



KONGU ENGINEERING COLLEGE

(Autonomous)

PERUNDURAI, ERODE – 638 060



INSTITUTION'S INNOVATION COUNCIL KEC (IIC@KEC) Transform Yourself



Annual Report of IIC@KEC for the academic year 2021-2022

A. About IIC@KEC:

1. Vision / Mission of IIC@KEC

- a. To provide skill-based trainings and create a conducive environment for the innovators to commence their entrepreneurial journey in liaison with National Innovation and Start-up Policy (NISP)
- b. To nurture ideation centric approaches like design thinking, collaborative innovation, sustainability and Product life cycle management for successful product commercialization
- c. To bring out innovative solutions for industrial and societal problems by exhibiting interpersonal and acquired skills
- d. To facilitate IPR activities and assist early start-up by connecting innovators with TBI and Angel investors/ Venture capitalists
- e. To be a Science and Technology led entrepreneurial hub for students, faculty, industry personals, unemployed youths and self-help groups for societal upliftment

2. Journey of IIC@KEC

- a. IIC@KEC was inaugurated in the academic year 2018-2019
- b. IIC@KEC was shortlisted as one in three best performing IICs of SRO during the academic year 2018-2019
- c. Received 5-star ratings for the academic years 2018-19, 2019-20 and 2020-21

3. Diversified representation in the IIC@KEC from industry, Interdisciplinary & Departments/ Units etc.

➤ Startup representation:

- a. Anmol Ajay Saxena, Founding CEO and MD, Ashva Wear Tech, Bangalore

- b. Mr.Mahesh P.V.Giri, ED, BNI Erode
- c. Mr. S. P. RajakumaranDirector, Mobitech Wireless Solution Private Limited, Erode
- d. Mr. Abhijith, Co- founder, Tagnquire Technologies Pvt Ltd.
- e. Mrs.Vedha Arun, Head, Investor relations, Native lead Foundation
- f. Mr. Sasi Varnakumar, Founder and CEO, Teal Orca, Coimbatore
- g. Mr. Karthickeyan.C, Managing Director, MAGNIC Technologies Pvt Ltd
- h. SIDBI Team & Dr. P. Karthikeyan, Associate Professor / MBA

➤ **Industry representation**

- a. Dr. A. Velumani, Founder – Thyrocare
- b. Puhazhendi K,Co-Founder & Director, Perfint Healthcare Pvt. Ltd Mr.
- c. Senthilkumar T P, Co-Founder, Iamneo.ai, Coimbatore
- d. Mr. G. Thirumurugan, General Manager/ Deputy Director (Tech.), District Industries Centre, Erode
- e. Mr. Jesu Raja, Founder & MD, Bloom'21 Enlightenments, Salem
- f. Mr. Vimal Kumar, Co-Founder, Vivalyf Innovations, Hyderabad
- g. Mr.M Palanivel, IEDS, Joint Director – MSME DI, Coimbatore
- h. Mr. Pradeep Thangavel, Terzo

➤ **Departments/ Units**

- a. Dr P. Navaneethakrishnan, CCO/ planning
- b. Dr U. S. Ragupathy, CCO/Accreditation
- c. Dr G Murugesan CCO/Academics
- d. Dr. P. Karthikeyan, Associate Prof./ MBA
- e. Dr. D. Balaji/ KPR Institute, Coimbatore

B. Key functionaries at the IIC@KEC:

- a. President – Dr. R. Parameshwaran / Professor MTS
- b. Vice President – Mr. P. S. Kannan/ Manager TBI@KEC
- c. Convener- Dr. S. Praveen Kumar / Asst. Prof. (Sr. G) MTS
- d. Faculty Coordinator – Dr. N. Kasthuri/ Prof. ECE
- e. Innovation activity coordinator – Dr. S. M. Senthil/ Asst. Prof. (Sr. G) MECH
- f. Start-up activity coordinator – Mr. R. P. Karthik/ Asst. Prof. ECE
- g. Internship coordinator – Dr. S. Albert Alexander/ Asso. Prof. EEE
- h. IPR activity coordinator- Dr. G. S. Rampradheep/ Asso. Prof Civil
- i. Social Media Coordinator- Mrs. K. Karthika / Asst. Prof. CT-PG

