



CHRIST

COLLEGE OF ENGINEERING AND TECHNOLOGY

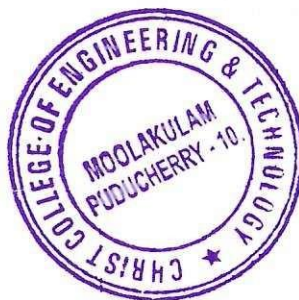
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Pitchaveeranpet, Moolakulam, Pondicherry - 605010.


(A Unit of Sam Paul Educational Trust)

CRITERIA 7 INSTITUTIONAL VALUES AND BEST PRACTICES

7.3. Institutional Distinctiveness

TITLE: RESEARCH AND START UP ECOSYSTEM




Dr. A. SIVAKUMAR, M.E., Ph.D., M.I.S.T.E.,
PRINCIPAL
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Criteria 7. INSTITUTIONAL VALUES AND RESPONSIBILITIES

7.3. Institutional Distinctiveness

7.3.1. Portray the performance of Institution in one area Distinctive to its priority and thrust

Title: Research and start up Ecosystem in IIC:

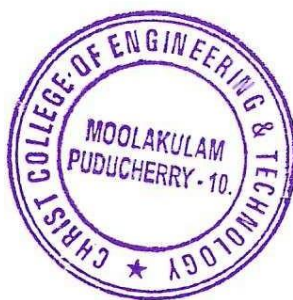
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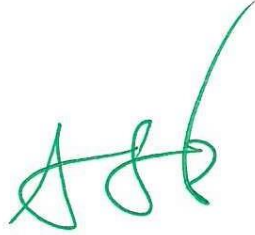
The AICTE Startup policy led to the establishment of the Institution's Innovation Council (IIC) at the Christ College of Engineering in Puducherry. For all information, this cell serves as a one-stop shop. The Christ College of Engineering and Technology forms member committee to develop comprehensive guidelines for different aspects of innovation, startup, and entrepreneurship management with the aim of adopting the National Innovation and Start-up Policy at the institution level. This committee will be deliberating on various facets of nurturing innovation and startup culture in the institution, which will cover intellectual property ownership, norms for technology transfer, and commercialization. Subsequent to the release of the Startup Policy by AICTE and further training received from the Ministry of Education's Innovation Cell and interaction with industry advisors and mentors, a comprehensive policy guiding document has also been prepared. Innovation is the application of concepts in real life that lead to the creation of new products or services or enhance the quality of those already available. In CCET every occasion the various ideas are collected from students and faculties and that will be discussed in detail for further focus on various activities like promoting of ideas through Conferences, IPR, beginning startup by students. Innovation frequently occurs when creators create more efficient goods, procedures, services, technology, artwork, or business plans that they then make available to the public, governments, and businesses. As a part of IIC calendar activity every semester Institute focus on organizing webinars in the area on Design prototyping, startup ecosystem etc. When solving a technical or scientific problem, engineering is frequently the means by which technical innovation emerges. MIC's primary goal in CCET is to provide a comprehensive ecosystem that will support an innovative culture in all educational settings, from idea development to pre-incubation and successful start-ups emerging from the incubator. Additionally, MIC will work on creating a ranking system to pinpoint establishments that are at the forefront of innovation. An "innovation cell" has been established by the Indian Government's Ministry of Education with the aim of methodically promoting an innovative culture in all higher education institutions (HEIs) throughout the nation. CCET focus on students skills by promoting their ideas through national level contest like AICTE – Vishvakarma awards, smart India hackathon etc. IIC of CCET encourages students and Faculties toward discoveries and research by integrating significant projects within the curriculum during the previous few years. Innovation can happen by accident, as a consequence of a significant system failure, or as a result of the efforts of several diverse individuals. Manufacturer innovation is the conventionally acknowledged source in the most basic linear model of innovation. This is the point at which an individual or company innovates for commercial gain. CCET motivates students and faculties to submit their ideas in conferences which was conducted in other colleges. Businesses can innovate in a variety of ways, but formal research and development (R&D) for "breakthrough innovations" is currently receiving a lot of attention. While more gradual innovations may come from experience, more radical and revolutionary inventions typically come from research and development. However, there are several exceptions to each of these generalizations.



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In India, the higher education landscape is evolving and changing bit by bit. The need of the hour is to drastically re-energize and rejuvenate our higher education sector through innovation and excellence, both in academics and research, given our enormous and dynamic needs. We are beset by a number of challenges, like brain drain, unemployment, and population explosions. A critical evaluation of our nation's research policies, practices, and procedures is urgently needed, as is a brainstorming session to discuss the issues arising from the rapidly shifting global landscape. It is imperative that we devise plans and implement the required actions to improve research and elevate the caliber of research conducted at our universities in this exact setting. In order to improve our research and raise the caliber of our research significantly, we must build our research infrastructure. The establishment of research centers within existing institutes and the identification of new institutes capable of doing top-notch research might make this feasible. In addition to having enough skilled labor, these centers must have all the advanced equipment needed to carry out high-end research, databases needed to perform systematic literature reviews and meta-analyses, and access to the literature via databases like Scopus, Science Direct, Pubmed. The chosen workforce must receive specialized training based on necessity, taking into account the specialists' prioritized research thrust areas. The next generation of innovators and divergent thinkers will need to come from a variety of professional education sectors in today's innovation economy. Thus, educators must be knowledgeable about the concepts and methods of cutting-edge research in their domains. The next generation of innovators and divergent thinkers will need to come from a variety of professional education sectors in today's innovation economy. Thus, educators must be knowledgeable about the concepts and methods of cutting-edge research in their domains. Research using a decision-oriented approach is available; its goal is to determine "best practice" and direct policy decisions. Then there is innovation based on research, which is what drives advancement in an applied sector. Simply implementing a behavior that is thought to be new can be considered "innovation" in ordinary language. "Decision-oriented" research, or research influencing the adoption decision, is the pertinent research in that situation. However, research intended to produce inventions is referred to as "research-based innovation." An idea's explanatory power is the final yardstick by which basic research ideas are evaluated. Academicians and other researchers investigate novel theories, apply theory to real-world situations, conduct futuristic research, create new goods and services, and engage in other activities as part of their research. A new item, like an invention, or the process of creating and introducing new things are frequently referred to as innovations. Innovations in the tech industry are typically new products, but they can also be new approaches to problems or even new ways of thinking. A new item, like an invention, or the process of creating by promoting ideas (IIC).




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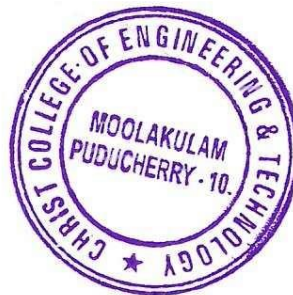
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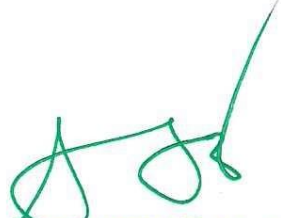
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7.3. Institutional Distinctiveness

7.3.1: Portray the performance of the Institution in one area distinctive to its priority and thrust




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IIC (INSTITUTE INNOVATION CELL)

ABOUT IIC

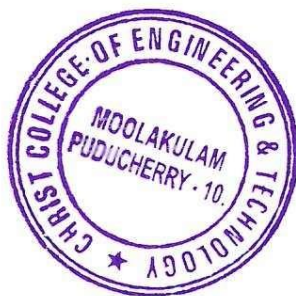
In order to systematically promote an innovative culture throughout all higher education institutions (HEIs), the Ministry of Human Resource Development (MHRD), Government of India, founded the "MHRD's Innovation Cell (MIC)." The main goal of MIC is to empower young students in their quest for knowledge by assisting them in working with novel concepts and developing them into working prototypes during their formative years. The establishment of "Institution's Innovation Councils (IICs)" in a few chosen HEIs is something that MIC hopes to promote.

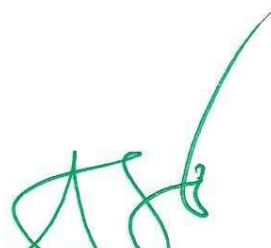
Major focus of IIC

- To establish a thriving ecosystem of innovation locally. HEIs' mechanism for enabling startup.
- Set up the institution in accordance with the Innovation Achievements Framework for the Atal Ranking of Institutions. The establishment of a functional ecosystem for idea scouting and pre-incubation. Students studying technology should improve their cognitive abilities.

