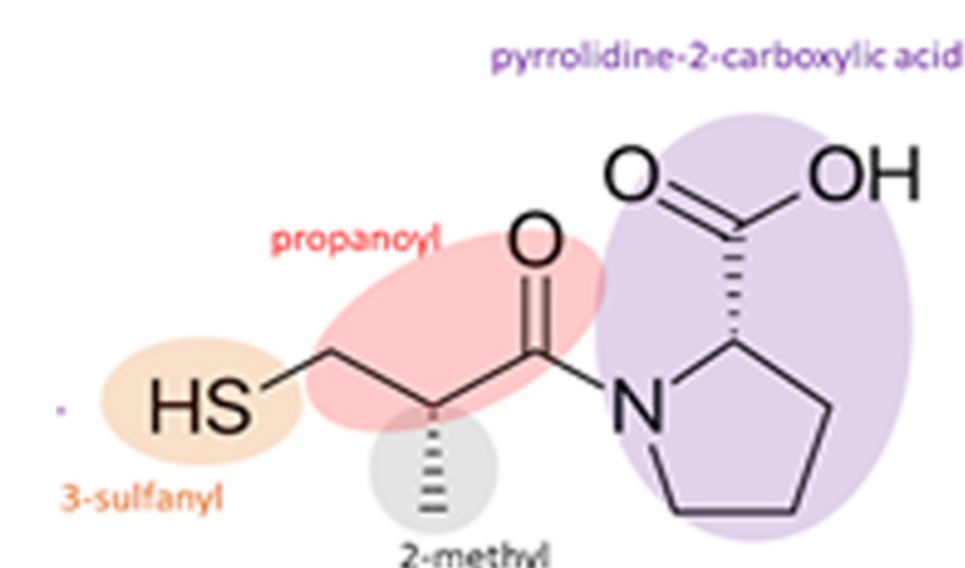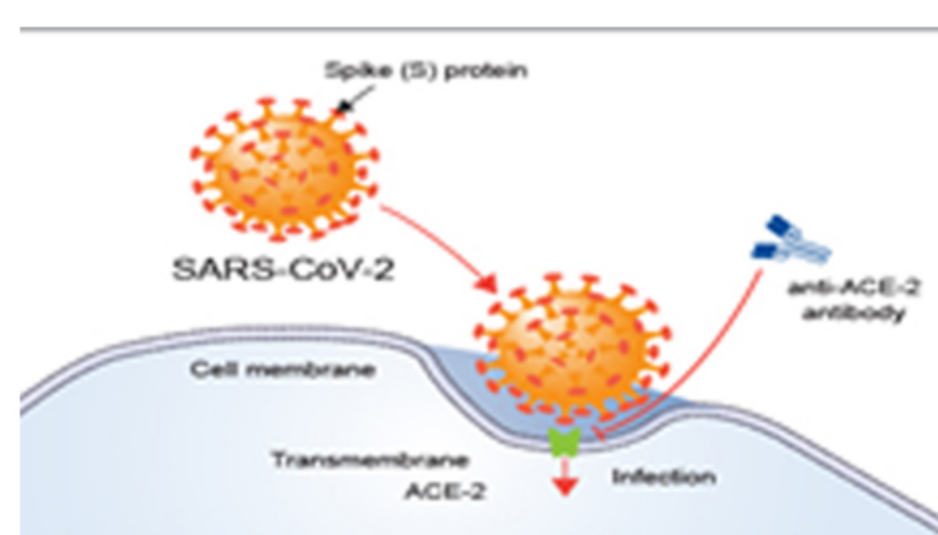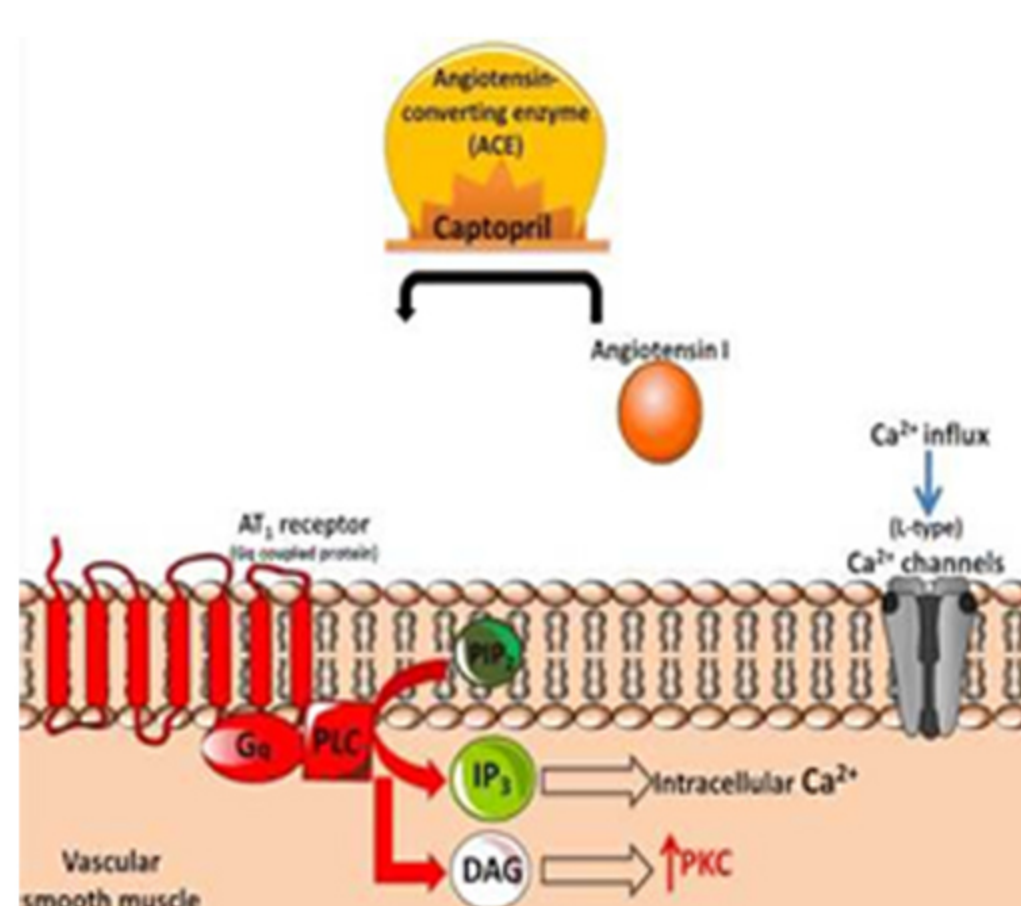
Conclusions

Captopril is a USFDA approved drug from venom of Bothrops jararaca and using CADD we can design ACE inhibitor that can be used as a therapeutic for recent pandemic COVID19 as it shows promising result when administered in liquid by nebulization.

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CLASSIFICATION METHODS FOR LABELLED DATA

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Introduction

The rapid use of machine learning in our day to day lives have increased the need to understand how a machine learning algorithm works and finding various methods to make it efficient for more predictions. Now a day's machine learning is applied to almost every aspect from distinguishing a spam mail to predicting cancer in a patient.

Objectives.

Classification methods provide the right track/ path for the data scientist to follow and ensure that the data provided will have the best predictions according to that classifier

Supervised Learning Types

Discrete Class Label: The process of predicting a discrete class label or category Regression: is the process of predicting a continuous value as opposed to predicting a categorical value in classification.

Terminology

The methodology of machine learning can be understood with three simple steps

Pre – Processing: - The first step is to clean and format the data, so we normally clean it first so that all of our photographs are in one file and the text is handled separately.

Predictions: - In this phase, we're actually using it or putting it into commercial use and that is to do a prediction and on there now we have our train model and our new data come together and output is going to be a prediction of what we are looking for.

Testing: - Now the final step is testing the trained model and looking into various stats that the system gives like how much accurately it is predicting as compared to previous data.

Results and Discussions

The use of machine learning has reached so much within few years that we had to come up with various methods to cope up with the situation and to train our data we develop certain methods (as mentioned) to get the best outcome.

Applications of Labelled Data

In machine learning, data labeling is the process of identifying raw data (images, text files, videos, etc.).

Data labeling is required for a variety of use cases including computer vision, natural

Conclusions

With the use of such methods, we can make the models more accurate and efficient. It's not liked the machine learning algorithm won't work without these methods but to get the best out of these prediction models we need to use such approaches like we have discussed above.

1. We do have a choice to use a certain method it all depends on the data that we are working on. In machine learning there is no good or bad models and there is no way of setting any benchmark on how efficient a model is as we are just predicting the outcome so it all comes down to the data that we are going to work on.

2. These methods assure us that the model is pushed to its limits especially when we are dealing with sensitive data like cancer diagnosis etc. This will surely help in making system more efficient and there will be less chances of an error or failure in the machine learning.

Overall Architecture

Preprocessing

Predictions

The working of Labelled Data

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Introduction

Acid phosphatase 5 (ACP5) is an iron-containing enzyme of the class of purple acid phosphatases, common in two isoforms which are responsible for catalyzing the hydrolysis of various phosphatases in acidic conditions [1]. Acid phosphatase 5 (ACP5) is mainly transcribed through a single gene that contains 5 exons in which the first three exons (E51, E52, E53) have three alternate promoters [2], While the TRAP5 protein is translated from exon 2 to exon 5 [3]. Acid phosphatase 5 (ACP5) is mainly found in macrophages that contains 975bp which is encoded by a protein of 325 amino acids including a single peptide of 19 residues and 2 potential sites for N-glycosylation. It plays a vibrant role in the synthesis of tartrate-resistant acid phosphatase 5 (TRAP5), which has a molecular weight of 35 -37kd [3]. It is found that 969bp of TRAP5 corresponds to 323 amino acids, a putative signal sequence of 19 amino acids, and 2 potential glycosylation sites. ACP5 is the most basic in nature and it is insensitive to inhibition by L (+) tartrate, found in the spleen and macrophages. Its enzymatic activity is responsible for osteopontin (protein) activity. For catalytic activity, it has a mixed valency of the di-iron center. Mostly, TRAP5 is primarily expressed by differentiated cells of the mononuclear phagocyte system which include osteoclasts, macrophages, and dendritic cells. TRAP5 is found into two isoforms which are TRAP5a and TRAP5b. TRAP5a is mainly synthesized as a monomeric proenzyme and has a molecular weight of 35kd [4-6]. TRAP5a has low enzyme activity due to the presence of a repression loop interacting with the active site [7], which is primarily found in immune cells. The increased level of TRAP5a is seen in obesity, end-stage renal disease, and rheumatoid arthritis [8-11]
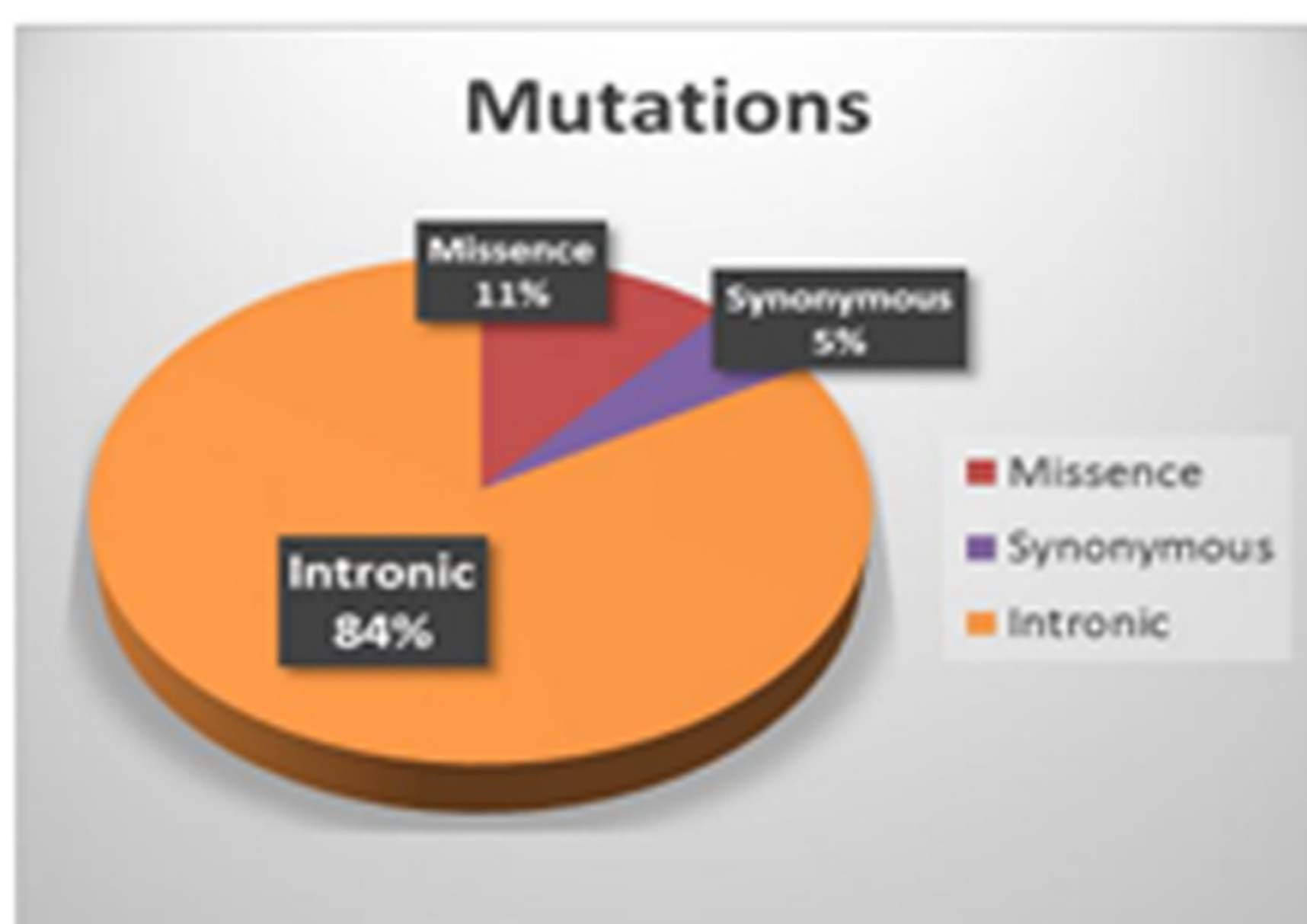
Figure 1. A Pie chart depicting the percentage of reported mutations in the ACP5 gene.
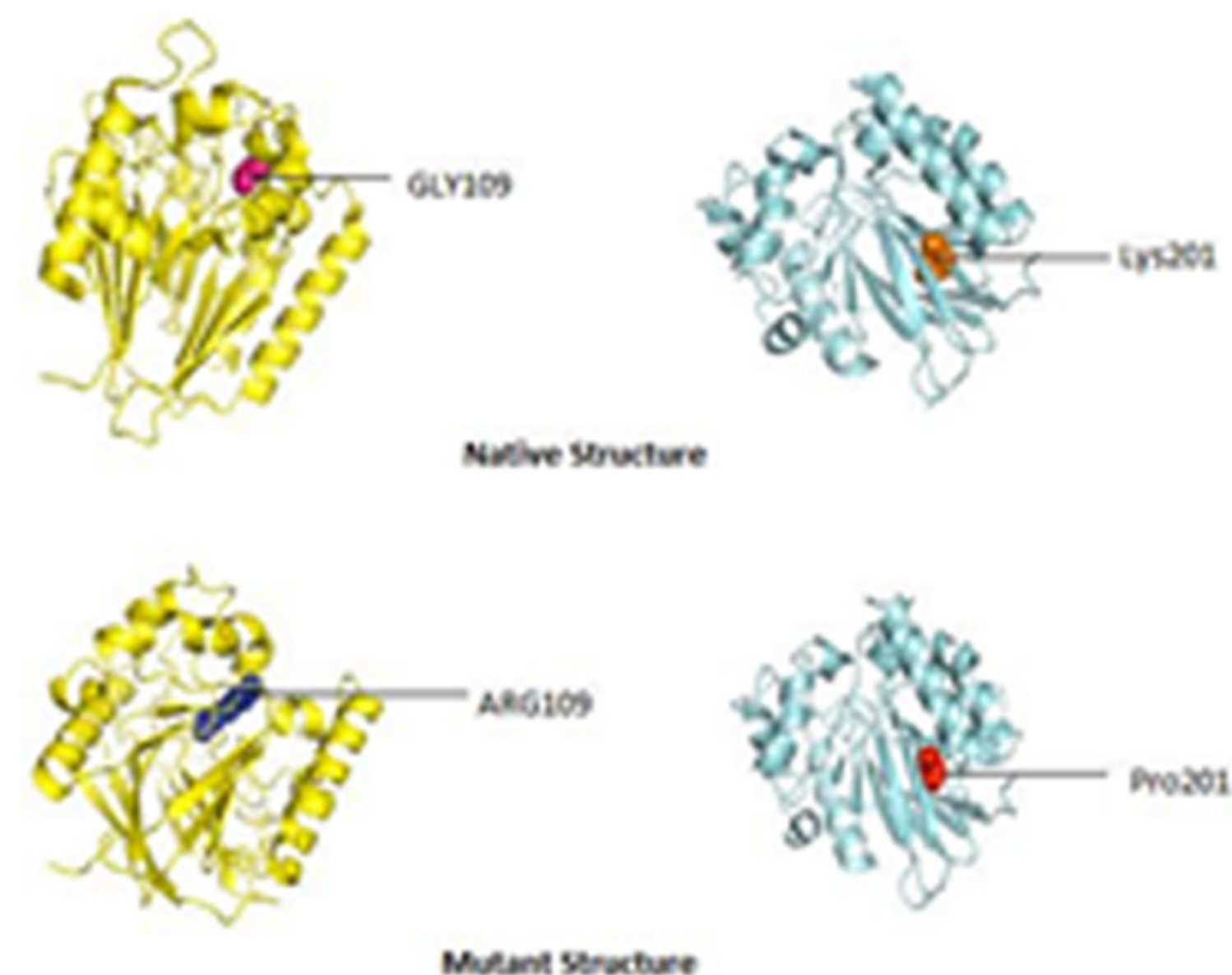
Figure 4. The figure shows the native and mutant structure of TRAP5 protein (G109R and L201P), PDB ID: 2BQ8