- j. SIH & YUKTI Coordinator- Dr. T. Abirami/ Asso. Prof IT
- k. ARIIA & NIRF Coordinator – Dr. P. Senthivelmurugan/ Professor MECH
- l. IP / Patent Expert – Mr. ArjunBala/ Metayage IP Strategy Consulting LLP
- m. Startup / Alumni entrepreneur – Mr. S. P. Rajakumaran/ MOBITECH
- n. Startup / Alumni entrepreneur – Mr. C. Karthikeyan / MAGNIC
- o. Expert from nearby Industry- Mr. G. Hariprakash / Logic Research Labs
- p. Expert from Nearby Incubation Center – Dr. K. Suresh Kumar / PSG STEP

C. Resource strength (human capital and Physical capital) in IIC@KEC:

- Total No. of IIC Members:
 - a. Faculty Members: 37
 - b. Student Members: 328
 - c. Non-Teaching staff members: 04
- Total No. of IAs:
 - a. Advanced level training: 29
- Total No. of faculty Mentors: 29
- Pre-Incubation Unit: Department level (10 Numbers)
- Incubation Unit: Kongu Technology Business Incubator (TBI@KEC)
- IP Facilitation Unit: IPR Cell@KEC

D. Facilities, Infrastructure of Pre-Incubation & Incubation kind and Student bodies/clubs engaged in promotion of Innovation and Entrepreneurship in the campus:

- a. **Ideation & Product design**
 - CAD centre (AutoCAD, CATIA, SOLIDWORKS, CREO, ANSYS, MATLAB)
 - Analog System Design lab (in collaboration with Texas Instruments)
 - Modelling and Simulation Laboratory
 - Bell Communication System Design Lab
 - NI LabVIEW Academy School (Virtual instrumentation)
 - Embedded system laboratory (Free scale Semiconductors Inc., USA)
 - High Performance Computing Lab (collaboration with C-DAC, Bengaluru)
 - IOT lab (Cyber Physical system design)
 - Cloud Computing and mobile application Laboratory
 - e-Yantra laboratory (in association with IIT-Bombay)
 - Process Dynamics and Control Laboratory
 - Food Analysis and Quality Control Laboratory

b. Incubation Unit

- Technology Business Incubator (TBI@KEC)

c. Prototype development

- Nidhi Prayas Shala at Kongu TBI
- Project cubicles and pre-incubation centers of each department
- Workshop Complex
- CAD/CAM centre
- Occupational Training Centre (OTC) sponsored by BOSCH

d. Business canvas model and business plan development

- Business Application lab
- Centre for conducting Certificate course in Accounting by ICWAI
- Mentorship through Entrepreneurs: CII, CODISSIA, EEDISSIA, Yi

e. Student bodies/ cells

- Entrepreneurship and Management Development Centre (EMDC)
- Self-Development Cell (SDC)
- Women Development Cell (WDC)
- Citizen Consumer / Legal Literacy Club
- Business Cell

E. Achievements by IIC@KEC:

- No. of different types of I&E and IPR activities Conducted
 - a. I&E Activities: 68
 - b. IPR Activities: 4
- No. of student's & faculty ideas generated: 475
- No. of student's & faculty Innovation/prototypes developed: 155
- No. of IPs generated, published and granted
 - a. IPs generated: 02
 - b. IPs published: 07
 - c. IPs granted : 01
 - a. No. of Student/Faculty Start-ups/Ventures established: 20
- Amount spent on I&E activities in the campus: Rs. 5,08,112/-
- Fund supported to student & Faculty lead Innovations, start-ups and IPR
 - a. Innovations: Rs. 1,06,000/-
 - b. Start-ups : Rs. 77,05,000/-
 - c. IPR : 1,97,920/-

F. Best IIC Faculty/Student members and their achievements:

➤ Faculty Members:

- a. Dr. N. Kasthuri- Winner of MISTRAL Contest
<https://sites.google.com/a/kongu.edu/kasthuri/>
- b. Mr. R. P. Karthik – Received Rs. 4,00,000/- for 5G Hackathon
<https://sites.google.com/a/kongu.edu/rpkarthik/>
- c. Mr. S. Pranav- Winner of SIH 2022
<https://sites.google.com/a/kongu.edu/pranav-chem/>