Functions of IIC

- To carry out in a timely manner the different innovation and entrepreneurship-related initiatives as directed by the Central MIC.
- Spotlight success stories and recognize and honor innovations.
- Arrange recurring seminars, workshops, and get-togethers with professionals, investors, and entrepreneurs. Establish a mentorship program for young entrepreneurs.
- Make connections with colleagues and national groups that support entrepreneurship.
- Establish an innovative projects platform for the institution's teachers and students to showcase their creative work.
- With industry participation, arrange hackathons, idea competitions, mini-challenges, etc.




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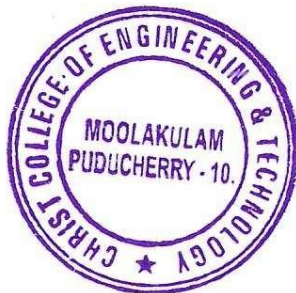
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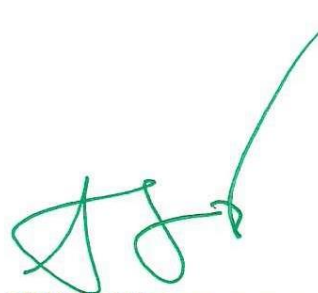
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IIC (INSTITUTE INNOVATION CELL)

Committee members list:

S.NO	NAME OF THE COORDINATORS	POSITION ASSIGNED IN IIC
1	Dr.A.SivaKumar- Principal	President
2	Dr.P.Chandru Devakannan- Iyear Coordinator	Vice President & NIRF Coordinator
3	Dr.Y.Thiagarajan- HOD/EEE	Convener
4	Dr.R.Boopathi –Asst Prof(Sr.Grade)-EEE	IPR Coordinator
5	Dr.S.Anandalatchoumy-HOD/ECE	Innovation Activity Coordinator
6	Dr.T.Thirumurugan-Assoc Prof/ECE	ARIIA Coordinator
7	Mrs.K.Sudha /HOD -CSE	Interinship Activity Coordinator
8	Mr.S.Sivasankaran/Assoc Prof-CSE	Social Media Partner
9	Mr.S.S.Karthik/Asst Prof-ECE	Startup Activity Coordinator




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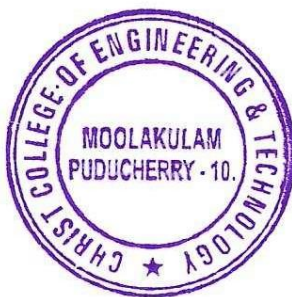
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IIC (INSTITUTE INNOVATION CELL)

QUIZ ON NATIONAL UNITY DAY



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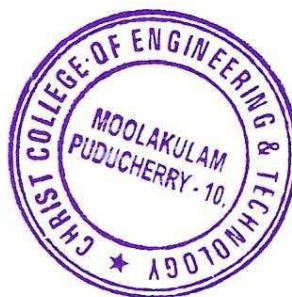
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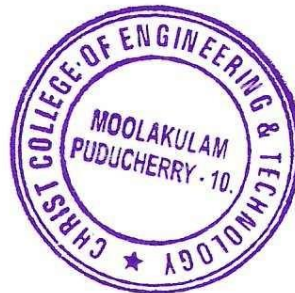
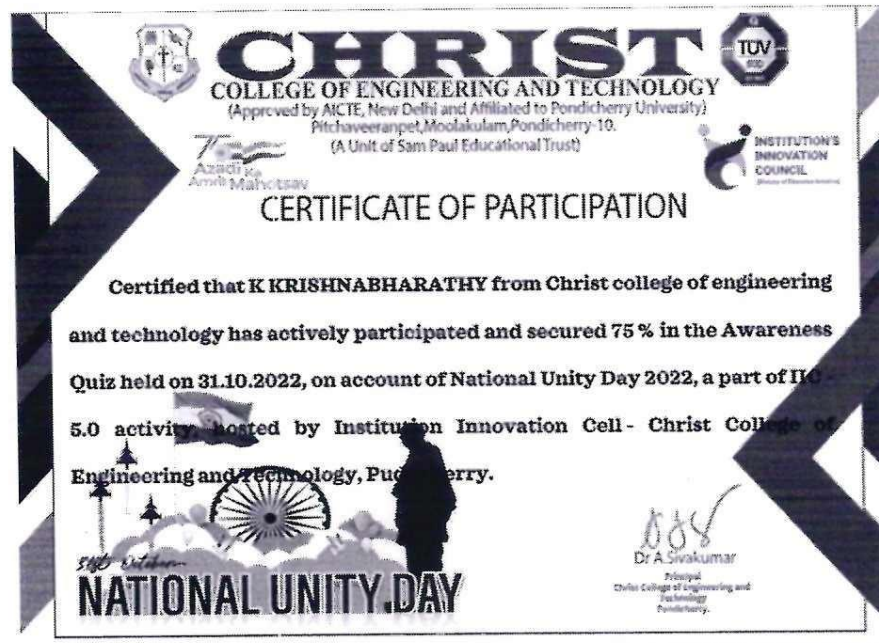
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National INNOVATION and STARTUP Policy (NISP) for Students and Faculty

On September 11, 2019, at AICTE in New Delhi, former education minister Shri Ramesh Pokhriyal, often known as "Nishank," launched the "National Innovation and Start-up Policy 2019" for instructors and students in HEIs. This strategy aims to direct higher education institutions in supporting student-driven inventions and start-ups and to include teachers and students in these endeavors on campus. Enabling HEIs to develop, optimize, and fortify the campus's innovation and entrepreneurial ecosystem is the goal of the policy.

It will be crucial in maximizing the potential of students' innovative problem-solving skills and entrepreneurial spirit, as well as in fostering robust intra- and inter-institutional collaborations with ecosystem enablers and other stakeholders at the local, state, and federal levels. The MoE's Innovation Cell is putting the policy into practice, working with AICTE, UGC, state/UT administrations, and institutions in tandem. The policy is being implemented in order to facilitate HEIs' prompt adoption.

CCET'S VISION, MISSION, GOAL, AND OBJECTIVE

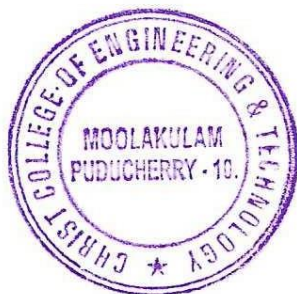
Vision: By 2030, we want to establish Christ College of Engineering and Technology (CCET) as one of India's innovation hubs and the top location for startups.

Mission: The objective is to create, foster, and maintain a thriving startup environment in CCET that will lead to employment development and innovation driven by entrepreneurship.

Short-term Objectives (Outcomes) : The growth of at least five technology start-ups in CCET should be encouraged, facilitated, and supported.

Long-term Objectives (Impacts)

Provide at least five high-growth Indian start-ups with committed support as they create cutting-edge technological solutions with significant societal implications in areas such as food, clean energy, healthcare, education, and sanitation.



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MoE's
INNOVATION CELL
(GOVERNMENT OF INDIA)



INSTITUTION'S
INNOVATION
COUNCIL
(Ministry of Education - Govt. of India)



CERTIFICATE

This is to certify that

Christ College of Engineering and Technology, PUDUCHERRY

has established Institution Innovation Council(IIC) as per the norms of Innovation Cell,
Ministry of Education, Govt. of India during IIC Calendar year 2020-21

Prof. Anil D. Sahasrabudhe
Chairman, AICTE

Dr. Abhay Jere
CIO, MHRD,
Innovation Cell

Date : 2020-09-11

Certificate No : 4696



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CIRCULAR

Date: 25.01.2023

The National Innovation and Startup Policy (NISP) committee meeting is scheduled on 25.01.2023 at 10.30 AM. Hence all the members of NISP are requested to attend the meeting without fail.

Convenor: Dr.P.Chandru Deva Kannan

Venue: Library, Main Block

Agenda:

1. Welcome address by Principal.
2. Discussion on NISP policy and reviewing guidelines of NISP.
3. Reviewing thrust areas identified for intervention and short-term and long-term plans of activities which are framed in previous meetings.
4. Framing National innovation & startup policy for faculty and students of CCET.
5. Vote of Thanks.