Conclusions

By using all multiple computational platforms, two nsSNPs G109R and L201P are predicted to be more deleterious causing alteration in structure and function of TRAP5 protein. TRAP5 can be a therapeutic target in immunological disorders, cancer, and metabolic bone diseases. As a result, these deleterious mutations can be lethal to its function and may hamper therapeutic strategy of protein. To investigate more precisely the deleterious effect of these nsSNPs (G109R and L201P) on structure and function of TRAP5 protein, further molecular dynamics simulation will be performed.

Reimagine the Urban stretch of Golghar Market, Gorakhpur

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Introduction

Over the last few decades, the rate of urban development in India has been expeditious. The vital factor for such rapid development is the rural - urban migration. The size of the cities has augmented exponentially because of the population outburst thus failing the traditional planning methods and planners of the past. The socio - economic requirements of the population has been acknowledged long before but the needs, efficacy and inadequacy of the present modes of planning are still unaccounted. 142 cities of India, of which 8 are significant metropolitan cities constitutee 20 percent of India's population. The other 80 percent of the citizens dwell in villages and other smaller settlements. To reciprocate to the needs of the society, the key aspects are proper development policies, economic planning and transportation facilities and so on. To define what a legitimate development policy must comprise, the multi-use of streets in Gorakhpur is a good example where the shops open up at commercial streets and the sidewalks are utilized by the poor to open up petty shops to support their livelihood in the urban environment. The sectors located away from the circulation arteries which comprises of residential streets become an extension of the urban environment. To achieve such a multi-functional layout, it is preposterous to create a dynamic environment comprising of play grounds, clubs and physical aspects of the urban Elements. This area is greener as compared to other areas of the district but the stretch is lacking landscape and streetscape that is why this stretch has been chosen for redevelopment. This research paper contributes to the advancement of human knowledge and can be used as a reference for future urban redevelopment projects where the areas are such densely populated.

Methods

As there are no proper roundabouts on the stretch there is a proposal for installation of new and more enhanced round abouts related to the history of Gorakhpur. Fig.6 is the view of existing and proposed round about at Ganesh chowk. In

Proposed design the chowk will have a statue of Munshi Premchand under a canopy to remember his works. Same is proposed at Vijay-chowk but with different design with a statue of lord Mahavir. Streets comprise more than 80% of public space in cities, but they often fail to provide their surrounding communities with a space where people can safely walk, bicycle, drive, take transit, and socialize. Streets should not be designed simply to accommodate the movement of vehicles – it is important that designers place a high priority on meeting the needs of pedestrians, cyclists and public transport users.

Results

Gorakhpur is a city along the banks of the Rapti river in the north-eastern part or the Purvanchal region in Indian state Of Uttar Pradesh with 6.73 lakhs population. Gorakhpur has its own cultural and historical importance and is known for famous poets such as Premchand, Firaq Gorakhpuri and Kabirdas, for freedom fighters as well as for Gautam Buddha and lord Mahavir. The ancient Gorakhpur, in addition to modern, comprised the districts of Basti, Deoria, Azamgarh, Maharajganj and parts of Nepal Tarai. Some of the important places in Gorakhpur are Golghar, Gorakhnath temple, Geeta press, Nauka Vihar, Shahi market

Reimagine the Urban stretch of Golghar Market, Gorakhpur

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and Bodh temple. Stretch is located in the Golghar area. This area is considered as the heart of the district as the city originated from this exact point. It is divided into 6 smaller sub-districts and is a small commercial part of the area. It is also a transportation hub and a small health care Centre, with a few hospitals located there but the stretch (university chowk-Vijay chowk) is not following the elements of urban design properly i.e., building typology, public spaces, street, transport and landscape. This area is greener as compared to other areas of the district but the stretch is lacking landscape and streetscape that is why this stretch has been chosen for redevelopmen

Conclusions

The redevelopment of the urban spaces is a dire need to cater the needs of the growing population and therural – urban migrators. To create ways for future development scenarios and to solve the issues regarding the traditional planning methods a dynamic and advanced strategy for urban redevelopment is to be opted which will serve the socioeconomic needs of the growing population and increase the efficacy of the urban environment to better adapt with the users. The redevelopment would also incorporate better and proper facilities for people in spite of all caste creed and race. The redevelopment of the site will also keep in mind the different aspects of an urban environment rather than just focusing on the built mass. Nowadays we can come across many stretch/streets redevelopment in various cities in India and worldwide. As there is high increase in motor vehicle on the street, no safe place is left behind for pedestrian and cycle use making it very crowded and contributing to air and noise pollution. For catering these kinds of problems these projects have been initiated by the government. According to the case studies of recent urban redevelopment sites also, the major issues that have been resolved are related to the pedestrian movability, public seating spaces, reduction of street traffic and regarding public safety. So by considering all these things proposal for Golghar, Gorakhpur has been given which will cater all the aspects of urban design and existing conditions.

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Parental perspective in Pediatric palliative care in India: A systematic review of literature using the PRISMA method

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Introduction

Research in Parental Perspectives are pivotal in gaining understanding of parents' experiences, issues, concerns and attitude in pediatric palliative care which affects their decision making. However only a limited number of such studies have included the first-person perspective of Parents. The aim of this article is to understand the contribution of previous research on parental perspectives in pediatric palliative care

Methods

A systematic review of studies was conducted. PubMed and Indian Journal of Palliative Care, were searched where studies published within 10 years dating from 2010 to 2020 publication date were reviewed. Eligible articles were research articles that included the perspective of parents of children with life-limiting illnesses

Results

We selected 9 research articles for review, where 7 key themes emerged; Psychological perspective, parental concerns, parental needs, parental attitude, spiritual perspective, cultural perspective and financial perspective, based on which the articles were reviewed according to their reporting of these key themes.

Records identified from Databases (PubMed, IJPC) = 685
Other sources= 12
Total references)= 697

Records removed *before screening*:
Duplicate records removed (n = 23)
Records removed for other reasons (n= 14)

Records screened (n = 660)

Records excluded (n = 623)

Full text reports assessed for eligibility (n = 37)

Reports excluded:
Non-Indian studies/population (n = 8)
No record of parental perspective (n = 17)
Commentaries/opinions (n = 2)
Unavailability of access to full article (n = 1)

Studies included in review (n = 9)

Conclusions

This review highlights requirement of more research into parental perspective if possible, covering all key aspects along with additional research in cultural perspective and development of validated tools, checklists and psychometric questionnaires for the assessment of these perspectives in various domains: spiritual, financial, psychological, cultural and sociais.