➤ Student Members:

- a. Ms. A. Priyanga – Winner in SIH 2022
Internship Activity Coordinator/ IIC@KEC
- b. Mr. R. Aswanth – Winner MISTRAL Contest

G. Best Innovations:

Following are the top innovations that has been funded by EDII IVP and TBI@KEC during the academic year 2021-2022

➤ Automatic sugarcane transplanting machine

Inventor	Co-Inventor(s)	Mentor	Department
Mr. N. Gokul Raja	Mr. M. S. Dhisvanth Mr. P. M. Goutham	Dr. P. Sivarajanji Prof. / ECE	ECE

Abstract:

An Automatic Sugarcane transplanting machine setup which can be attached to existing power-tiller or mini-tractor and driven by one person. The major operations of the proposed technology are Furrow Formation, Automatic seedlings dispensing and planting process.



➤ Ecological Hyperacid (Waterless) Dyeing System

Inventor

Mr. P. Ranjith Kumar

Co-Inventor(s)

Mr. C. Naveen Rahite
Ms. M. Rashika

Mentor

Dr. S. Selvakarthi
Asst. Prof. / EIE

Department

EIE

In conventional dyeing process water act as a solvent, it was replaced by carbon dioxide. The main objective of the project is to avoid the over usage of water and to eliminate the pollution due to waste water released in the natural bodies (river, underground using bore-wells)



➤ Food and Nutritional Security:

Inventor

Augustine Rajendran

Team Lead Email:

augustinerajendran@gmail.com

Startup Name

Bivet Technosciences
(OPC) Private Limited

Product-Market fit achieved by the company was through Research and Planning validated the idea with real potential people. Our product was tested at different locations at three states at Tier I and Tier II cities. The product rightly matches with the present requirement of the consumer, due to its rich mineral content in food, when added in right proportion besides improving shelf life.



➤ **FLABRR :**

Inventor

Karthik J

Team Lead Email:

foodtechnicsindia@gmail.com

Startup Name

Foodtechnics Private Limited

People started using packed foods to get rid of making flatbreads, so that they save time but spend money knowing which its not really fresh or healthy food. This where flabrr comes in to aid the flatbread preparation on ease and simple. It is at TRL-5 stage, where the prototype is ready for trials and working repeatedly on complete process for looking flaws and correcting it. We are improving the process for most reliable output. Once the full fledge trials done for about a month can go for manufacturing the similar units with the batch quantity say 5.



➤ **Portable Smart Milk dispenser for Milk sales and purchase :**

Inventor

Shanmuga Vadivel

Team Lead Email:

shanmugavadivel@icont.co.in

Startup Name

IcOnT Technologies OPC
Private Limited

The milk collected from producers (cattle breeders) were not measured or quantified correctly. Still, only traditional methods are followed for measuring the milk, like 100 ml, 200ml, 500 ml containers. The problem with these techniques is no accuracy in quantifying of milk, less hygienic associated when collecting milk from vessels and also a time-consuming work throughout the process. Initially, it is been planned to target the retail milk vendors and their allied community members like milk societies.



H. Start-ups established by students

- M/S. Agram Agro Tech; Founder: Mr. N. Gokulraja
- M/S. Snifty Technologies; Founder: Mr. P. Ranjith Kumar
- M/S. Native Guru Private Limited; Founder: Mr. T. Vignesh Prabhu
- M/S. Idot inc., Founder: Mr. Bharanidharan

I. Break through Innovations / Technology Developed at the institute

The following are the break through innovations that were developed in house at our institute by the faculty and student members of IIC@KEC during the year 2021-2022.

1. Ecological Hyperacid (Waterless) Dyeing System

In conventional dyeing process water act as a solvent, it was replaced by carbon dioxide. The main objective of the project is to avoid the over usage of water and to eliminate the pollution due to waste water released in the natural bodies (river, underground using bore-wells)



2. Novel sanitary Napkin

It is a double side napkin in single set. So they can use one side for particular time and they can remove top side and thrown away and can use other side for another particular period so, it reduce the necessity of carrying additional napkins along with them. It is made with organic agro-waste absorbent material so it reduces the cost as compared to other biodegradable napkins. At the same time, it decompose easily in the environment.