Convenor

Copy to:

1. IIC members & NISP members
2. Principal office.
3. All the Heads



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Annexure I

NATIONAL INNOVATION & STARTUP POLICY

About NISP

NISP 2019 was launched by the Hon'ble Minister of HRD on September 11, 2019. The National Innovation and Startup Policy 2019 for students and faculty of Higher Education Institutions (HEIs) will enable the institutes to actively engage students, faculties, and staff in innovative entrepreneurship-related activities. This framework will also facilitate the Ministry of Human Resource Development in bringing uniformity across HEIs in terms of Intellectual Property ownership management, technology licensing and Institutional Startup policy, thus enabling the creation of a robust innovation and Startup ecosystem across all HEIs.

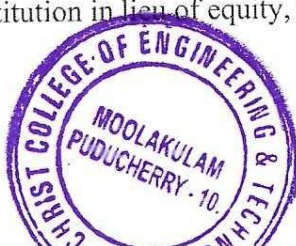
The 'National Student and Faculty Startup policy 2019' is a guiding framework to envision an educational system oriented towards startups and entrepreneurship opportunities for student and faculties.

The objective of this policy formulation are as follows:

- To guide HEIs to promote and motivate students for Innovation & Entrepreneurship
- To create Innovation Pipeline and Pathways for Entrepreneurs
- To Incentivize Faculty & Students for Entrepreneurship
- To provide Incubation & Pre-Incubation support
- To collaborate and Co-create the Business Relationship and Knowledge Exchange

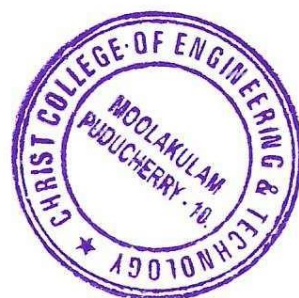
The main features of this policy are as follows:


- Creation of 'Innovation fund' for supporting innovative projects and Start-ups by allocating minimum 1% of institution's total budget.
- Academic break for a semester/ year to work on their startups Credits for working on innovative prototype/ business models.
- 2% – 9.5% Equity/ stake in startup/ company by Institute's incubator.
- Complete Ownership of IPR by the inventors in case of non-usage of the institute's facilities/ resources.
- Services to be offered by the institution in lieu of equity, fee-based, or zero payment model.



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NISP IMPLEMENTATION




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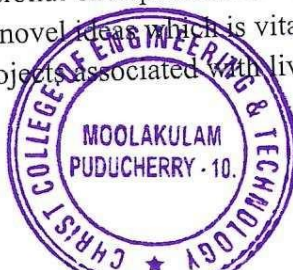
Date: 25.01.2023

Minutes of meeting

The committee meeting of National Innovation and the Startup Policy (NISP) is conducted on 25.01.2023 at 10.30AM. The minutes of the meeting is given below.

The meeting was started. The chairperson started the meeting here he has broadly focused on following

1. As a road map to. missionary vision, the PEC Innovation and Entrepreneurship Policy (PEC- IEP) is formulated by the stakeholders from various fields towards fulfilling the objectives for enabling an innovation and entrepreneurial ecosystem.
2. On this context of the NISP, a committee is constituted in CCET to formulate detailed guide lines for various aspects related to innovation, Start up and entrepreneurship management. The members reviewed NISP policy and guidelines and previous meeting minutes.
3. After multiple rounds of discussion, Innovation and Start up Policy is prepared for students and faculties of CCET with the following objective.
 - a) To identify student innovators, promote and support them to sustaining business models. It works to cultivate the innovation ecosystem within the college and around to harness the entrepreneurial potential of the young minds.
 - b) To impart as supportive and vibrant environment to stimulate the innovation attitude of the student entrepreneurs, startups/SME and enable them to design technology based products and services leading to job creation for strengthening the regional and national economy.
 - c) Exposure of maximum number of students to the concept of entrepreneurship Enhancement of entrepreneurial skills of students.
4. Chairperson motivated the committee on various facts for nurturing the innovation and Start u culture in CCET through a well design action plan under the guide line of NISP/AICTE as follows.
 - To guidelineeth institutions/organizations, individuals promoting entrepreneurship and bring out budding entrepreneurs from the college.
 - To arrange motivational entrepreneurial talks and play motivational role, with the interest to bring out novel ideas which is vital now.
 - To identify mini projects associated with livelihood promotional activities



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- To conduct Short Term Certificate Courses in real-time entrepreneurship
- To organize programs for skill development and capacity building
- To arrange Industrial/field visits for practical experience

5. The detailed NISP policy, Vision and Mission of NISP CCET, Short term and long-term objectives are framed and it is given in Annexure I.

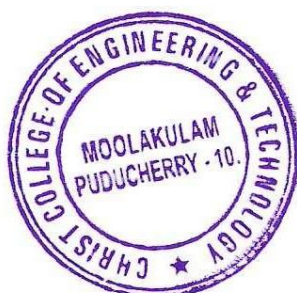
The meeting was concluded with vote of thanks.

Member present


Sr. No.	Name of the Coordinators / Members	Position assigned in IIC
1.	Dr.A. Sivakumar - Principal	President
2.	Dr.P. Chandru Deva Kannan / I-Yr Coordinator	Vice President & NIRF Coordinator
3.	Dr.Y. Thiagarajan / HOD - EEE	Convenor
4.	Dr.R. Boopathi / Asst.Prof (SG) - EEE	IPR Coordinator
5.	Dr.S. Anandalatchoumy / HOD - ECE	Innovation Activity Coordinator
6.	Dr.T. Thirumurugan / Asso.Prof - ECE	ARIIA Coordinator
7.	Mrs. K. Sudha / HOD - CSE	Internship Activity Coordinator
8.	Mr. S. Siva Sankaran / Asso.Prof - CSE	Social Media Coordinator
9.	Mr.S.S. Karthik / Asst.Prof - ECE	Start-up Activity Coordinator
10.	Mrs.R.K. Santhiya / Asst.Prof - CSE	Innovation/NIRF Activity Member
11.	Mr. I. Malaiyalathan / Asst.Prof - MECH	Startup Activity Member



Coordinator/ Convener
NISP /CCET



Dr. A. Sivakumar
Principal
CCET


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☎ : 0413 - 2293491, 2293493 📠 : 0413 - 2293492 ✉ : adminoffice@christcet.edu.in ; ccet_pondy@yahoo.com

Date: 05.12.2020

To
NISP Implementation Team,
MHRD's Innovation Cell,
AICTE, New Delhi.

Subject: Letter of nomination for Dr.P.Chandru deva kannan, Professor, Department of Mechanical Engineering to implement National Innovation and Startup Policy (NISP) at our institute.

Sir/ Madam,

Following senior faculty from Christ College of Engineering and Technology, Puducherry is nominated for the implementation of NISP at our institute. The nominated faculty will coordinate with MHRD's Innovation Cell for activities/ communications related to NISP implementation at his/ her institute in consultation with the head of institute or appropriate competent authority.

Name of faculty: Dr.P. Chandru deva kannan
Designation: Professor
Email id: chandru4u1983@gmail.com
Mobile Number: 9994075359

Warm regards,

Signature

Name of Head of Institute: Dr.A. Sivakumar
Designation: Principal
Email ID: siva_kumarenergy@yahoo.com
Contact Number: 709499901

Institute Name: Christ College of Engineering and Technology, Puducherry
AISHE Code: C-6522



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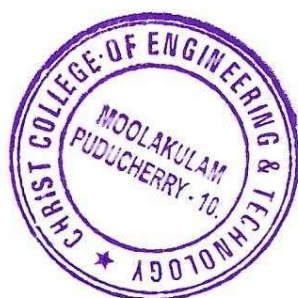
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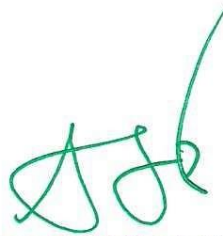
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LIST OF MIC EVENTS CONDUCTED

2022-23

S.NO	NAME OF THE EVENT	DATE OF PROGRAM	OFFLINE/ONLINE
1.	Launch of 5G Services	01/10/22	Online
2.	Workshop on Entrepreneurship as career opportunity	14/11/22	Online




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All India Council For Technical Education
AICTE(NEW DELHI)



INSTITUTION'S
INNOVATION
COUNCIL

Email ID: principal@christcet.edu.in

Website: www.christcet.edu.in

Submission of Report MIC Activity to upload in IIC Portal 2022 -2023

(Target Audience: UG/PG/Research Scholars/Faculties/Start-ups/Entrepreneurs)

Program title: PM Modi launched 5G services

Date / Time of the Event: 01.10.2022 / 9.30 AM – 4.00 PM.