University Center of Research and Development 2021-22

PATENTS

Year	Filed	Published	Granted
2016	3	1	0
2017	10	4	0
2018	35	9	0
2019	63	77	0
2020	109	91	13
2021	297	66	17
Total	804	253	31
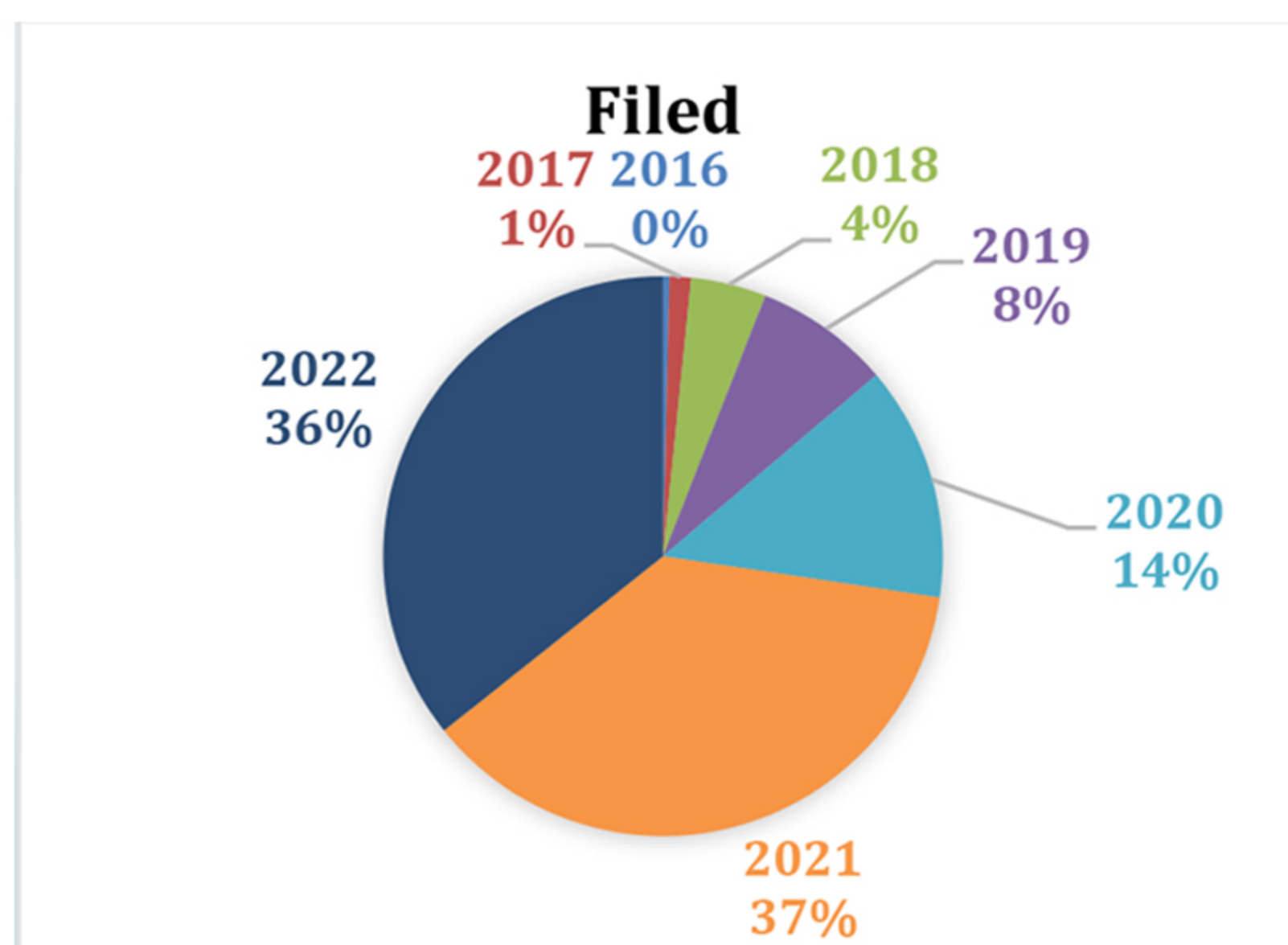
Patents filed from 2015
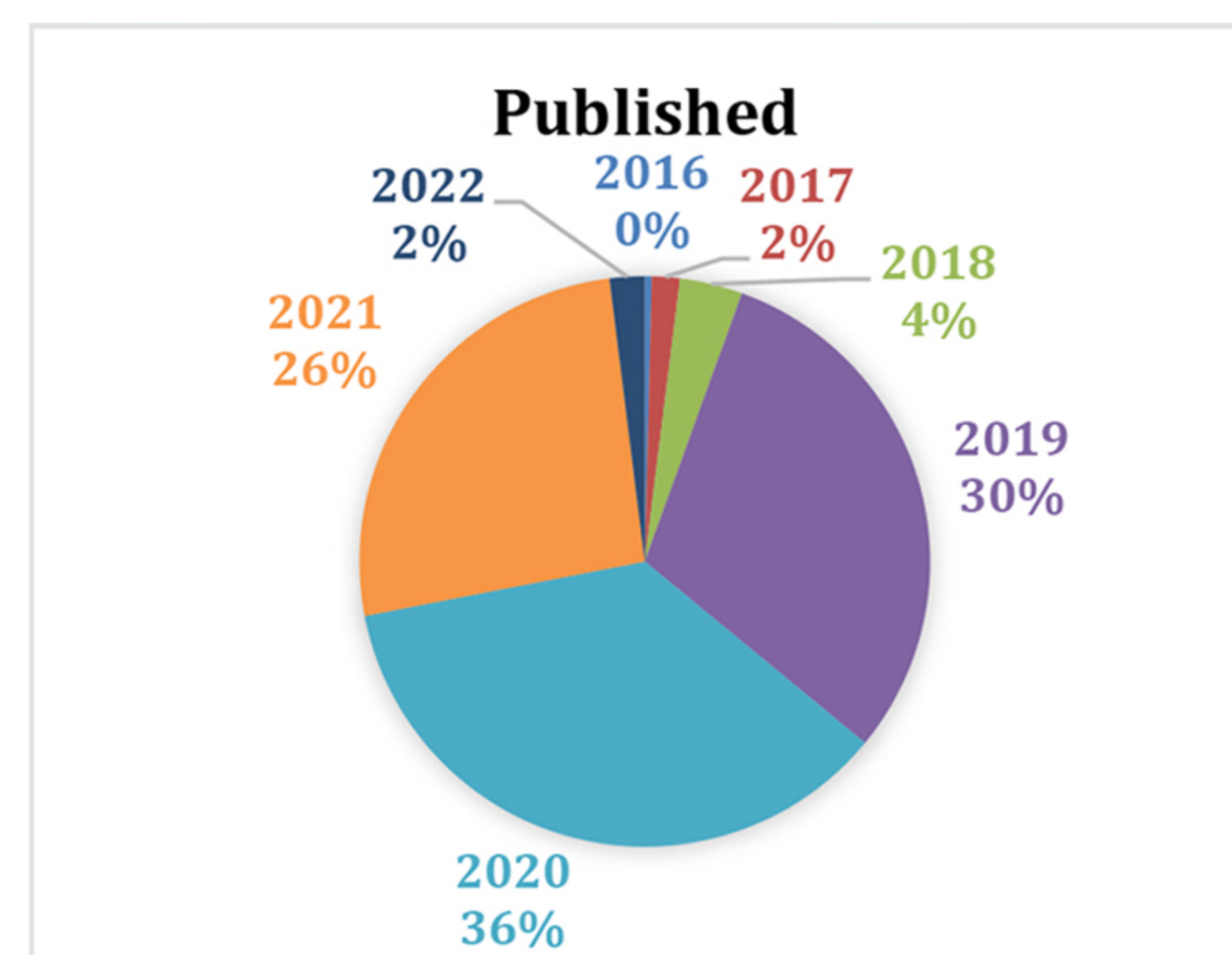
Patents Published from 2015
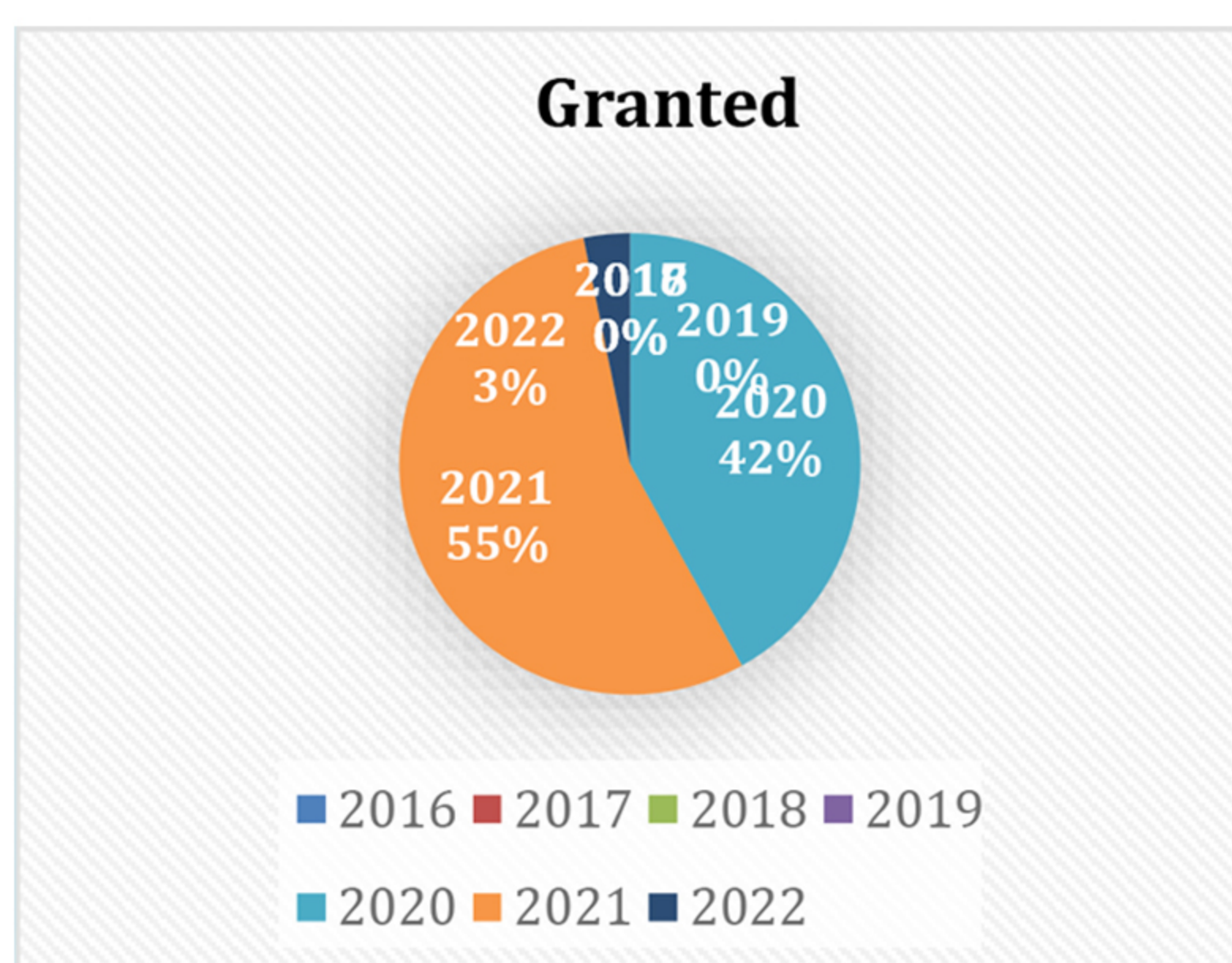
Patents Granted from 2015

Patents of GU

University Center of Research and Development 2021–22
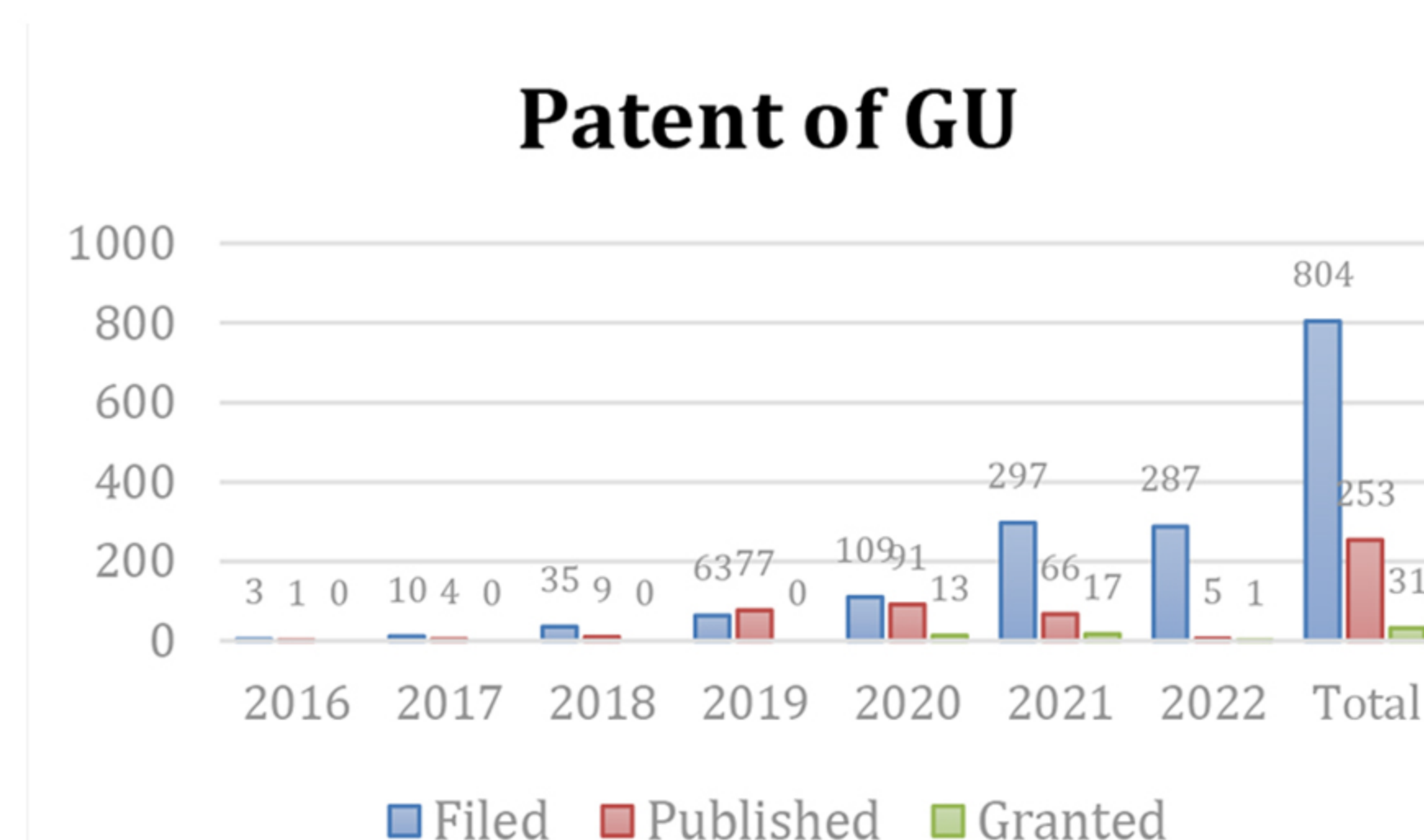
GU Patent Detailed Summary on Patent Type					
Academic Year	African	Australian	Design	German	Indian Patent
2015-2016	0	0	0	0	1
2016-2017	0	0	0	0	3
2017-2018	0	0	0	0	12
2018-2019	0	0	0	0	64
2019-2020	0	0	5	0	40
2020-2021	1	18	1	0	256
2021-2022	0	22	1	2	377
Grand Total	1	40	7	2	753

Types of Patent
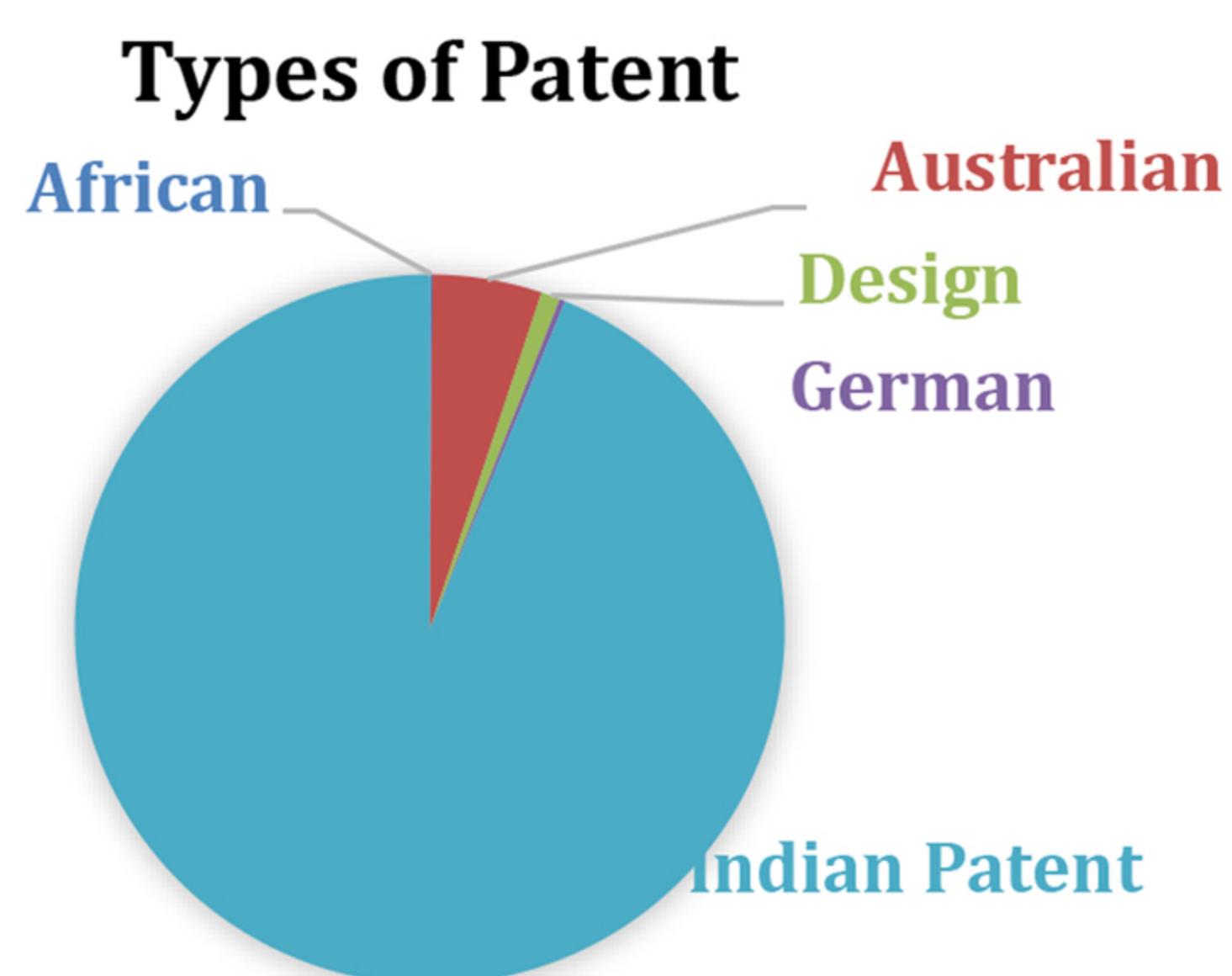
Patents(Sample)