3. THE X PELLER (BIRD DETERRENT SYSTEM)

Crops are being heavily damaged by intrusion of birds over fields, mostly during the time of harvest as well as planting. As stated by the farmers, 40% of the total yield is being damaged due to overgrazing by these pests which affects the economic growth of our country drastically. Moreover, they deface floors and equipment, bombards aircraft and other durable goods, halt operations and make unnecessary repairs, down power lines, spoils inventory, contaminates food pallets as well as nibble out the insulation. The X Peller is a fully automated bird deterrent system that provides continuous bird repelling capability after a one-time configuration. The product uses a laser beam with wavelengths and power that is allotted by the government for public use. When operational, birds will avoid occupying that particular area as they consider there to be unsafe.



J. Participation of IIC@KEC in various programs of Central and State Govt.

➤ ARIIA

- Participation: **Since 2018**
- Rank: **Band Excellent (Private/ Self-Financed College)**

➤ NISP Adoption status

- Trained Faculty - **01**
- Policy Formulation - **Completed**
- Policy Implementation – **Completed**

➤ Regional Meet @ Sathyabama University, Chennai – 4 Members

➤ Innovation Ambassador

- Advanced level training: **29**

➤ Smart India Hackathon

- Hardware Category: **5 Projects - National Finalist and One Project - Winners (Team Chemflash)**
- Software Category: **2 projects - National finalist**

- **National Innovation Repository**
 - Total Registrations: **540**
 - Idea Submitted / Recommended: 475 / 371
 - Prototypes Submitted / Recommended: 155 / 120
 - Business / Startup Ideas Submitted / Recommended: 20 / 20
- **TNSI - Tamil Nadu Student Innovators**
 - National level Finalists: **Two Teams**
- **5G Hackathon**
 - National level Finalist: **One team (Grant of Rs. 4,00,000/-)**

K. Detail of Social-Media & Connections of IIC @KEC

- Instagram:** https://www.instagram.com/iic_kec/
- Facebook:** <https://www.facebook.com/iickec>
- Twitter:** <https://twitter.com/IICKongu>

L. Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell

Mr. J. K. Aswin, Chairman, IIC@KEC

Being the chairman of IIC@KEC I have got a chance to work with a great team of faculties and students. We organized about 50 events in this academic year, which boosts innovation and entrepreneurial skills of students.



Ms. A. Priyanga, Winner SIH'2022 from KEC

We are the first batch to win in SIH'2022. This happened only due to constant reviewing and mentoring by our faculty coordinators of IIC.



Mr. Phuskar Bhadle, Team Lead, Aujas Cyber Security, Pune

I have visited Kongu Engineering College representing MoE's innovation cell for SIH'2022. The way of hospitality and event organizing were appreciable.



Mr. Bharani Dharan Krishnaswamy, Chief Architect, TCS, Chennai

I have evaluated various project works of Kongu Engineering College students; I have witnessed industrial standards in their innovations



Special Mentions from SIH External participants

<p>Greetings Everyone, My name is Vivek Verma, team member, A1 developers. It really an amazing experience for me and my team in this hackathon. We build great memories with this institution. It really enjoyable and memorable for us. I extremely thankful to the entire management including faculties, student volunteers and the staff members for their entire support. Special thanks to the students volunteers specially N Prasanth sir for their the help and support. I also thanks to my college @kmclu for nominating our team to the final round. Thank you and Regards, Vivek Verma, Team- A1 developers</p>	<p>Good morning to all, utsah jivan from Sarada College thanks each and every one in the organizing team and volunteers team for their very excellent support in all stage of the events. We are marveled by their dedicated team efforts always tinged with smile and enthusiasm. You have put the whole event in positive energy zone that enabled all the teams work with energy and zeal. The planning and effortless execution was marvelous. Cheers to the team. Kudos to all the innovators and winners. Also happy to have met mentors and get their strategies for planning for hackathon. We are returning back energized.</p>
<p>Dear organizers, Good morning all. Warm Greetings. On behalf of Sri Eshwar college of Engineering, Coimbatore I really submit my sincere appreciation to all the organizers, coordinators, committee members, student volunteers for the excellent arrangements, hospitality and support rendered at KEC. We also request you to send us the Valedictory function photos - softcopy in this group, so that it has to be submitted to our college. Dr. S. Sumathi, Associate Professor - AI&DS, Sri Eshwar college of Engineering</p>	<p>Good evening all! On behalf of Angadi Institute of Technology and Management, Belagavi, Karnataka, would like to thank organizers, teachers and volunteers for their excellent and successful conduction of the SIH. We loved your hospitality and the campus. Thank you -SILVA MINDS</p>