Mode of Conduction: online

Thrust Area: Ushering in a new technological era, PM Modi launched 5G services during 6th India Mobile Congress at Pragati Maidan in New Delhi. He said, "New India will not remain a mere consumer of technology, but India will play an active role in developing and implementing that technology."

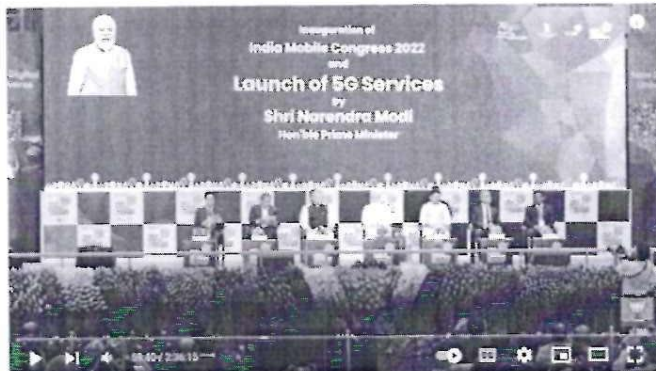
Live YouTube Link: <https://www.youtube.com/watch?v=6N3cgvvgfeio>

B) No of Participants Attended: 50 (UG/PG /Faculties)

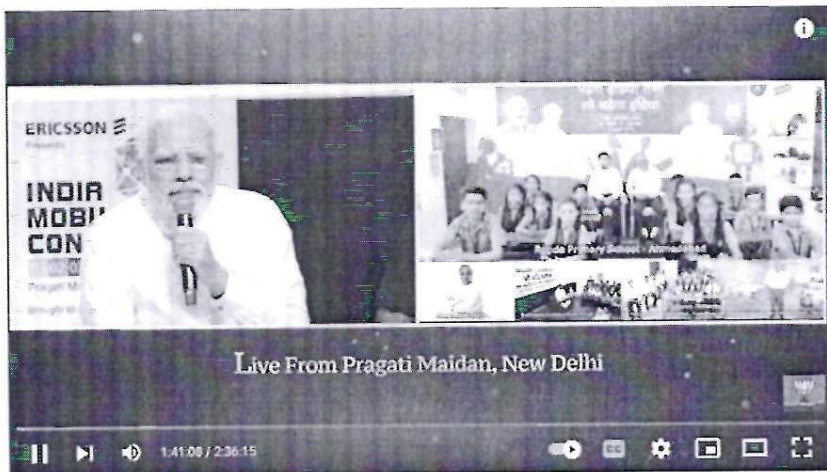



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SCREEN SHOT OF THE EVENT



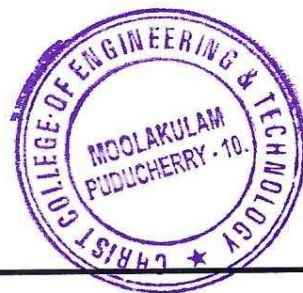
PM Modi launches 5G services and inaugurates 6th edition of India Mobile Congress in New Delhi



PM Modi launches 5G services and inaugurates 6th edition of India Mobile Congress in New Delhi



PM Modi launches 5G services and inaugurates 6th edition of India Mobile Congress in New Delhi



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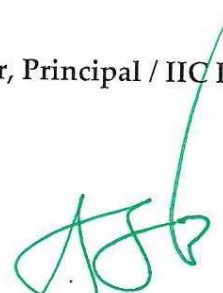


Verified By


Dr. A. Sivakumar
Principal
Christ College of Engineering and
Technology
Puducherry.

Dr. A. Sivakumar, Principal / IIC President




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Submission of Report
IIC Q1 Calendar Activity to upload in IIC Portal
IIC 5.0 Activity 2022 -2023

Program title: Workshop on “Entrepreneurship and
Innovation” as Career Opportunity

DATE: 14.11.2022 / Time: 10.30 am - 11.30am.

Mode of Conduction: online

Thrust Area: Entrepreneurship

Speaker: Er.N.RAHUL

Project Lead @TANSIM RH (TNVL)

Certified Chief Innovation Officer

Link for registration: <https://forms.gle/S8erWmyi6Sn4H5w1A>

Feedback link: <https://forms.gle/T43xJljs2qgUcHfx7>

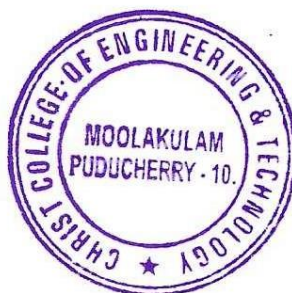
Event link : <https://meet.google.com/bin-noqq-rdx>

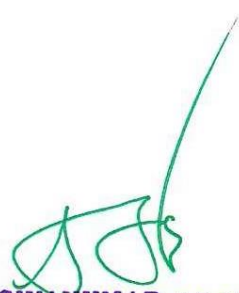


E -Certificate Status: Provided to all the active participants.

A) Brief write up of the event (250 words):

Prof. Subramanian (IIC Start-up Activity - Coordinator) /Associate Professor/Dept. of Mechanical Engineering delivered the Welcome address followed by chief guest introduction delivered by Prof.Chandru (Vice President-IIC). The speaker started with an out of box mind kidding activity in order to get students realize that whatever they make or not innovation. Rather innovations require updating and also, he insisted students to get work on the daily needs. The program ended up with a Vote of Thanks delivered by Dr.Y. Thiagarajan – IIC Convener.




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POSTER FOR PUBLICITY



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INNOVATION

IIC 5.0 Calendar Activity

INSTITUTION INNOVATION COUNCIL OF CCET



INSTITUTION'S
INNOVATION
COUNCIL

Organizes a Webinar on

"Entrepreneurship and Innovation" as Career Opportunity



SPEAKER: N Rahul ME C.Eng & CCIO
Project Lead
Tamilnadu Startup and Innovation mission
Tirunelveli Regional Hub
MSME Department
Government of Tamil Nadu

Free Registration

Link: <https://forms.gle/S8erWmyi6Sn4H5w1A>



CONTACT US
0413-2293491, 2293493
www.christcet.edu.in

FOR ADMISSIONS CONTACT
9047015506, 9786677771



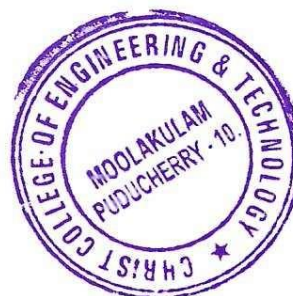
Dr. A. SIVAKUMAR, M.E., Ph.D., M.I.S.T.E.,
PRINCIPAL