Inventor Faculty	Department	Title Of The Patent	Year Of Filing	Category
Om Prakash Verma	SBAS	Voice And Face Based Intellient Car/Door Locking System Using Machine Learning Programming	2020-2021	National
Om Prakash Verma	SBAS	Advanced Remote Biometric Attendance System For Preventing The Spread Of Covid19 Infection	2020-2021	National
Anjali Gupta	SBAS	In-Silico Screening Of Peptide Nucleic Acid Derivatives Against Sars-Cov-2 Main Protease	2020-2021	National
Anupama Mps	SBAS	Deep Learning Based Energy Efficient Smart Ecosystem For Smart Cities Merged With Iot	2020-2021	National
Divya Tripathy	SBAS	Method Of Preparing Adsorbent For Removal Of Dye From Water	2020-2021	National
Manoj Dilip Shanti	SBAS	Smart Irrigation Enriched With Fertilizer Mixing And Water Wastage Reduction Using Deep	2020-2021	International

Pratichi Singh	SBAS	Covid19 Protected Room: Disinfecting Room Air Using Machine Learning System	2020-2021	National
Rohit Tripathi	SBAS	Wearable Eye Movement Detection Device And Method	2020-2021	National
V Chandralega	DOCE	Concrete With Partial Replacement Of Cement Withmetakaolin	2020-2021	National
T Ganesh Kumar	SCSE	An Intelligent Auto Park Car Enabled Rescue System For	2020-2021	National
A Daniel	SCSE	Iot Based Bed For Somnambulism (Sleepwalking) Patient	2020-2021	National
Anupam Lakhanpal	SCSE	Management Of Temple Collection Box Using Sensors And Cloud Data Storage	2020-2021	National
Arul V	SCSE	Method For Identification And Classification Of Brain Tumors Based On Mri Images Using Machine	2020-2021	National
Arvind Kumar	SCSE	Vehicle Speeding Detection: Automatic Vehicle Speed Detection, Notification And Location	2020-2021	National
B Balamurugan	SCSE	Industrial Digital Assistants (Ida): Designing And Reorganizing The Workplace Layout For The	2020-2021	International
D Rajesh Kumar	SCSE	Smart Agriculture Using Iot	2020-2021	International
Deepika Sherawat	SCSE	Iot Based Predictive Model For Attention Deficit Hyperactivity Disorder	2020-2021	National
Dileep Kumar Yadav	SCSE	Ivh- Sanitizer System: Intelligent Vehicle Hand Sanitizer System Using Pre-Instruction.	2020-2021	National
G Nagarajan	SCSE	The Dust Detection Module For Home And Industrial Applications Using	2020-2021	National
Heena Khera	SCSE	Dach- Health Notification: Iot Based Health Notification And Doctor Availability Checking In	2020-2021	National
Himanshu Sharma	SCSE	Digital Identity Tracking To Any Mobile With High Security Using Machine Learning Programming	2020-2021	National
Janarthanan	SCSE	Minimal Invasive Fully Automated Robotic Rubber Tree Tapping And Latex Collection Using Iot	2020-2021	National
K M Balamurgan	SCSE	Ipc Face Mask: Intelligent Face Mask (Rgb- Non-Woven Fabric, Melt-Blown Fabric) To Protect From	2020-2021	National
Meenakshi Sharma	SCSE	Smart Covid Mask: Ai-Based Mask With Attachment To Auto-Detect And Kill The Covid-19	2020-2021	International
Munish Subharwal	SCSE	Integrated Disaster Response System For Identification Of Safe Locations Using Machine	2020-2021	National
N Gayathri	SCSE	Mart Covid-19 Protection Band Using Ai, Iot And Cloud	2020-2021	International
N Partheeban	SCSE	A Novel Method To Transmit The Electronic Medical Records In Secure Cloud Environment	2020-2021	National
P Muthusamy	SCSE	Iot Based Agriculture Crop Monitoring System Using Sensors	2020-2021	National
P Rajakumar-Guscse201827131	SCSE	Machine Learning Based System For Evaluation And Prediction Of Lung Cancer Using Computed	2020-2021	National

Padamanabhan P	SCSE	Water Consumption Control System For Irrigation Based On Iot	2020-2021	International
Rajkumar R	SCSE	To Reduce Data Processing Workload With Cloud Computing Environment	2020-2021	International
Raju Ranjan	SCSE	Iot Based Water Flow Regulator And Distributor For Auto Controlled Irrigation	2020-2021	National
Ramesh Kumar C	SCSE	Iot Based Wearable Wireless Volume Control Device For Any Electronic Gadgets	2020-2021	National
Satheesh A	SCSE	Soft Computing Based Nlp Approach For Simple Robotic System Voice Control	2020-2021	National
Suman Devi	SCSE	Artificial Intelligence Based Generic Architecture Incorporating	2020-2021	National
Supriya Khaitan	SCSE	System And Method For Detecting A Potential Vehicle Collision And Providing Alerts	2020-2021	National
Tarun Kumar	SCSE	Design And Development Of Three-Dimensional Advertisement Boards By Using Belt Driven	2020-2021	National
Thirunavukkarasan M	SCSE	Information System For Contamination Water Quality Monitoring Using	2020-2021	National
Vijaylakshmi	SCSE	An Automated And Integrated Mobile App For Handling Road Accident And Emergency Situation	2020-2021	National
Vishnu Sharma	SCSE	Photo Hydroponics Chamber With Automatic Climate Control	2020-2021	International
B Priestly Shan	DEECE	A Multilevel Inverter Topology With Reduced Number Of Switches For Solar Photovoltaic	2020-2021	National
Divya Sharma	DEECE	Car Security – Central Door And Door Glass Locking System	2020-2021	National
Rohit Tripathi	DEECE	System And Method For Controlling Home Appliances	2020-2021	National
Indu Bhardwaj	DEECE	Wild Animal-Train Collision Prevention System	2020-2021	National
Sarita Chaudhary	SOB	A Supply Chain Management And Control System	2020-2021	National
Prem Shanker Mishra	SMAS	Nanoemulgel Composition With Muscle Relaxant Activity	2020-2021	National
Rishabha Malviya	SMAS	Air Cooling Device With Smart Antimicrobial Feature	2020-2021	International

POLYMER COATED STORAGE PACK GLASS CONTAINER

Rishaba Malviya, Pramod Kumar Sharma, Suneel kumar Dubey

Department of Pharmacy

Application No.	201711041609	Year of Filing	2019-20
Status	Published	Year of Publication	2019-20

The invention relates to a polymer coated storage pack (glass container) for blood comprising native polymers such as natural polysaccharide containing –OH, –CH2OH and groups to prevent blood clotting without using any anticlotting agent and also helps in blood transport even at 35°C.

CATENARY BASED FERROCEMENT THIN SHELL

Rishaba Malviya, Pramod Kumar Sharma, Suneel kumar Dubey

Department of Architecture

Application No.	201811013752	Year of Filing	2018-19
Status	Published	Year of Publication	2019-20

The present invention describesa design of catenary based ferrocement thin shell. 12mm thick material ferrocement ultrathin shell has been designed by using natural for catenary. Funicular forms are generated using parabola, circle and catenary. This shell has a predefined shape derived from catenary which is fixed, a one very specific type funicular form. It is form based structure derived from nature and act as a surface active structure. In this structure we can save material and making in light weight, low maintenance, low cost and earthquake resistant.

SMOG REDUCING APPARATUS

Indu Kumar Pandey, Sudipto Sarkar

Department of Mechanical Engineering

Application No.	201711043579	Year of Filing	2017-18
Status	Published	Year of Publication	2019-20

The invention relates to a smog reduction apparatus, comprising; an inlet portion for allowing contaminated air to enter; an axial blower fixed at the inlet portion; a first sp chamber allowing contaminated water meet the showering water to dissolve; said shower connected to a subordinate tank ensures the flow of small drops of water contin inside the first spherical chamber; a connecting duct for

water supply from the subordinate tank to said first chamber; a valve to check water flow from the main tank to the subordinate tank; a second spherical chamber; an outlet portion of said apparatus for releasing fresh air to the environment; an outlet axial blower; an anemometer are fi sump; a pH meter connected to the sump; an electronic sensor which is connected with three different valves through wires; and a carbon filter fitted above sump chamber filtering the contaminated water.

SYSTEM FOR HEALTH MONITORING AND GUIDING FOR BLIND PERSON USING INTERNET OF THINGS SENSOR

Dr. B Balamurugan

Department of Computer Science and Engineering

Application No.	202041001257	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

The present invention relates to a system for health monitoring and guiding for blind person using internet of things sensor. The objective of the present invention is to overcome the inadequacies of the prior arts in health monitoring and guiding for blind person using internet of things sensor. The system for health monitoring and guiding for a blind person using internet of things sensor comprises a biomedical signal measurement module, a guiding module and a processing and communicating unit.

A NOVEL BLOCK-BASED REINFORCEMENT LEARNING MOVE TOWARD FOR RESOURCE ALLOCATION IN CLUSTERED IOT

Dr. Munish Saharwal

Department of Computer Science and Engineering

Application No.	202041005374	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

Virtualization technologies deliver the resources for computation for public infrastructure in the form of service clouds namely Rackspace, Amazon and GoGrid. Multiple virtual machines that can operate independently are allowed by these technologies for residing in the isolation apparently on the same host physically. Applications that are scaled dynamically runs on clouds leading to unpredictable variable results due to the interference in the performance affecting the associated virtual machine in co-location. Appropriate policies of scaling are determined in the environment of non-stationary & dynamic property being non-trivial. The ability of scaling the resources on demand is the important advantage possessed by

the clouds of the proposed invention compared to the conventional counterparts of hosting. But this creates a problem about the allocation of resource that should be included or deducted with the performance underlying the resource is constant flux. Temporal difference is applied for learning of the reinforcement algorithm termed as Q learning with the policies of optimal scale to be determined.

DEEP LEARNING BASED ENERGY EFFICIENT SMART ECOSYSTEM FOR SMART CITIES MERGED WITH IOT

Anupama MPS, Department of Basic Science

Application No.	202011036436	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

Design of a smart city is focused in this invention with advanced automated smart devices comprising of smart homes with intelligent features such as smart energy management, smart waste management and smart surveillance with advanced security and automated street lights able to learn from previous experiences based on deep learning. As security is the main objective of such smart cities, detection of objects and people creating threat to the inhabitants by utilizing neural networks along with image classifier and detection of object. Design of the system is merged with the concept of Internet of Things (IoT) for controlling various components involved in the smart cities including efficient energy management of smart homes to smart surveillance detecting objects such as gun from the footage of closed circuit television in order to detect unknown dangers on the streets of the smart cities especially by training of a neural network by the outputs generated from image classifier. There are no sensors available to detect objects creating threat to life hence image classifier is utilized for detection of such objects providing security to the residents of smart cities.

In-Silico Screening of Peptide Nucleic Acid Derivatives Against SARS-Cov-2 Main

Anjali Gupta, Department of Basic Science

Application No.	202011054279	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

The current situation of a pandemic caused by SARS-CoV-2 has compelled us all to think of environmental benign alternatives for sustaining life. Here, we have explored the drug-like abilities of modified peptide nucleic acid (PNA) monomers against viral targets via., molecular docking approach. The molecules were tested against two viral [PDB: 6Y2E & 6VWW (SARS-CoV-2, 2019- nCoV) protein targets. The rapid in-

silico screening and molecular docking of potential molecules against different COVID-19 targets provide an outlook towards the use of these synthetic RNA/DNA based derivatives for multi-disease remediation. Out of fifty-two derivatives, a set of highly active molecules with the possible ability to inhibit the progression of microbes have been identified based on the structure and functionality of the derivatives. Based on similar parameters the drug efficacy of the active derivatives was also compared with some generic viral drug molecules (Umifenovir and hydroxychloroquine). The higher binding modes and binding interactions of guanidine groups incorporated in the basic backbone of the PNA derivatives may have been responsible for the improved activity against viral targets/anti-COVID19 and have shown promising results to become active drug ingredients against these protein targets. The reported results would be greatly helpful in the next step during the process of drug discovery against COVID-19.

Concrete With Partial Replacement of Cement Withmetakaolin

V Chandralega, Department of Basic Science

Application No.	202041038725	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

Concrete is the most commonly used material for construction. The worldwide production of cement has greatly increased since 1990.Production of cement results in a lot of environmental pollution as it involves the emission of CO_2 gas. Supplementary cementitious materials (SCM) are finely ground solid materials that are used to replace a portion of the cement in a concrete mixture. These supplementary materials may be naturally occurring, manufactured or manmade waste. Various types of pozzolanic materials that improve cement properties have been used in cement industry for a long time. Metakaolin is a dehydroxylatedaluminium silicate. It is an amorphous non crystallized material, constituted of lamellar particles. From the recent research works using Metakaolin, it is evident that it is a very effective pozzolanic material and it effectively enhances the strength parameters of concrete. This paper reviews the use of metakaolin as supplementary cementitious material in concrete.

SELF-CHECKOUT METHOD USING AN IOT BASED SHOPPING CART

Rohit Tripathi, Department of Electrical Electronics and Communication Engineering

Application No.	202011050849	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

Self-checkout method using an IOT based shopping cart The present invention relates to an IoT based shopping cart 100 comprising a user-movable container 102 having a unique identification code and sized to receive a user-selected bar-coded item(s), a self-checkout method 200 for such shopping cart

comprising steps of scanning barcode(s) of a user-selected item(s) through at least one scanning unit positioned on the user-movable container 202, actuating an entry region 106 on the container for receiving the user-selected item(s) inside that container 204, establishing a wireless connection for virtually showcasing received item(s) on a software installed on a handheld unit to allow user-defined electronic amendments on the received item(s) 206, facilitating self-payment of the received item(s) electronically using the software 208, receiving receipts of the user-purchased item(s) through a printing unit fitted on the container 210 and scrutinizingly removing the user-purchased item(s) through an unlockable top cover equipped by the container 212.