M. Images



SIH 2022 Participants

KONGU ENGINEERING COLLEGE
(AUTONOMOUS)
Perundurai, Erode - 638060

DEPARTMENT OF CIVIL ENGINEERING
IN ASSOCIATION WITH
INSTITUTION'S INNOVATION COUNCIL @ KEC

"Ignite your minds"

An Event to commemorate Dr. APJ Abdul kalam birthday

PROOF OF CONCEPT (PoC) COMPETITION 2021

EVENT : 01/11/2021
DATE : 02/11/2021

Cash prizes:-

- 1]=> RS 5000
- 2]=> RS 3000
- 3]=> RS 2000

Event theme :-

- Agriculture and Allied Field
- Healthcare
- Waste Management
- Electricity, New and Renewable Energy
- Sensor Technology
- Information & Communication Technology
- Others

STAFF CO-ORDINATOR:-

- 1) Dr. S. RAMAPRIYAN
- 2) Ms. VIJAYAVATHI
- 3) DR. S. VIJAYANTH
- 4) MR. S. VENKATACHALAM
- 5) MRS. T. JEEVETHA

KONGU ENGINEERING COLLEGE
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Perundurai, Erode - 638060.

DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING
IN ASSOCIATION WITH
INSTITUTION'S INNOVATION COUNCIL

organises

PROOF OF CONCEPT (PoC) COMPETITION 2021

Event Date: 30/10/2021

TOP 10 TEAMS WILL BE FINALIZED!!!

Cash Prize:

- 1st Prize - Rs.5,000-
- 2nd Prize - Rs.3,000-
- 3rd Prize - Rs.2,000-

Staff Co-Ordinators
Dr. V. Surendar | Dr. K. Prithvi
Dr. S. Albert Alexander | Mr. M. Suresh

Student Co-Ordinators
Mr. S. Vinoth Kumar

KONGU ENGINEERING COLLEGE
Perundurai, Erode - 638060

INSTITUTION'S INNOVATION COUNCIL

Transform Yourself

DEPARTMENT OF COMPUTER TECHNOLOGY - PG

PROOF OF CONCEPT (PoC) CONTEST 2K21

PROMOTE YOUR INNOVATION

Celebration Of NATIONAL INNOVATION DAY

Proof of Concept (PoC) CONTEST 2K21

I prize - Rs.5000
II prize - Rs.3000
III prize - Rs.2000

Winning teams will be recommended for KE Spark fund, IPR filing and NIDHI PRAYAS

Staff Coordinators:
Mr. M. Arumugam | Ms. K. Karthika | Ms. T. E. Ramya

<https://kongu.ac.in>

KONGU ENGINEERING COLLEGE
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PERUNDURAI, ERODE - 638060

DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION

EIE ASSOCIATION & ISOI STUDENT'S CHAPTER IN ASSOCIATION WITH IIC

PROUDLY PRESENTS

"KEC - PROOF OF CONCEPT"

EIE PROJECT EXPO

(EXCLUSIVE FOR EIE STUDENTS)

EXCITING CASH PRIZES...