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SPEAKER PROFILE

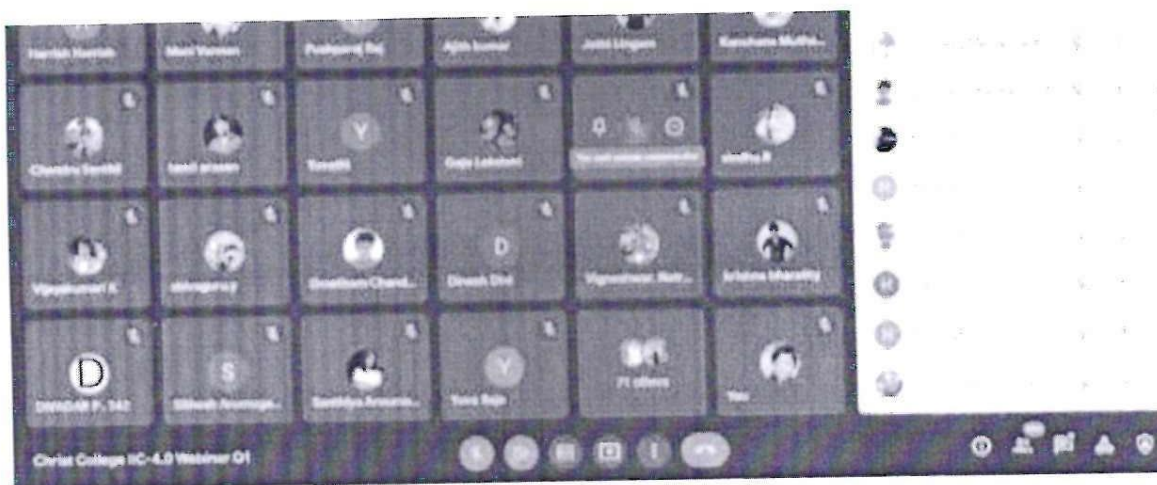
Rahul is the Project lead for Regional Initiatives of Tamil Nadu startup and Innovation Mission (TANSIM) Regional Hub at Tirunelveli which is a Nodal Agency of Govt. of TamilNadu to promote Startups and Entrepreneurship; He is the certified chief Innovation officer accredited by Rochester USA and an Alumni of Draper University Silicon Valley USA undergone Entrepreneurship program. Rahul is a Design Thinking Facilitator Trained by NODES and Symbiosis CDL Pune. Previously Co founded ATESH Labs (Lighting Lanterns Media works private limited) which is a social skill tech Startup recognized by Startup India and Startup Tamilnadu; ATESH Labs now Curious Gamma Learning is recognized as one of the Top 21 Startups of Asia in Skill development & assessment by Beststartupsasia and Best 100 startups of Tamilnadu in Edu tech by Startup Pills. Rahul is selected for Microsoft for Startups Founders Hub offered by Microsoft and Microsoft Azure. He is also the founder trustee of Silverink Foundation which enables education 4.0 and supports a supportive and collaborative ecosystem in education, entrepreneurship child and women welfare through its **SPATE** Program making the world a happier planet. Silverink Foundation is **supported by Nasscom Foundation Bigtech Programme in partnership with Techsoup for Non-Profits**. He is an Innovation Ambassador of IIC of Ministry of Education's Innovation cell and a certified ILO Trainer in Entrepreneurship. Rahul is the Global Facilitator of Techstars Startup weekend Powered by Google for startups and Go Daddy and also he is the Chapter Director of Startup Grind for Kanniyakumari which is the world's largest community of Entrepreneurs and Innovators and also he is the lead organizer of Techstars startup weekend Nagercoil which is powered by Google for Entrepreneurs; and organizer of TEDxKanniyakumari. He is the Mentor of Kerala Startup Mission and Connector of Founders Liar and co-curator of Techstars startup digest. He is Associate Member and chartered Engineer of Institution of Engineers, and Member of National HRD Framework. Rahul have completed SDG School a prolific program run by Makers Assylum partnered with UNESCO, UNDP Accelerator Labs, World Economic Forum and EU REI with 100% Scholarship. and has 13+ years of Experience in Teaching, Entrepreneurship and Soft Skill Development Training. Rahul has two patents in his credits and he have been awarded with Dr. Abdul Kalam Young Social Activist Award in the year 2013. Design Thinking, creativity education, Entrepreneurship Skills, Softskills, six hats tool, Lateral thinking, Innovation Thinkering are his areas of Interest. He has trained over 5000+ people across the country

Project Lead	(Regional Initiatives)	-	Tamil Nadu Startup and Innovation Mission (TANSIM)
Certified	Chief		Innovation Officer
Previously	Founder & Chief	Design Officer	- ATESH Labs (LLMW P LTD)
Previously	Founder & Chief	Learning Officer	Silverink Foundation
Global	Facilitator	-	Techstars Startup Weekend
Certified	ILO	Trainer	in Entrepreneurship Development
IIC	Innovation Ambassador	-Design Thinking	in Innovations - MoE Innovation Cell
Chapter	Director	-Startup	Grind Kanniyakumari




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Puducherry - 10

PARTICIPANTS SCREEN SHOT



Submitted By: Name of the Council Coordinator: Dr.Chandru

Verified by: Dr.Y. Thiagarajan (IIC-Convenor)

Approved for upload by:



Dr A.Sivakumar
Principal
Christ College of Engineering and
Technology
Pondicherry.

Dr.A. Sivakumar (IIC-President)

Dr. A. SIVAKUMAR, M.E., Ph D., M.I.S.T.E.,
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Letter of Appreciation

Dear Sir/Madam,

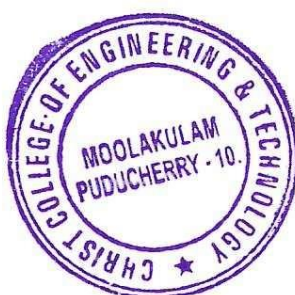
Please accept our sincere gratitude to all the chief functionaries and every members of the IIC Institution's Innovation Council (IIC) of Christ College of Engineering and Technology for the continuous support and contribution towards building the innovation and entrepreneurship culture development in your campus and also extending support to help other IIC institutions towards growth of the IIC network during the academic year 2022-23.


Chief Functionaries of the IIC at Christ College of Engineering and Technology ,
PUDUCHERRY

Name	Position
Dr.A.Sivakumar	President
Dr. P. Chandru Deva Kannan	NISP Co-ordinator
Dr.P.Chandru Deva Kumar	Vice President
Dr.Y.Thiagarajan	Convener
Dr. T. Thirumurugan	ARIIA Coordinator
Dr.S.Anandalatchoumy	Social Media
Mr.J.Mani	Start up Activity Coordinator
Dr.P. Chandru Deva Kannan	NIRF Coordinator
Mr.S.Siva sankaran	Innovation Activity
Dr.R.Boopathi	IPR Activity Coordinator
Mrs.K.Sudha	Internship Activity Coordinator

As we are progressing towards a 'quality' driven I&E ecosystem development, we strongly believe that the IIC model and its unique structure is definitely putting your HEI's thoughts, actions and aspirations in a systematic way to achieve inclusive and holistic development of the ecosystem.

Thanks & regards.




Dr. A. SIVAKUMAR, M.E., Ph.D., M.I.S.T.E.,
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CHRIST COLLEGE OF ENGINEERING & TECHNOLOGY
Moolakulam, Oulgaret Municipality
Puducherry - 10.

Yours Sincerely,
Dipan Kumar Sahu

Apurva

Assistant Innovation Director
MoE's Innovation Cell, Govt. of India



[Signature]
Dr. A. SIVAKUMAR, M.E., Ph.D., M.I.S.T.E.,
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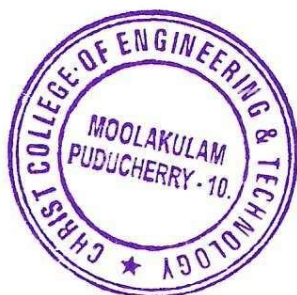
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INNOVATIONS THROUGH IPR

S.N O	Name of the Applicant /Inventor	TITLE OF PATENT	Application Number	Date of Filling	Date of Publication / Granted in IPR Journal
1.	Dr. Y. Thiagarajan (Applicant and Inventor)	Multifunctional Test Tube	202141039231 A	30/08/2021	Granted on 22/03/2022
2.	Dr.Y. Thiagarajan (Applicant and Inventor)	A microbial fuel cell with CNT electrodes	201941049319 A	30/11/2019	Published on 06/12/2019
3.	Dr.Y. Thiagarajan (Applicant and Inventor)	A sanitary napkin dispenser	202041005625A	10/02/2020	Published on 14/02/2020
4.	Dr.Y. Thiagarajan (Applicant and Inventor)	Automated Hygiene Fluid Dispensing Device	202041017380 A	22/04/2020	Published on 05/06/2020
5.	Dr.Y. Thiagarajan (Inventor)	Lightning Arrester for Domestic Appliances	202041033142 A	02/08/2020	Published on 04/09/2020