SYSTEM AND METHOD FOR LEMMATIZING AND STEMMING ENGLISH LANGUAGE DIGITAL DOCUMENTS USING ARTIFICIAL INTELLIGENCE AND COMPUTATIONAL LINGUISTICS
V Chandralega, Department of Hospitality & Tourism

Application No.	202141059243	Year of Filing	2020-21
Status	Published	Year of Publication	2020-21

"While reading a digital document written in English Language, Natural Language Processing will help the program to understand different tenses of the verb. Natural Language Processing can help the system understand that look and looked are two different tenses of the same verb. This identification is very important, especially during Information Retrieval from English Language Digital Document. For the system to recognize the different tenses of the same verb, stemming and lemmatization are applied. Proposed is a method for stemming English word by reducing the same to its root. A Rule-Based Heuristic Technique is used to trim the ends of words and sort the same. The words look, looked and looking are simply from the same stem of the word look that are suffixed with –ed and –ing. The Heuristic Algorithm for Stemming and Lemmatizing is designed in such a way to avoid Over-stemming and Under-stemming thereby reducing the chances of wrong Information Perception and inaccurate Information Retrieval."

Non - Goverment Consultancy Projects

Non-Government Consultancy Projects 2020-21		
S. No	Department	Amount per Department
1	Department of Basic Sciences	250000
2	Department of Civil Engineering	850000
3	Department of Computer Science and Engineering	5105000
4	Department of Electrical Electronics and Communication Engineering	1000000
5	Department of Law	2745000
6	Department of Management	3505000
7	Department of Mass Communication	1000000
8	Department of Mechanical Engineering	2200000
9	Department of Pharmacy	3500000
Total		20155000

Non Govt. Consultancy Projects 2020-21
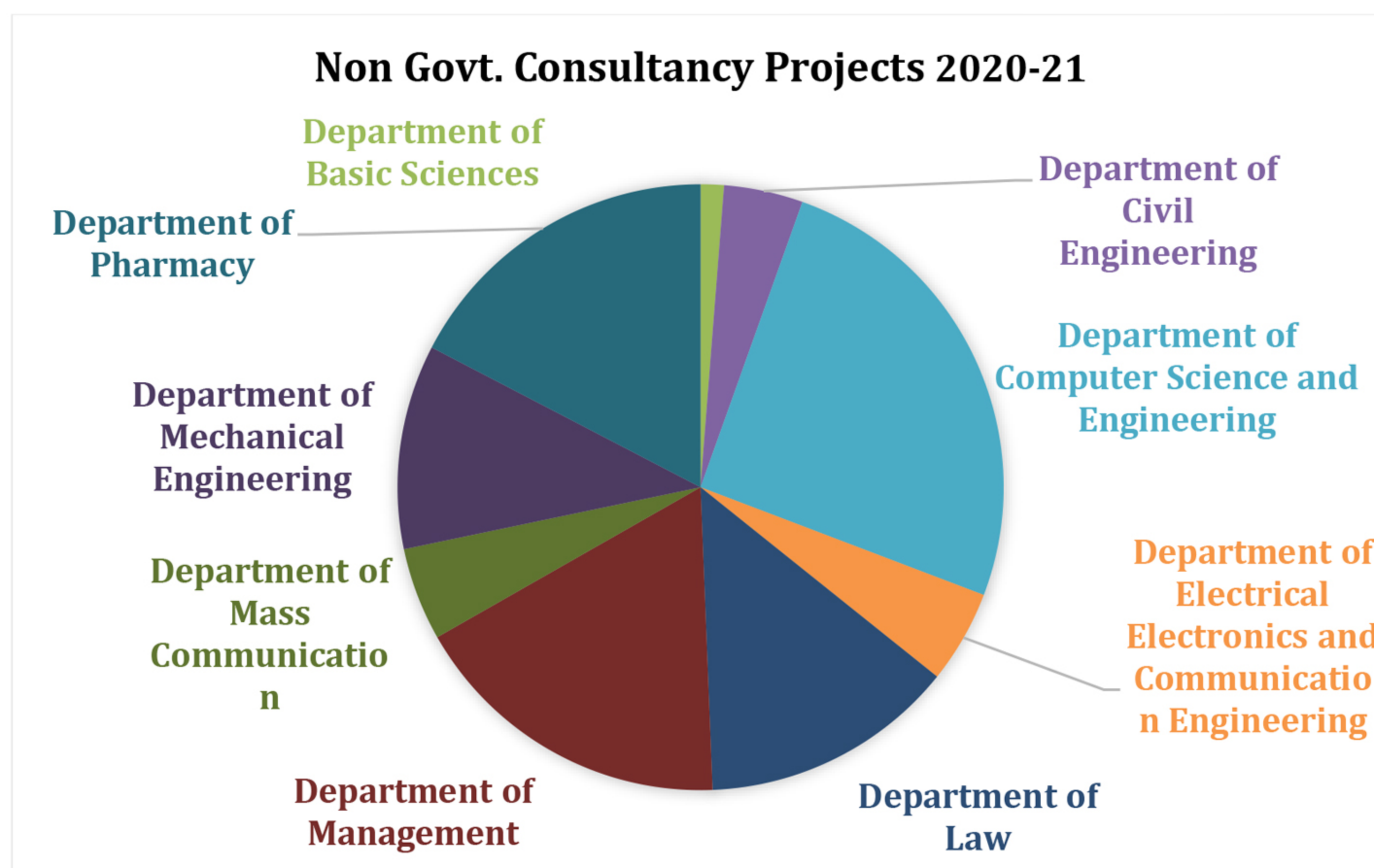
Consultancy Project

Department	Number of Projects
Department of Basic Sciences	7
Department of Civil Engineering	1
Department of Computer Science and Engineering	22
Department of Electrical Electronics and Communication Engineering	2
Department of Law	9
Department of Management	4
Department of Mass Communication	0
Department of Mechanical Engineering	7
Department of Pharmacy	13

Consultancy Projects
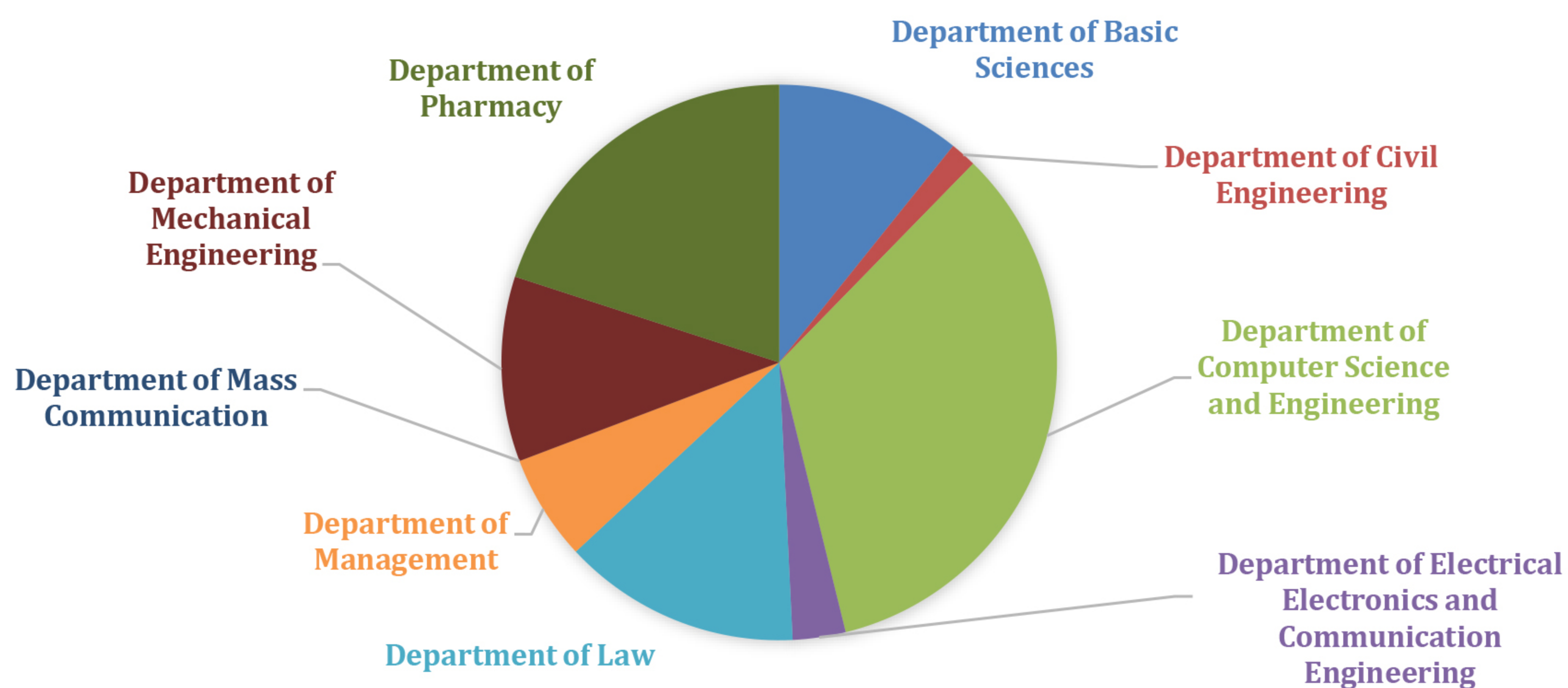
Seed Funding

Department	Amount Received
Department of Basic Sciences	1,302,000
Department of Architecture	359,200
Department of Computer Science and Engineering	250,000
School of Engineering	1,095,000
Department of Basic Sciences	620,000
Department of Nursing	44,000
Department of Management	880,000
Department of Finance and Commerce	852,000
Department of Law	10,000
Department of Bio-Sciences	270,000
Department of Humanities	450,000