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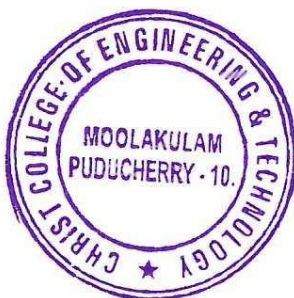
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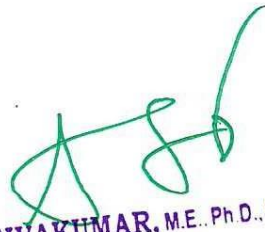
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INNOVATIONS THROUGH IPR

IP Granted: 01 (Australian Innovation Patent Grant)

S.N O	Name of the Applicant / Inventor	TITLE OF PATENT	Country / Applicatio nNumber	Date of Filling	Date of Grant
1.	Dr.Y. Thiagarajan (Applicant and Inventor)	SMART SELF- HEATING RECHARGEABLE INOCULATION LOOP (SHRIL)	Australian InnovationPatent Patent number: 2020103597	22/11/2020	20/01/2021




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Government of India
Ministry of Commerce and Industry
Department for Promotion of Industry and Internal Trade
Office of the Controller General of Patents, Designs and Trade Marks

CERTIFICATE OF APPRECIATION

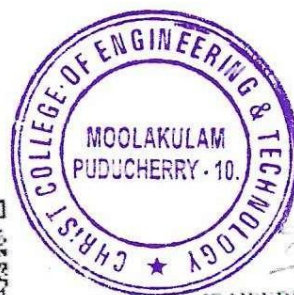
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*In recognition of active participation in the National Intellectual Property Awareness Mission (NIPAM) launched by the Government of India on the occasion of the 75th anniversary of independence under the banner "Azadi Ka Amrit Mahotsav" to create widespread awareness on Intellectual Property Rights (IPR). The exceptional contribution in successfully organizing the awareness programme on **March 03, 2022** in association with Intellectual Property Office, Chennai by providing your valuable time and support is highly appreciated.*

Solicit your continued support for outreach of IPR far and wide.

Date: March 04, 2022



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PATENTS, DESIGNS AND TRADE MARKS
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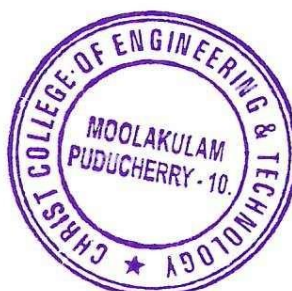
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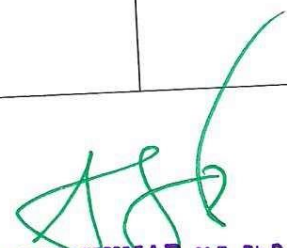
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LIST OF PROJECTION INNOVATIONS PRESENTED IN CONFERENCES

2022-23

S.NO	NAME OF THE AUTHORS	TITLE OF INNOVATION	DEPT/COLLEGE	DATE OF PROGRAM
1.	V.Sindhu,M.Srivaitheeswari,T.Thilothamma	Face recognition based attendance system	IT/CCET	2/3/23
2.	V.Meera, D.Thilagavathy, N.Vishvaprasath	Skin Disease Detection using Deep Learning	IT/CCET	2/3/23
3.	Subramanian .E,Sivasabari.P,Vishali.T	Plant disease Identification using a Novel Convolutional Neural Network	IT/CCET	2/3/23
4.	B.Gokulakrishnan, S.Divyadarshini,, K.Jayanthi, S.Vasanthakumar	Secure Patient data using IOMT	IT/CCET	2/3/23
5.	SS.Karthik , Dr.V.Vijayalakshmi, Dr.G.Zayaraz	RPOM-Rational Process Offloading for Improving the Resource Utilization of the IOT	ECE/CCET	2/3/23
6.	SS.Karthik, Soundar.M, Jagadeshwar.M,Karthick.R, Suresh.S	Design and Implementation of Traffic Management for Density and Emergency based system	ECE/CCET	2/3/23
7.	S.S.Karthik , Suresh.V, Vignesh.S, Kamesh.J	ECC Based address generators designs and implementations for low power memoty BIST Applications	ECE/CCET	2/3/23




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INTERNATIONAL CONFERENCE ON ADVANCE RESEARCH IN INFORMATION AND COMMUNICATION TECHNOLOGY

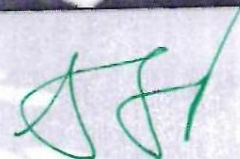


Proceedings ICARICT - 2023

2nd March 2023

Organized by
CSI College of Engineering & Technology
Kottai Valley, Nilgiris, Tamil Nadu - 643 001
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Moolakulam, Oulgaret Municipali
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**International Conference on Advance Research in
Information and Communication Technology
(ICARICT-2023)**

Face Recognition Based Attendance System

¹V. Sindhu, ²M. Srivaitheeswari, ³T. Thilothamma

^{1,2,3}Department of Information Technology
Christ College of Engineering and Technology, Puducherry - India

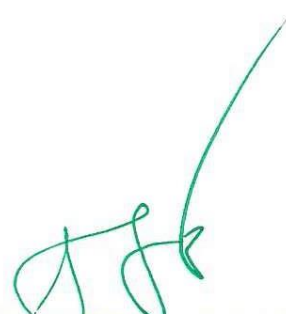
Paper ID: ICARICT_ 021

This project aims to recognize faces in an image, video, or via live camera using a machine learning based face recognition model that is fast as well as accurate. Face recognition is a process of identifying faces in an image and has practical applications in a variety of domains, including information security, biometrics, access control, law enforcement, smart cards, and surveillance system.

The frames of video or streaming video contains the spatial features of the faces of persons and after inputting the frames it involves the following steps: Face detection, Feature extraction, Feature set. The face detection phase uses Histogram of Oriented Gradients for detecting the faces from the frames inputted. For feature extraction purpose, Face landmark estimation algorithm is used to extracting the important features from the faces. The feature set is made by collecting the encodings from the given face.

The dataset used consists of a single image per each person that containing their faces. The particular frame taken from the CCTV is given as input to the model. Then comparison of the test input with existing dataset are done. Using the prediction by SVM (Support Vector Machine) algorithm 100% accuracy was obtained by correctly predicting the students.




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**International Conference on Advance Research in
Information and Communication Technology
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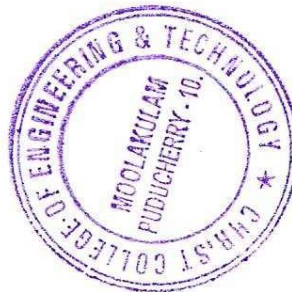
Skin Disease Detection Using Deep Learning


¹V. Meera, ²D. Thilagavathy, ³N. Vishvaprasath

^{1,2,3}Department of Information Technology
Christ College of Engineering and Technology, Puducherry - India

Paper ID: ICARICT_ 022

Skin is the most powerful protection of important organs in the human body. It acts as a shield to protect our internal body to get damaged. But this important part of the human body can be affected by so serious infections caused by some fungus or viruses or even dust too. Around the world, millions of people suffer from various skin diseases. Sometimes a small boil on the skin can turn into a severe issue or even an infection that will cause a major health issue. Some skin issues are so contagious that one can be affected by another just with a handshake or using a handkerchief. A proper diagnosis can result in proper medication that can reduce the miseries of the people suffering. In this project, we have tried to develop a prototype to detect skin diseases using neural networks. In the choice of neural networks, we have chosen CNN which abbreviates as a convolutional neural network. Earlier detection works have been done using DNN which is a deep neural network. Our project is combination of both image processing and CNN. First, we took the picture of the skin and we include those pictures in the dataset. Then we process the image with the help of image processing technique and it will classify the type of the disease.




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Puducherry - 10.



**International Conference on Advance Research in
Information and Communication Technology
(ICARICT-2023)**

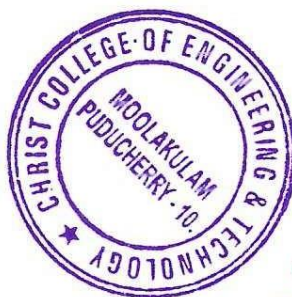
**Plant Disease Identification Using a Novel Convolutional
Neural Network**

¹Subramanian. E, ²Sivasabari. P, ³Vishali. T

^{1,2,3}Department of Information Technology
Christ College of Engineering and Technology, Puducherry - India

Paper ID: ICARICT_ 023

In recently, so many plants are affected by insects, quality of soil, parasitic plants and pathogenic organisms such as fungi, bacteria, viruses. It is very difficult for farmers to identify what type of disease is affected to their plants. In this work, we solve the plant disease identification problem. We using the most efficient Depth wise Separable Convolution and Residual network algorithms. This project aims to satisfy the need of disease identification in the agricultural environment. The method that is being used for plant disease identification is convolutional neural network with depth wise separable convolution and residual network with these algorithms we have achieved an Accuracy levels which are quite impressive Training time required for training the dataset have been significantly reduced number of Epochs also reduced. A web-based representation is implemented using html, css, javascript, initially input image is uploaded in the console and image get processed and result is displayed on the site's display. We are proposing a model with better improved Accuracy and lowered Validation losses and web-page based interaction for better user experience.



Dr. A. SIVAKUMAR, M.E., Ph.D., M.I.S.T.E.,
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**International Conference on Advance Research in
Information and Communication Technology
(ICARICT-2023)**

Secure Patient Data Using IOMT

**¹B. Gokulakrishnan, ²S. Divyadarshini, ³K. Jayanthi,
⁴S. Vasanthakumar**

^{1,2,3,4}Department of Information Technology
Christ College of Engineering and Technology, Puducherry - India

Paper ID: ICARICT_ 024

Due to insecure communication among the entities involved in IoMT, an attacker can tamper with the confidential and private health related information. For example an attacker can not only intercept the message, but also modify, delete or insert malicious messages during communication. It leads to the problem of data privacy and security. To deal this sensitive issue, we have designed a block chain and AI enabled technique where the legitimate users can access the health care data from the cloud servers in a secure way. In this project, blockchain provides a secure, decentralized way to store and transfer data, which ensures the privacy and security of medical data. The entire health care data is stored in a block chain maintained by the cloud servers.



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**International Conference on Advance Research in
Information and Communication Technology
(ICARICT-2023)**

**RPOM—Rational Process Offloading for Improving the Resource
Utilization of the Internet of Things**

¹S.S. Karthik, ²Dr. V. Vijayalakshmi, ³Dr. G. Zayaraz

¹SAP, Department of Electronics and Communication Engineering
Christ College of Engineering & Technology, Puducherry - India

²Associate Professor, Department of Electronics and Communication Engineering
Puducherry Technological University, Puducherry - India

³Professor, Department of Computer Science and Engineering
Puducherry Technological University, Puducherry - India

✉: ¹karthsivashanthi@gmail.com, ²vvijizai@pec.edu, ³gzayaraz@pec.edu

Paper ID: ICARICT_ 026

The Internet of Things (IoT) interconnects diverse objects and service platforms for providing ubiquitous application support through diverse communication technologies. Quality of service and experience required application support is ensured through precise resource allocation and request scheduling in this platform. Considering the densely populated user scenario and service demand, this article introduces a Rational Process Offloading Method (RPOM) for reducing the service backlogs in IoT. This method distinguishes the scheduled and offloading of required application requests for preventing additional service delays. The decisions for offloading and time-sensitive application responses are performed using the state learning process. In this learning, the offloading and scheduling states are validated using current and previous state analysis for independent and congestion-less responses. The state is trained using the time and offloading demand observed between the request and response. However, the varying state modeling is used for determining a forecast-based service allocation, improving the utilization. The RPOM's performance is validated using the metrics of resource utilization, offloading ratio, service delay, and backlogs.





**International Conference on Advance Research in
Information and Communication Technology
(ICARICT-2023)**

**Design and Implementation of Traffic Management for
Density and Emergency based System**

¹S.S. Karthik, ²Soundar. M, ³Jagadeshwar. M, ⁴Karthick. R, ⁵Suresh. S

¹SAP, Department of Electronics and Communication Engineering
Christ College of Engineering and Technology, Puducherry – India

^{2,3,4,5}Department of Electronics and Communication Engineering
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✉: ¹karthsivashanthi@gmail.com, ²soundarm246@gmail.com

³vasanthajagadesh@gmail.com, ⁴karthickgowtham844@gmail.com

⁵sureshmugesh007@gmail.com

Paper ID: ICARICT_ 027

The design and implementation of traffic management for density and emergency-based system is aimed at designing a density based dynamic traffic signal system where the timing of signal will change automatically on sensing the traffic density at any junction. Traffic congestion is a severe problem in most cities across the world and therefore it is time to shift more manual mode or fixed timer mode to an automated system with decision making capabilities. Present day traffic signaling system is fixed time based which may render inefficient if one lane is operational than the others. To optimize this problem, we have made a framework for an intelligent traffic control system. Sometimes higher traffic density at one side of the junction demands longer green time as compared to standard allotted time. We, therefore propose here a mechanism in which the time period of green light and red light is assigned on the basis of the density of the traffic present at that time. This is achieved by using PIR (proximity Infrared sensors). Once the density is calculated, the glowing time of green light is assigned by the help of the microcontroller (Arduino). The sensors which are present on sides of the road will detect the presence of the vehicles and sends the information to the microcontroller (Arduino) where it will decide how long a flank will be open or when to change over the signal lights. In subsequent sections, we have elaborated the procedure of this framework.





**International Conference on Advance Research in
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(ICARICT-2023)**

**ECC Based Address Generators Designs and Implementations for
Low Power Memory BIST Applications**

¹S.S. Karthik, ²Suresh. V, ³Vignesh. S, ⁴Kamesh. J

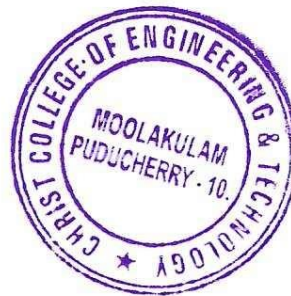
¹SAP, Department of Electronics and Communication Engineering
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^{2,3,4}Department of Electronics and Communication Engineering
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✉: ¹karthsivashanthi@gmail.com, ²suresh1105sv@gmail.com
³srivigneshwaran1403@gmail.com, ⁴kamesh05052002@gmail.com

Paper ID: ICARICT_ 043

Nonlinearity of a digital-to-time converter (DTC) is pivotal to spur performance in DTC-based all-digital phase locked-loops (ADPLL). In this paper, we characterize and analyze the mismatch of cascaded-delay-unit DTCs. Through an improved built-in-self-test (BIST) time-to-digital converter (TDC) assisted with phase-to-frequency detector (PFD), a measurement system of sub-half accuracy is constructed to conduct the characterization. Fabricated in 28-nm CMOS, the DTC transfer functions are measured, and mismatches are compared against Monte-Carlo simulation results. The integral nonlinearity (INL) results are compared against each other and converted to the in-band fractional spur level when the DTC would be deployed in the ADPLL. The BIST-TDC system thus characterizes the on-chip delays without expensive equipment or complex setup. The effectiveness of adding a PFD into the loop is validated. The entire BIST system consumes 0.6mW with a system self-calibration algorithm to tackle the analog blocks' non-linearity. Index Terms—All-digital PLL(ADPLL), build-in self-test (BIST), digital-to-time converter (DTC), fractional spur, jitter, mismatch, noise shaping, phase/frequency detector (PFD), self-calibration, time-to-digital converter (TDC).