Seed Funding Projects

GALGOTIAS UNIVERSITY
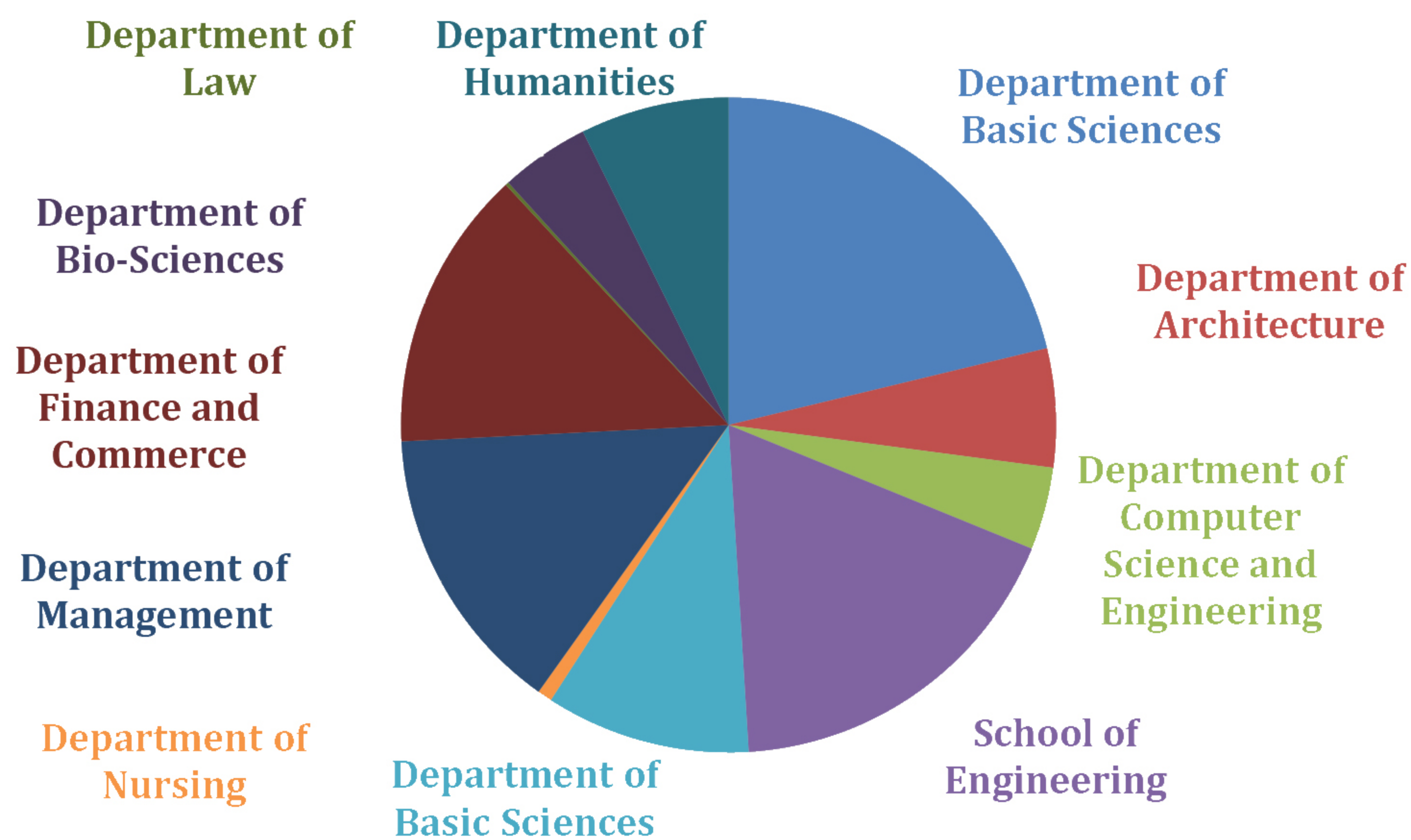
Citation Index
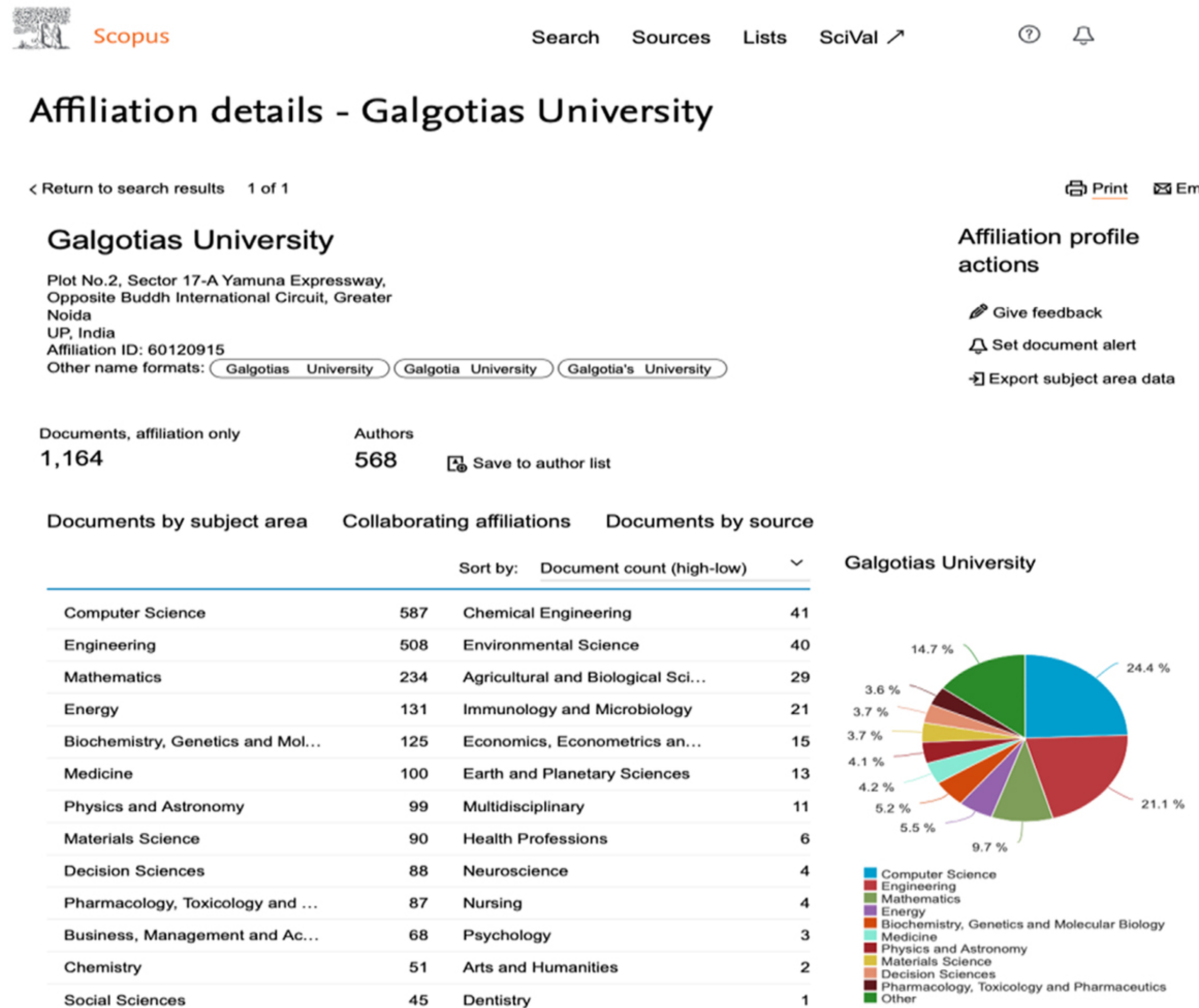
Scopus Citation of Galgotias University
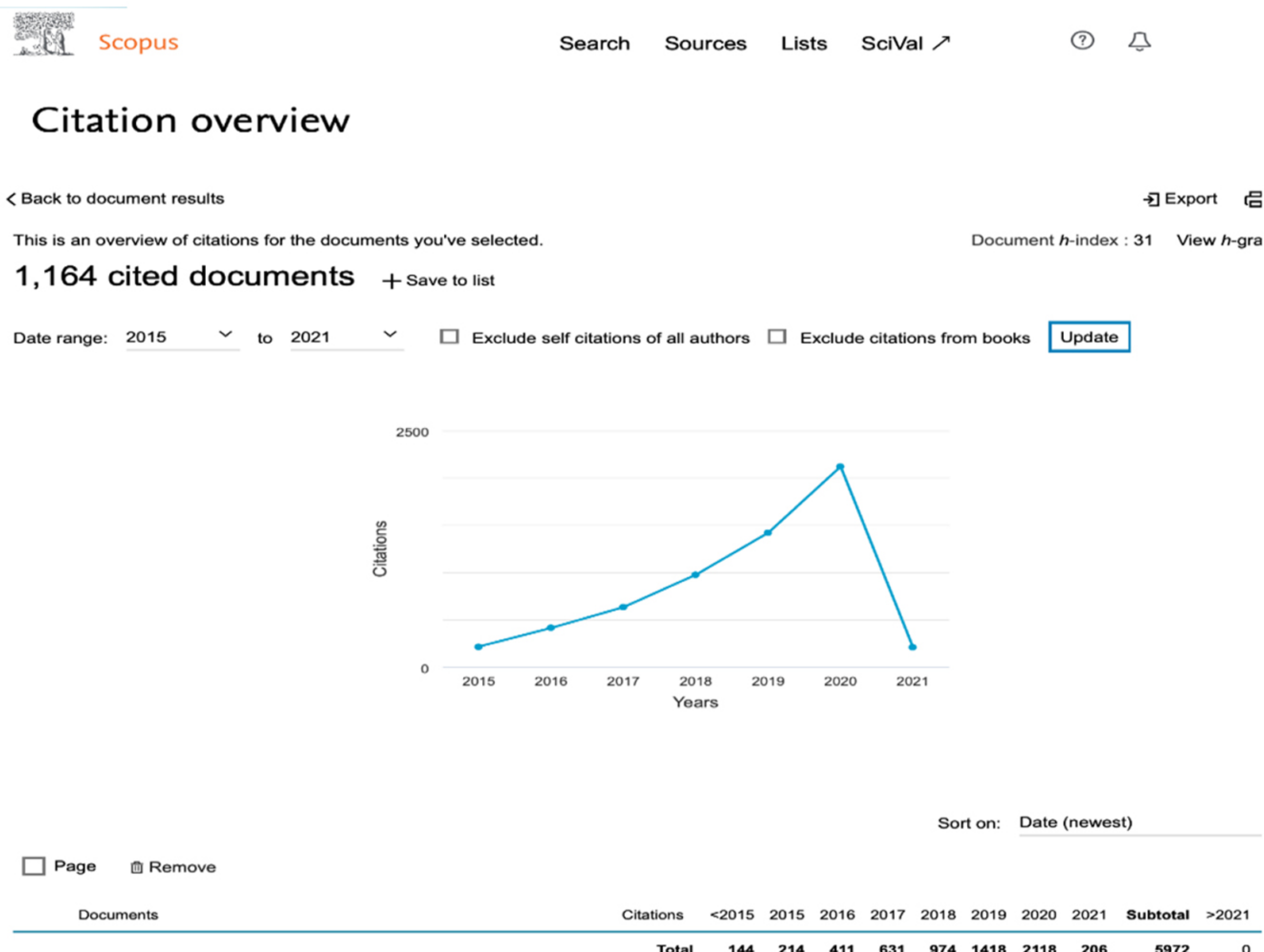
Citation Overview from 2015 to 2022

University Center of Research and Development 2021-22

Citation Report of WoS

Research Group Seminars

Seminar on Know how blockchain is changing your world

Seminar on Child Statelessness in India During pandemic situation

Seminar on VENTEL

Seminar on Placenta Previa

International Conferences

Sl. No	Conference	Posters
1.	**International Conference on Advances in Computing, Communication Control and Networking –ICACCCN (ICAC3N-20)** organized by Galgotias University in collaboration with IEEE UP Section from 18th December 2020 to 19th December 2020 on Zoom. The papers of the Conference are published in a Conference proceeding with ISBN 978-1-7281-8338-1 and indexed with Scopus, Web of Science and others. The link for same is https://icac3n-20.in	
2.	**ICEEE 2021: International Conference on Electrical and Electronics Engineering** organised by Galgotias University in collaboration with University of Malaya, Malaysia from 2nd Jan 2021 to 3rd Jan 2021 on WebEx. All the papers are Published in Conference Proceeding indexed with Scopus, Web of Science and Others. The link for same is http://www.iceee.in/	
3.	**2020 International Conference on Computing, Power and Communication Technologies (GUCON)** organized by Galgotias University in collaboration with IEEE from 2nd Sept 201 to 26th Sept 2021 held at Kuala Lumpur, Malaysia. The same is available at http://www.gucon.org/	

4.	**2 Days International virtual conference on "Wildlife Forensics, its laws and conservation** organized by Galgotias University in collaboration with Wildlife conservation trust from 28th July 2020 to 29th July 2020 at Galgotias University, Greater Noida. The same is available at https://www.galgotiasuniversity.edu.in/pdfs/wildlife-final.pdf	On International Tiger's Day International Conference on Wildlife Forensics, Its Laws & Conservation Date - 28th and 29th July 2020 Jointly Organized With Wildlife Conservation Trust & Department of Forensic Science (School of Basic and Applied Sciences) Galgotias University, Greater Noida
5.	**Advanced Computing and Intelligent Technologies Proceedings of ICACIT 2021-SEECE** organized by Galgotias University in collaboration with IEEE from 20th March 2021 to 21st March 2021 at Galgotias University, Greater Noida. The same is available at http://icacit.in/ICACIT2021/	Lecture Notes in Networks and Systems 218 Monica Bianchini Vincenzo Piuri Sanjoy Das Rabindra Nath Shaw *Editors* Advanced Computing and Intelligent Technologies Proceedings of ICACIT 2021 Springer

IPR Workshops

Sr. No.	Event	Date	Timing	Resource Person
1	One Week IPR Workshop	23-10-2021 to 27-10-2021	5:00 PM-7:00 PM	Dr Md Aftab Alam, Head- IPR Cell
2	IPR- Awareness (SCSE Faculty GU)	27-11-2021	2:00 PM-3:00 PM	Prof. Balamurgan Prof. Aftab Alam
3	Workshop on IPR (SOB, SEECE, SFC,SLE and SOH)	14-03-2020	10:00 AM-1:00 PM	Dr Jaspreet Dr Param Joshi
4	Workshop on IPR (SOAg, SON, SOL SMAS SOA, and SOE)	14-03-2020	2:00 PM-4:00 PM	Dr Jaspreet Dr Param Joshi
5	Workshop on IPR (SOB, SEECE, SFC, SLE and SOH)	11-03-2020	3:00 PM - 4:00 PM	Dr. Sansar Singh Chauhan
6	How to Write Systematic review and Technical Paper with projects	04-06-2020	3:00 PM - 4:00 PM	Dr. Meenakshi Sharma
7	Webinar on Nano electronics and its trending applications	22-06-2020	3:00 PM - 4:00 PM	Dr. D. Nirmal
8	Fuzzy, Machine Learning/Deep Learning for Remote Sensing Image Classification	27-06-2020	11:00 AM-1:00 PM	Dr. Anil Kumar
9	International Webinar on Artificial Intelligence in cloud computing and IoT	18-07-2020	4:00 PM - 5:00 PM	Prof. Vincenzo Piuri, Professor, University of Milan
10	International Webinar on Role of the Smart Grid in Facilitating the Integration of Renewable	27-07-2020	6:30 PM - 7:30 PM	Prof. Saifur Rahman, Founding Director, Advanced Research Institute at Virginia Tech, USA
11	Workshop on 'How to write a Research Paper?"	19-10-2020	10:00 AM-12:00 PM	Dr P K S Nain Dr P Mathiyalagan
12	Research Paper Writing Workshop Series,	20-10-2020	11:30 A.M. to 1:45 P.M.	Dr. Lisa P. Lukose
13	Workshop on General Practices of Publishing	03-02-2021	11:00 AM-1:00 PM	Dr. Partha Pratim Pal & Dr Khushbu Kushwaha
14	Research Writing & Publication	09-02-2021	2:00 PM-4:00 PM	Dr. Gaurav Kumar
15	Innovationem de Postulatum	11-05-2021	9:00 AM-5:00 PM	Dr Divya Tripathy

Workshop on Research Methodology

Post Corona Reconstruction Program by Prof. (Dr.) Muhammad Yunus, Nobel Peace Laureate

Webinar on Post-Corona reconstruction Program has been conducted by UCRD on 8th July 2020 to the faculties of Galgotias University to motivate and flow the positive energy after the Covid. The session has been presented by Prof. (Dr.) Muhammad Yunus, Nobel Peace Laureate also he is Founder of Grameen Bank known as "The bank for the poor's".

Webinar on "Internet based Education, Entertainment and Employability"

A webinar on Internet based Education, Entertainment and Employability has been organized by the University entre for research and Development on 20th June 2020. The session has been honored by Dr. Manpreet Sing Manna, SLIET Longawal, Diretor AICTE MHRD Commendation award by Hon'ble President of India.

University Center for Research and Development 2021-22

Expert Talk on Competitive advantage of Hospitality education and Switzerland as its birthplace

An Expert Talk session has been arranged by University center for research and Development on Competitive advantage of Hospitality education and Switzerland as its birthplace" on 5th May 2020. Mr. Amin Khandaker, Chief Academic Officer of SWISS IM&H has presented the session. The Session has been conducted.

Joint Online Faculty Development Programme
Data Science for All
July 27 to August 7, 2020

Jointly Organized by:
NIT Patna,
NIT Warangal,
IIIT DM Jabalapur

Resource Persons

Prof DVLN Somayajulu, IIITDM Kurnool
Prof RBV Subramnayam, NIT Warangal
Dr Atul Gupta, IIITDM Jabalpur
Dr T Ramakrishnudu, NIT Warangal
Dr Nagesh Bhattu, NIT Andhra Pradesh
Dr Anand Kumar, NITK Surathkal

Supported By :

Ministry of Electronics and Information Technology Government of India

Details

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Director, NIT Patna

Academic Level Coordinator
Dr. Prabhat Kumar,
NIT Patna

Proctor Level Coordinator
Prof. Meenakshi Sharma,
UCRD, Galgotias University, Gr. Noida

About NIT Patna

National Institute of Technology Patna is the 18th National Institute of Technology created by the Ministry of H.R.D. Government of India after rechristening the erstwhile Bihar College of Engineering Patna on 28.01.2004. The Institute imparts high level education training, research and development in science, engineering technology and humanities along with high quality education and values at UG, PG and Ph.D. level. At present the Institute offers courses in six major technical disciplines viz. Architecture, Civil Engineering, Computer Science & Engg., Electrical Engg., Electronics & Communication Engg. And Mechanical Engg. It also consists of well-established departments of Physics, Chemistry, Mathematics and Humanities and Social Sciences.

About E&ICT Academy Patna

Ministry of Electronics and Information Technology, Government of India has instituted seven Electronics and Information & Communications Technology (ICT) Academies of which, the academy of NIT Patna is one. The Academy at NIT Patna aims to design and organize basic as well as specialized training programmes in niche areas of electronics and ICT for the development of required knowledge base, skills and tools to equip the teaching community with better knowledge and understanding.

Contact Details: E & ICT Acacemy, NIT Patna (office)
Website: http://www.nitp.ac.in/ict/   **Landline:** 0612 - 237 1715 / 237 2715 (Ext: 344)
Email: eictapatna@nitp.ac.in, ucrd@galgotiasuniversity.edu.in
Contact : http://www.nitp.ac.in/ict/Contact_us.php

University Center for Research and Development 2021–22

GALGOTIAS UNIVERSITY

Course Contents

- **Mathematical Foundations of Data Sciences :** Matrices, Vectors, Vector Spaces, Matrix Decomposition, Singular Value Decomposition, Statistical Measures, Probability basics, density function, variance, conditional probability, Markov Chains.
- **Data Processing :** Dimensionality Reduction, Principal Component Analysis.
- **Machine Learning basics :** Regression, Classification Decision Trees, Naïve Bayesian Classifier, Clustering, Handling
- **Large Datasets:** MapReduce.
- **R for Data Science :** Data Wrangling, Data Visualization, Programming.
- **Python for Data Science :** Normal Python, NumPy, Pandas, Matplotlib.
- **Deep Learning**
- **Scikit, Keras and TensorFlow:** Practice on ML topics.

Key Features

- Online / Live lectures sessions by subject experts.
- Comprehensive tutorials and practice notes.
- Online lab and training sessions.
- Follow up sessions and discussion forums on research problems and internships.

Course Fee Details

Faculty/ PhD Scholar: Rs. 500/- (SC/ST = Rs. 250/-)
Others (Except Faculty/PhD-Scholar): Rs. 1000/- (SC/ST = Rs. 500/-)

Online payment details

Bank Name: Allahabad Bank
Account Name: NIT Patna
Account No.: 50380476798
IFSC Code: ALLA0212286

Link for registration:

https://forms.gle/N3WZZtJC41E9qHUo8
(Please mention your Proctor Coordinator Name)

University Center of Research and Development 2021-22

GALGOTIAS UNIVERSITY

INDO-MUSCAT ONE-WEEK VIRTUAL WORKSHOP ON RESEARCH WRITING SKILLS-SERIES-01

Date: 26th May to 30th May, 2020

Objective of the Workshop: University Centre of Research and Development (UCRD) is organizing One-week Virtual Workshop on Research Writing skills with Jointly with Modern College of Business and Science, Muscat which have collaboration with SAP University alliances, Franklin University, University Missouri St. Louis. This workshop on Research paper writing is primarily targeted at Research Scholars/Academicians in providing useful insights about writing good quality of research paper. Scientific papers are considered as an important indicator to measure the research output / performance of an individual, institution and also a country. Researchers publish their research findings mainly in the form of articles / papers in scientific and technical journals. This indicator directly linked to the career of an individual researcher and also an institution for getting funds, recognition etc. A great deal of value is attached for publishing high quality research papers. Writing a scientific research paper is an art as well as a sophisticated knowledge-based skill. Writing a scientific research paper is a prerequisite for undertaking research investigation. A substantive research effort is involved in writing a scientific research paper by a large number of International Researchers and by industry experts. However, several researchers do not know how to write a scientific research paper with the result that a large number of papers are being rejected by the peer reviewed quality journals. 'Publish or Perish' is the order of the day. There are several tasks involved in the process of publication such as contents of scientific paper, referencing styles and tools, citation databases, publishing ethics and plagiarism, choosing Right Journal, Impact Factor and H Index etc.

PATRONS

Hon'ble Chancellor
MR. SUNEEL GALGOTIA

Hon'ble Vice Chancellor
PROF. (DR) PREETI BAJAJ

Hon'ble CEO
MR. DHRUV GALGOTIA

CONVENOR:
Prof. (Dr.) Meenakshi Sharma
Prof. (Dr.) Dr. B. Balamurugan

University Centre of Research and Development

INDO-MUSCAT ONE-WEEK VIRTUAL WORKSHOP ON RESEARCH WRITING SKILLS

Date: 26th May to 30th May, 2020

Inaugural Session	9.30 AM

CHIEF GUEST

MAMOUN ALAZAB
Charles Darwin
University, Australia
Charles Darwin University,
Ellengowan Drive, Darwin,
NT 0909, Australia

DR NAVEEN CHILMUKHURTI
Head of Cybersecurity
Discipline, Director,
International Programs and
Partnerships, Computer
Science and IT La Trobe
University, Melbourne,
Australia

Zoom ID:	233-765-3786
Zoom Password:	Palav@1808

University Center of Research and Development 2021-22

GALGOTIAS UNIVERSITY

INDO-MUSCAT ONE-WEEK VIRTUAL WORKSHOP ON RESEARCH WRITING SKILLS

Date: 26th May to 30th May, 2020

GUEST SPEAKERS

Prof. (Dr.) Ramani
University Technology Petronas, Bandar Seri Iskandar, 32610, Perak, Malaysia.

TOPIC
How to get Research Grant Proposal and Its Utilisation

Meeting ID: 895 5314 6672
Password: 901116

29th May 2020
11.00 AM-01.00 PM

Prof. Omprakash Kaiwartya
Professor, Research Associated, Senior Member IEEE, Northumbria University, Newcastle, UK

TOPIC
E-Mobility and IoT enteric Research and Publication in top tier IEEE Transactions and IEEE journals

Meeting ID: 823 1667 3161
Password: 474667

29th May 2020
02.00 PM - 04.00 PM

Dr. Basant
Modern College of Business & Science University of Missouri St Louis, Franklin University USA) Muscat, Oman

TOPIC
Blended Learning: A synthesis of Best Practices

Meeting ID: 233-765-3786
Password: Palav@123

30th May 2020
11.00 AM-01.00 PM

Er. Ajay Singh
Director- Pwc India (PricewaterhouseCoopers)

TOPIC
Transitioning Towards- An Experience-Driven Research- UG/PG Students/Ph.d students

Meeting ID: 233-765-3786
Password: Palav@123

30th May 2020
2.00 PM-3.30PM

Dr. Aarati Mujumdar
"Head Department of General Education, Dr. Abdullah Bin Gani University of Malaya Kuala Lumpur, MALAYSIA"

TOPIC
Sustainability of Scientific Writing Skills in Publishable Research in Liberal Education

Meeting ID: 831 1025 6171
Password: 532477

30th May 2020
03.30 PM-05.00 PM

Dr. Aradhna Malik
IIT Kharagpur

TOPIC
Principles of Research Writing/Valedictory Function

Meeting ID: 831 1025 6171
Password: 532477

30th May 2020
05.00 PM-05.30 PM

Prof. Ahmed Al Naamany
Assistant Executive Chairman at Modern College of Business and Science (MCBS), Muscat

TOPIC
Valedictory Function

Meeting ID: 831 1025 6171
Password: 532477

30th May 2020
05.00 PM-05.30 PM

Professor Muttukrishnan Rajarajan
Director of the Institute for Cyber Security at City University of London -MGA Awards & Recognition Committee 2019-2020"

TOPIC
Valedictory Function

Meeting ID: 831 1025 6171
Password: 532477

30th May 2020
05.00 PM-05.30 PM

GALGOTIAS UNIVERSITY

INDO-MUSCAT ONE-WEEK VIRTUAL WORKSHOP ON RESEARCH WRITING SKILLS

Date: 26th May to 30th May, 2020

GUEST SPEAKERS

Prof. (Dr.) Preeti Bajaj
"Hon'ble Vice Chancellor- Galgotias University , Ex -Member-GC, National Board of Accreditations, BOG IEEE HKN 2019-21, Vice Chair Branding IEEE India Council 2020, Member -MGA Awards & Recognition Committee 2019-2020"

TOPIC
Academic Research during COVID'19

Meeting ID: 233-765-3786
Password: Palav@123

26th May 2020
10.30 AM-12.00 Noon

Dr Naveen Chilmukhurti
"Head of Cybersecurity Discipline Director, International Programs and Partnerships, Computer Science and IT La Trobe University, Melbourne, Australia"

TOPIC
Art of Writing High Impact Factor Journals Research Papers

Meeting ID: 233-765-3786
Password: Palav@123

26th May 2020
12.00 Noon - 2.00 PM

Prof. (Dr.) Dr. Sherimon P.C
"Faculty of Computer Studies Arab Open University, Oman Branch, Muscat, Sultanate of Oman"

TOPIC
Tip & Tricks on Funded Project opportunities in Middle East

Meeting ID: 896 0526 0063
Password: 188780

26th May 2020
2.30 PM-4.30 PM

Dr.R.Lakshmana Kumar
Hindusthan College of Engineering and Tchnology, Coimbatore, India

TOPIC
How to avoid plagiarism

Meeting ID: 820 5705 7501
Password: 011855

27th May 2020
9.30 AM-11.00 PM

Prof. (Dr.) Abdullah Bin Gani
University of Malaya Kuala Lumpur, MALAYSIA

TOPIC
Pragmatic Approach to Phd Research

Meeting ID: 850 4418 8095
Password: 457817

27th May 2020
11.00 AM-01.00 PM

Prof. (Dr.) Upasana G Singh
University of Kwa -Zulu Natal, South Africa

TOPIC
Research Made easy – Tricks and Tips

Meeting ID: 886 0759 1488
Password: 814071

26th May 2020
2.00 PM-4.00 PM

Prof. (Dr.) Thinagaran Perumal
Department of Computer Science Faculty of CS&IT, University Putra Malaysia

TOPIC
How to evaluate the Research and What high impacted Journal editor's aspect

Meeting ID: 899 4476 2452
Password: 557956

28th May 2020
11.00 AM-1.00 PM

Prof Mohd Noh Karsiti
Associate professor, University Technology Petronas, Malaysia.

TOPIC
Identify the Research problem and Research Ethics

Meeting ID: 875 0201 4444
Password: 777561

28th May 2020
2.00 PM-4.00 PM

Joint one-week virtual workshop with ICT Academy
SERIES-02

Joint one-week virtual workshop has been organized by the UCRD on "Learning Practical research skills and techniques (An innovative, Integrated Approach) Series. 2" on 10th August 2020 to 14th August 2020. Mr. Sufi Zahoor, Hon'ble chief executive officer of human cap, Former Sr. Vice President, Quark India has presented the session

Series-03

International STTP on **Research Writing & Design** — 28 Feb-21 March, 2021. Organized by University Center for Research & Development, Galgotias University.

INDO-ITALY ONE WEEK INTERNATIONAL VIRTUAL WORKSHOP ON RESEARCH METHODOLOGY –SERIES 04

University Center for Research and Development (UCRD), Galgotias University has organized the 'Indo - Italy One Week International Virtual Workshop on Research Methodology-Series 04' on Dated 6th Sept 2021 – 10th Sep 2021 for All Faculties and Research Scholars with the objective to have interaction regarding various dimensions of research and especially its methodology part mainly with Faculty and Ph.D. and Post-doctoral. Prof. K. K Aggarwal, Chairman, National Board of Accreditation and Esteemed Ela Gandhi and Esteemed Prof. (Dr.) Vicen Zo Pluri has honored the Occasion

GALGOTIAS UNIVERSITY

RESEARCH AWARDS

Galgotias University has organized the 2nd Research and Innovation Award Ceremony on 11th January 2022. Faculties with significant contribution in the field of research were felicitated and awarded with incentives. The Chief Guests, Dr. Richard John Robert, Chief Scientific Officer of England and Nobel Laureate along with Dr. Anil Sahasrabudhe, Chairman, AICTE New Delhi graced the ceremony.

The Chief Guests, Dr. Richard John Robert, Chief Scientific Officer of England and Nobel Laureate along with Dr. Anil Sahasrabudhe, Chairman, AICTE New Delhi graced the ceremony

Vice Chancellor Prof. Dr. Preeti Bajaj, Honoring the Chancellor Mr. Suneel Galgotia

Top Researchers of the Departments

Vice Chancellor Prof. Dr. Preeti Bajaj, Honoring the CEO Mr. Dhruv Galgotia

University Topper in Research

Awardees from the School SMAS

गलगोटिया विश्वविद्यालय ने शोध और नवाचार में उत्कृष्ट योगदान के लिये शिक्षकों और शोधार्थियों का किया सम्मान

आजाद पत्र न्यूज

ग्रेटर नोएडा। गलगोटिया विश्वविद्यालय के अंतर्गत संचालित यूनिवर्सिटी सेंटर ऑफ रिसर्च एंड डेवलपमेंट द्वारा द्वितीय शोध एवं नवाचार पुरस्कार समारोह का आयोजन किया गया। इसमें प्रो0 रिचर्ड जॉन रॉबर्ट (नोबल पुरस्कार विजेता) मुख्य वैज्ञानिक अधिकारी, न्यू इंग्लैंड बायोलैब्स तथा डॉ0 अनिल सहचबुद्धे (अध्यक्ष) एआईसीटीई, नई दिल्ली शामिल हुए।

विश्वविद्यालय के कुलाधिपति श्री सुनील गलगोटिया ने पुरस्कार समारोह के मुख्य अतिथि नोबल पुरस्कार विजेता डॉ रिचर्ड जॉन रॉबर्ट और एआईसीटीई के अध्यक्ष प्रो अनिल सहचबुद्धे का स्वागत किया। उन्होंने उच्च शिक्षा में अनुसंधान को बढ़ावा देने के लिए, पूरे देश में अनुसंधान की पारिस्थितिकी प्रणाली को विकसित करने पर जोर दिया। शोध को केंद्र में रखते हुए प्रोफेसर बजाज ने एक रिसर्च मैंडेट तैयार किया है, जिसके जरिए साल भर विभिन्न गतिविधियों का आयोजन किया जाएगा। यह विश्वविद्यालय के लिए हर्ष का विषय है कि विश्वविद्यालय को यूजीसी द्वारा 12वीं की सूची में शामिल किया गया है और नवाचार उपलब्धियों पर

संस्थानों की अटल रैंकिंग की उत्कृष्ट श्रेणी में भी सूचीबद्ध किया गया है।

नोबल पुरस्कार विजेता प्रो0 रिचर्ड जॉन रॉबर्ट न्यू इंग्लैंड बायोलैब्स, इप्सविच, मैसाचुसेट्स में मुख्य वैज्ञानिक अधिकारी हैं। उन्हें 1993 में फिजियोलॉजी व मेडिसिन में उत्कृष्ट कार्य करने पर नोबल पुरस्कार से नवाजा गया। प्रो. रॉबर्ट ने अपने व्याख्यान में नोबल पुरस्कार जीतने की अपनी यात्रा का वर्णन किया और जीवन में बाधाओं के बावजूद संकाय सदस्यों, युवा शोधकर्ताओं और विद्यार्थियों को प्रोत्साहित किया कि आपको अपने लक्ष्य पर ध्यान केंद्रित करना चाहिए। उन्होंने युवा शोधकर्ताओं को अपने शोध में नवीन होने के लिए प्रेरित किया। उन्होंने अनुसंधान में सफलता प्राप्त करने के लिए तीन प्रमुख कारकों का खाराश दिया- प्रचुर मात्रा में विशिष्ट ज्ञान, बहादुर संदेह की भावना, और पूर्ण उत्साह। उन्होंने पुरस्कार विजेताओं को जिज्ञासु बनने, उनकी संभावनों को पालन करने, अवसरों का लाभ उठाने और अपनी किस्मत का उपयोग करने के लिए प्रोत्साहित किया। "वह करें जो आपको पसंद है, आप हर दिन का आनंद लेंगे और आपका करियर कभी भी नौकरी की तरह महसूस नहीं करेगा" उन्होंने सलाह दी।