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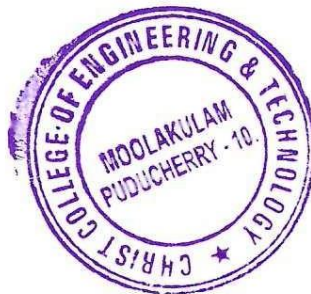
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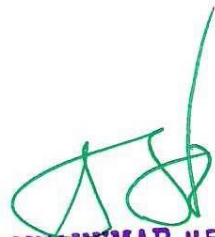
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STARTUP FOUND BY STUDENTS OF CCET

2022-23

S.NO	NAME OF THE STUDENTS	NAME OF STARTUP	DATE OF COMMENCEMENT OF BUSINESS
1.	Mr.Selvabarathi,Mr.Ramu,Mr.K.Harish,Mr.B.Harish,Mr.Mugilan	TECHOFES	07/07/22




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Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises



UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER

UDYAM-PY-03-0016615

NAME OF ENTERPRISE

TECHCOS INCORPORATED

TYPE OF ENTERPRISE *

S.No.	Data Year	Classification Year	Enterprise Type	Classification Date
1	2020-21	2022-23	Micro	22/12/2022

MAJOR ACTIVITY

TRADING

[For availing benefits of Priority Sector Lending(PSL) ONLY]

SOCIAL CATEGORY OF ENTREPRENEUR

SC

NAME OF UNIT(S)

S.No.	Name of Unit(s)
1	Development

OFFICAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	1	Name of Premises/ Building	TechCos
Village/Town	Thiruvandarkovil	Block	2
Road/Street/Lane	First Cross	City	Chinnapet
State	PUDUCHERRY	District	PONDICHERY, Pin 605102
Mobile	9791597282	Email:	selvabharathi1801@gtmail.com

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE

07/07/2022

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS

07/07/2022

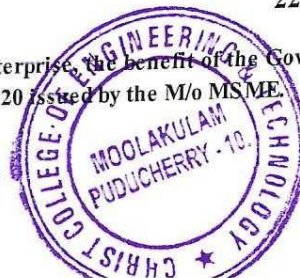
NATIONAL INDUSTRY CLASSIFICATION CODE(S)

S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	85 - Education	8550 - Educational support services	85500 - Educational support services	Services

DATE OF UDYAM REGISTRATION

22/12/2022

* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME.



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12/22/22, 3:52 PM

Print : Udyam Registration Certificate

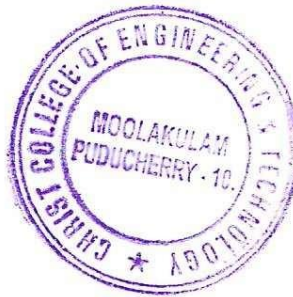
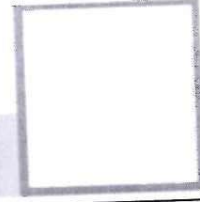
Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing:- 22/12/2022

For any assistance, you may contact:

1. District Industries Centre: PUDUCHERRY (PUDUCHERRY)
2. MSME-DFO: CHENNAI (TAMILNADU)

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174 UNIVERSITY
RANK HOLDERS
19 GOLD MEDALISTS

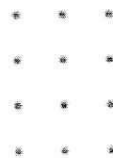
94% Students
Placed

Congratulations

First Student Startup in CCET

Creating a digital business ecosystem

Tech os



The Principal, Management, Staff
and Students wish that their great
success comes in their Journey



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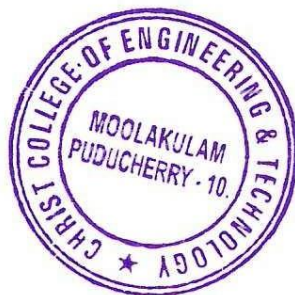
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STUDENTS PARTICIPATION IN NATIONAL CONTEST

Student's & faculty Innovation/prototypes developed -01 (Submitted and Shortlisted for the second Round under AICTE Vishwakarma Awards)

Application Number	VISH202014866
Team Name:	KKKN
Project Name:	Hazardous gas detection and notification system
Sub-Category:	Promote micro, small and medium enterprises to achieve the mission of Atmanirbhar Bharat
Girls Team only:	Yes
Multi-Discipline:	Yes




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7.3.1. INSTITUTIONAL DISTINCTIVENESS

7.3. RESEARCH AND STARTUP ECOSYSTEM

LIST OF WEBINARS PRESENTED BY ALUMNUS AND EXTERNAL RESOURCE PERSON FROM OTHER ORGANIZATION ON ENTREPRENEURSHIP

S.NO	NAME OF THE WEBINAR	RESOURCE PERSON NAME	ORGANIZATION NAME	DATE OF PROGRAM
1.	Motivational Session by Successful Entrepreneur	Mr. Singathevan Manikandan	Founder , Meet oh Meat	17/12/20
2.	Scope in Digital Marketing & General	Mr.M.Hraiharan	Ad-Trafficker Paragon Digital services Pvt Ltd	15/05/20
3.	Virtual Product Development	Mr. R.Krishnakumar	Engineering Analyst, Caterpillar ,Chennai	17/07/21
4.	Entrepreneurship and Internship Opportunity in Engineering Career	Dr.R.Ravivarman	National Institute of Technology, Agartala	25/09/23
5.	Challenges and Opportunities for an Entrepreneur & Leveraging the Startup Ecosystem	Mrs.Tamilselvi & Mr. Vishnu Varadan	Human Resource Business Partner Hindustan Unilever - Puducherry	14/03/24



2876

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LIST OF WEBINARS PRESENTED BY ALUMNUS AND OTHER EXTERNAL RESOURCE PERSONS



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IIC CALENDAR ACTIVITY 2020 - (Q1)
INSTITUTION INNOVATION COUNCIL OF CCET

Organizes a Webinar on
**"Motivational session by
successful Entrepreneur"**

SPEAKER:
Mr. Singathevan Manikandan,
Founder - Meet Oh Meat,
Tamilnadu, India



187

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WEBINAR ON

SCOPE IN DIGITAL MARKETING & GENERAL

GUIDELINES TO FACE
INTERVIEW


Mr.M.Hariharan

Ad-Trafficker,
Paragon Digital
Services.Pvt.Ltd
Alumni,CCET.



"15/05/2020
10:00 AM"




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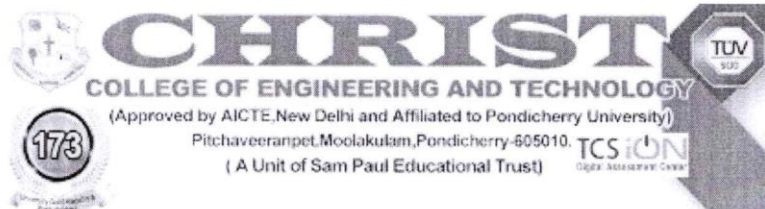
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LIST OF WEBINARS PRESENTED BY ALUMNUS AND OTHER EXTERNAL RESOURCE PERSONS



DEPARTMENT OF MECHANICAL ENGINEERING
ORGANIZES A WEBINAR

"Virtual Product Development"



SPEAKER

Mr. R. KRISHNAKUMAR

Alumnus of CCET

Engineering Analyst, Caterpillar, Chennai.



17th July 2021



11:00 am - 12:00 pm

Registration Link:

<https://forms.gle/12EjTg2TVinSuYtj8>



Signature

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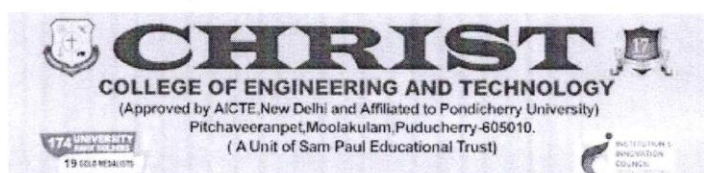
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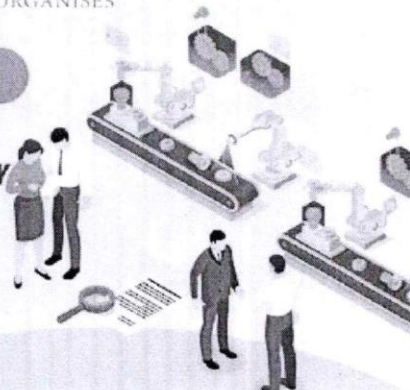


DEPARTMENT OF MECHANICAL ENGINEERING

ORGANISES

Seminar on

**ENTREPRENEURSHIP AND
INTERNSHIP OPPORTUNITY
IN
ENGINEERING CAREER**



RESOURCE PERSON

Dr. R. Ravivarman, M.Tech., Ph.D.

ASSISTANT PROFESSOR

DEPARTMENT OF MECHANICAL ENGINEERING,
NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA, INDIA.



187

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IMPACT LECTURE SERIES -II

SPEAKERS

 **Title: Leveraging the Startup Ecosystem**
Vishnu Varadan
Chief Executive Officer
AIC-PECF (Atal Incubation Centre - Pondicherry Engineering, College Foundation) - Puducherry

 **Title: Challenges and Opportunities for an Entrepreneur**
Tamil Selvi
HR Business Partner
Hindustan Unilever - Puducherry



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