प्रो अनिल दत्तात्रेय सहचबुद्धे, भारतीय प्रौद्योगिकी संस्थान (आईआईटी), गुवाहाटी में मैकेनिकल इंजीनियरिंग के प्रोफेसर वर्तमान में अखिल भारतीय तकनीकी शिक्षा परिषद (एआईसीटीई) के अध्यक्ष हैं। शोध क्षेत्र में कार्य करने हेतु उन्हें कई पुरस्कारों से सम्मानित किया गया है। समारोह के दौरान उन्होंने युवा विद्वानों और पुरस्कार विजेताओं को संबोधित करते हुए कहा कि भारतीय शिक्षा प्रणाली में अकादमिक अखंडता के बारे में जागरूकता पैदा करना समय की आवश्यकता है। ईमानदारी अकादमिक और अनुसंधान में उत्कृष्टता का स्तंभ है। सत्र के दौरान उन्होंने कहा कि किसी को वित्त पोषित परियोजनाओं पर ध्यान

केंद्रित करना चाहिए और पूरे जोश के साथ अनुसंधान पर काम करना चाहिए। सत्र में बोलते हुए अध्यक्ष ने अनुसंधान में उत्कृष्टता हासिल करने पर जोर दिया और कहा कि रटने की शिक्षा पर जोर न देते हुए छात्रों को मूल विचारक बनाना चाहिए। यूजीसी द्वारा विश्वविद्यालय को 12वीं की सूची में शामिल होने पर विश्वविद्यालय के सीईओ श्री ध्रुव गलगोटिया ने गलगोटिया परिवार को बधाई दी। इसके साथ ही उन्होंने पुरस्कार विजेताओं, संकाय सदस्यों, शोध विद्वानों को उत्साहित किया। सीईओ श्री ध्रुव गलगोटिया ने कहा कि भारतीय शिक्षा और अनुसंधान की प्रमुख कमजोरी भारतीय अनुसंधान में विश्वविद्यालयों द्वारा हिस्सेदारी की अपेक्षाकृत बहुत कम होना है। इसको बढ़ाने की जरूरत है। छात्रों एवं संकाय सदस्यों में अनुसंधान और नवाचार की योग्यता के विकास के लिए विश्वविद्यालय समय-समय पर छात्रों एवं संकाय सदस्यों के संसाधन एवं प्रोत्साहन देने का कार्य कर रहा है। ताकि छात्र एवं संकाय सदस्यों की रुचि शोध क्षेत्र विकसित हो। विश्वविद्यालय की कुलपति प्रोफेसर (डॉ.) प्रीति बजाज ने मुख्य अतिथि की हार्दिक स्वागत किया। उन्होंने अनुसंधान और नवाचार के क्षेत्र में विश्वविद्यालय की उपलब्धियों का भी वर्णन किया। उन्होंने बताया कि यह

आयोजन विश्वविद्यालय में अनुसंधान-आधारित अध्ययन, नए प्रयोगों और नवाचारों को प्रोत्साहित करेगा। प्रोफेसर बजाज ने कहा कि विश्वविद्यालय पिछले साल से शोध के क्षेत्र में उत्कृष्ट योगदान देने वाले शिक्षकों और छात्रों को प्रोत्साहित कर रहा है। अपने वक्तव्य में कहा कि शोध किसी भी राष्ट्र की प्रगति विज्ञान और प्रौद्योगिकी के क्षेत्र के साथ-साथ शिक्षा और अनुसंधान में हुई निरंतर वृद्धि पर निर्भर करती है। इस उद्देश्य को पूरा करने के लिए गलगोटिया विश्वविद्यालय लगातार प्रयास कर रहा है।

समारोह के दौरान प्रतिकुलपति डॉ. अवधेश कुमार, रजिस्ट्रार डॉ. नितिन गौर, यूएसीआरडी डीन प्रोफेसर (डॉ.) मीनाक्षी शर्मा, डायरेक्टर इंटरनेशनल रिलेशंस डॉ. बी. बालारुगन भी मौजूद थे और उन्होंने पुरस्कार विजेताओं को प्रोत्साहित किया और बधाई दी। समारोह में विश्वविद्यालय के संकाय सदस्यों, छात्रों और शोधार्थियों ने भाग लिया। वहीं कोरोना महामारी को ध्यान में रखते हुए कार्यक्रम ऑफलाइन तथा ऑनलाइन दोनों माध्यमों के जरिये किया गया। कार्यक्रम का संचालन प्रोफेसर मीनाक्षी शर्मा ने किया। इस कार्यक्रम में 130 शिक्षकों तथा 40 छात्रों को प्रस्तुति पत्र के अलावा प्रोत्साहन राशि दी गई।

In Recognition of your contribution among world's Top 2% Scientist for the year 2020 by Elsevier BV, Stanford University
Rishabha Malviya
awarded on 11th January 2022

In Recognition of your contribution among world's Top 2% Scientist for the year 2020 by Elsevier BV, Stanford University
Amit Singh
awarded on 11th January 2022

OPEN HOUSE PROJECTS

S.NO	Division	Name of the School	Number of projects per Division	Number of projects per School
1	Innovation	School of Agriculture	20	98
2	Precision Agriculture		20	
3	Resource Conservation		44	
4	Startup/ Self Entrepreneur		14	
5	Financial Markets & Services	School of finance and Commerce	15	70
6	Investment		18	
7	Marketing		22	
8	Regulation& technology in Buisness		15	
9	Cardiovascular Technology	School of Medical and Allied Sciences (paramedical)	23	175
10	Medical laboratory Technology		29	
11	Optometry		17	
12	Physiotherapy		106	
13	Aviation	School of Buisness	3	14
14	BBA LSCM		1	
15	Bus. Anal		1	
16	Finance		3	
17	HR		3	
18	Marketing Division		3	
19	Chemistry	School of Basic &Applied Sciences	6	55
20	Clinical Research Divison		3	
21	Life Sciences		12	
22	Forensic Science		19	
23	Mathematics		6	
24	Physics		9	
25	Economics	SLE	18	76
26	English		22	
27	Political Science		22	
28	Psychology		12	
29	SOCIOLOGY		2	
	Total Projects		488	488

University Center of Research and Development 2021-22

University Center of Research and Development 2021–22

Airport Ramp and Runways

School/ Dept Name	School of Business		
Division	Aviation	Program	BBA Aviation Management
Project Title	Airport Ramp and Runways		
Name of the Students	Name of the Student	Enrolment Number	Email
	Monika	20SLAM1020001	monika.20slam1020001@galgotiasuniversity.edu.in
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	Praptika Roy	20SLAM1020006	praptika.20slam1020006@galgotiasuniversity.edu.in
Name of Mentor	Prof. Shiv Kumar Sharma		
Project Outcomes	☐ Research paper ☐ Patent ☐ Book chapter		
% of Plagiarism	8%		

Abstract *(Should be more than 500 words and less than 900 words)*

"ICAO" which is also known as International Civil Aviation Organization has described a runway to be a rectangular area where a land aerodrome is prepared for the landing and take-off of aircraft" for commercial airlines business making daily turnovers. Specifically, if spoken about "Runways", these may be a man-made surface or a natural surface, whereas a "Ramp" refers to the area in airport where the commercial aircrafts are parked. The term comes from the days of seaplanes, where 'Ramp' traces its roots back to the days of seaplanes when there literally was a ramp from the water to the terminal parking area.

In our model we have built:
- Terminal Building from where passengers transfer between ground transportation and the facilities that allow airline passengers to board and de-board from an aircraft.
- The Remote Bay which is an isolation bay is a special parking space created for an aircraft facing n exigency like hijack or bomb threat.
- Ramp area where aircraft are parked, loaded and unloaded. And the yellow line which denotes the Taxiway. •The White stripe located on each side of the runway the marking provides a visual aiming point for landing the aircraft.
- The Red points on the runway which denotes the end line of runway (runway end).
- The most important of all is the ATC Tower (Air traffic controllers) which monitor the location of aircraft in their assigned airspace by radar and communicate with the pilots by radio. The generic role of an air traffic controller is quite complex, as they are the ones who works from the control tower, giving clearance for aircraft to take off and land safely in the airport.

Keywords

Terminal building, air traffic control tower, remote parking bays.

OPEN HOUSE PROJECTS

Operation and supply chain management of Nestle.	
School/ Dept Name	School of Business
Division	Business Analytics
Project Title	Operation and supply chain management of Nestle.

Division	Business Analytics	**Program**	BBA (B.A)

Name of the Students	**Name of the Student**	**Enrolment Number**
	Arti Famda	20gsob1090035
	Kaif Ahamed	20gsob1090001
	Divyanshu Kumar Rai	20gsob1090034

Name of Mentor	Dr. Gaurav Gupta
Project Outcomes	✔ **Research paper** ☐ **Patent** ☐ **Book chapter**
% of Plagiarism	23%

Abstract (Should be more than 500 words and less than 900 words)

In this model we see that there is a farm in which the raw materials are being grown and then supplied to production unit by the suppliers. Then the finished goods or manufactured goods are being taken to the warehouses where products are stored and then they are distributed to the various retailers or various shops.

If we explain Analytically:

When one unit of the product will be sold to the customer then the owner of the retailer will get the notification of the product that his one unit has been sold and the information of sold product will automatically will flow to all the departments or units involved in that chain of operation and supply chain. Simultaneously the sold product will get deducted in all the units. This will affect the production data and then all the decisions are being made that how much product again has to be manufactured or made in all the production unit. So basically it's a kind of continuous flow of information. And here analytics plays a very vital role in operation and supply chain of Nestle company. So by this we can reduce the wastage of time, money and materials that will result in cost minimization and profit maximization.

Keywords

Raw material, Suppliers, Retailers, Unit, Information

Five-day Workshop on Road map to startup success

Startup Cell & IIC, Galgotias University has organized the Five Days Workshop on Roadmap to Startup Success from 31st Jan. to 04th Feb. 2022.

GALGOTIAS UNIVERSITY

Future Plan (2021-22)

GALGOTIAS UNIVERSITY
(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

NBA ACCREDITED · CSE | ECE | ME

GRANTED '12B' STATUS

2nd "EXCELLENT"

Research Activity Calendar 2022

Reviews of Research Files

Date	Time	School
7th Feb 2022	2.00 - 4.00 PM	SCSE
8th Feb 2022	2.00 - 4.00 PM	SOB, SON
9th Feb 2022	2.00 - 4.00 PM	SBAS, SMAS
10th Feb 2022	2.00 - 4.00 PM	SOHT, SFC, SOAD
11th Feb 2022	2.00 - 4.00 PM	SOENGG
12th Feb 2022	2.00 - 4.00 PM	SOL, SOAG
14th Feb 2022	2.00 - 4.00 PM	SOLE, SOE

Workshops on Writing of Research Paper

Date	Time	School
7th Feb 2022	10.00 - 11.30 AM	SCSE
8th Feb 2022	10.00 - 11.30 AM	SOB, SON
9th Feb 2022	10.00 - 11.30 AM	SBAS, SMAS
10th Feb 2022	10.00 - 11.30 AM	SOHT, SFC, SOAD
11th Feb 2022	10.00 - 11.30 AM	SOENGG
12th Feb 2022	10.00 - 11.30 AM	SOL, SOAG
14th Feb 2022	10.00 - 11.30 AM	SOLE, SOE

Research Activities

Date	School	Activity
01 - 05 Feb 2022	UCRD	FDP
21nd Feb 2022	UCRD	Workshop
7 - 11 Feb 2022	SFC & SOB	Int. Conference
21 - 25 Feb 2022	SOENGG + SOA	Int. Conference
14 - 18 Mar 2022	SOE + SOLE	Int. Conference
21 - 25 Mar 2022	SCSE	Int. Conference
18 - 22 Apr 2022	SBAS + SOAG	Int. Conference
25 - 29 Apr 2022	SMAS + SON	Int. Conference
02 - 04 May 2022	SOL + SOH + SMCS	Int. Conference
13 - 14 May 2022	UCRD	Int. Conference

Students Project Review

Date	Time	School
15th Feb 2022	2.00 - 4.00 PM	SCSE
16th Feb 2022	2.00 - 4.00 PM	SOB, SON
17th Feb 2022	2.00 - 4.00 PM	SBAS, SMAS
18th Feb 2022	2.00 - 4.00 PM	SOHT, SFC, SOAD
19th Feb 2022	2.00 - 4.00 PM	SOENGG
22nd Feb 2022	2.00 - 4.00 PM	SOL, SOAG
23rd Feb 2022	2.00 - 4.00 PM	SOLE, SOE

Research Group Activities

Date	Time	Schools
7th Feb 2022	2.00 - 4.00 PM	All Schools
7th Mar 2022	2.00 - 4.00 PM	All Schools
4th Apr 2022	2.00 - 4.00 PM	All Schools
2nd May 2022	2.00 - 4.00 PM	All Schools
6th Jun 2022	2.00 - 4.00 PM	All Schools

Progress Meeting with Research Coordinators

Date	Time	Schools
8th Feb 2022	2.00 - 4.00 PM	All Schools
8th Mar 2022	2.00 - 4.00 PM	All Schools
5th Apr 2022	2.00 - 4.00 PM	All Schools
3rd May 2022	2.00 - 4.00 PM	All Schools
7th Jun 2022	2.00 - 4.00 PM	All Schools

Dean Meetings

Date	Time	Schools
7th Feb 2022	09.00 AM - 10.00 AM	Engineering
7th Feb 2022	01.00 PM - 02.00 PM	Non Engineering
1th Apr 2022	09.00 AM - 10.00 AM	Engineering
1th Apr 2022	01.00 PM - 02.00 PM	Non Engineering
3rd Jun 2022	09.00 AM - 10.00 AM	Engineering
3rd Jun 2022	01.00 PM - 02.00 PM	Non Engineering

Final File Submission

Date	Time	Schools
4th Jul 2022	9.00 AM - 5.00 PM	SCSE
5th Jul 2022	9.00 AM - 5.00 PM	SOB, SON
6th Jul 2022	9.00 AM - 5.00 PM	SBAS, SMAS
7th Jul 2022	9.00 AM - 5.00 PM	SOHT, SFC, SOAD
8th Jul 2022	9.00 AM - 5.00 PM	SOENGG
9th Jul 2022	9.00 AM - 5.00 PM	SOL, SOAG
11th Jul 2022	9.00 AM - 5.00 PM	SOLE, SOE

University Center of Research and Development 2021-22