02.11.2021

CONTACT-R. SANTOSH (SECRETARY)
EIE DEPARTMENT

Kongu Engineering College
(Autonomous)
Perundurai Erode - 638060

DEPARTMENT OF MECHANICAL ENGINEERING
in association with
INSTITUTION'S INNOVATION COUNCIL @ KEC

"Ignite your minds"

An event to commemorate Dr.APJ Abdul Kalam's birthday

PROOF OF CONCEPT (PoC) COMPETITION 2021

EVENT DATE: 02/11/2021

CASH PRIZES:

- I - ₹5000
- II - ₹3000
- III - ₹2000

EVENT THEMES:

- Agriculture and Allied Fields
- Healthcare
- Waste Management
- Electricity, New and Renewable Energy
- Sensor Technology
- Information & Communication Technology
- Others

JURIES ARE FROM INDUSTRY

For queries, Contact our Coordinators:
Dr.C.Baskar, A&D/Mech - 999405748
Mr. S. Venkatesan, A&D/Electrical - 9388139603
Dr.S.M.Senthil, APSSBC/Mech - 9994846414

Student Co-ordinators:
Aravind JK - III Yr E349598058
Abishek R - III Yr E349598059
Aishwarya Rajesh - II Yr E349598770

KONGU
ENGINEERING COLLEGE
(AUTONOMOUS)
PERUNDURAI, ERODE - 638060

DEPARTMENT OF MECHATRONICS ENGINEERING

MECHATRONICS ENGINEERING ASSOCIATION(MCEA)

&

INNOVATION AND ENTREPRENEURSHIP FORUM(IEF KEC)

PROUDLY PRESENT

"Open House Exhibition"

"KEC - PROOF OF CONCEPT" - PROJECT EXPO

Top PoCs Will be considered for Seed Funding

DATE : 30.10.2021
VENUE : MECHATRONICS GROUND FLOOR

Ideation and Proof of concepts Development

The image contains two photographs and a presentation slide. The left photograph shows several students in a workshop setting, focused on a task. The right photograph shows a group of students in a classroom or lecture hall, with one student presenting to an audience. The presentation slide in the background displays the text "IDEATION & PROOF OF CONCEPT DEVELOPMENT" and "KONGU ENGINEERING COLLEGE". A Google Map pin indicates the location as Erode, Tamil Nadu, India.

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KONGU ENGINEERING COLLEGE
[AUTONOMOUS]
PERUNDURAI, ERODE - 638060
Innovation and Entrepreneurship Forum(IEF@KEC)
proudly organises

WORKSHOP ON PRODUCT DESIGN AND DEVELOPMENT
(EXCLUSIVE FOR REGISTRANTS OF E-HORIZON'22 PROJECT EXPO)
on

1. 2D SKETCHUP 2. CREO PARAMETRIC or SOLIDWORKS 3. ANDROID APP DEVELOPMENT 4. WEB DESIGNING

5. MACHINE LEARNING 6. INTERNET of THINGS 7. ELECTRIC CIRCUIT / PCB SIMULATION

Date : 14 to 18 March, 2022
Time : 04:30 pm to 06:30 pm
FREE REGISTRATIONS

KONGU ENGINEERING COLLEGE
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TBI-KEC INCUBATING SUCCESS INSTITUTION'S INNOVATION COUNCIL(IIC@KEC) & ENTREPRENEURSHIP AND MANAGEMENT DEVELOPMENT CENTRE(EMDC)

Entrepreneurship Awareness Camp - II

Mr. S. Rajumar, Founder & Managing Director, Chennal Side Rice Industries P. Ltd, Erode, Tamil Nadu, India
Dr. R. Paramasivam, COO - TBI & Research Professor / MTS, KEC
Dr. S. M. Senthil, Coordinator - EMDC, Associate Professor / Mech, KEC
Dr. S. Praveen Kumar, Convener - IIC@KEC, Associate Professor / MTS, KEC
Dr. P. Karuppiah, Associate Professor / MECH, KEC
Dr. C. Vasar, Associate Professor / Mech, KEC
Dr. S. Alton Alexander, Professor / IEEE, KEC

DATE : July 01 & 02, 2022 TIME : 09:15 AM - 04:00 PM VENUE : IT Park seminar hall

World Entrepreneur's Day Celebration
Session on : "My Journey and Lessons Learnt as an Entrepreneur" & Recognition of Campus Entrepreneurs
Resource Person : Ganesh Devaraj, Ph.D., Chief Executive Officer, Soliton Technologies, Bangalore.

DATE : 21st August, 2022
TIME : 11:00 am to 01:00 pm
PLATFORM : Google Meet

Workshops



Field Visit to Kerala Startup Village – Kerala Startup Mission



N. Contact

Dr. Praveen Kumar Subramanian

Convener – Institution's Innovation Council – KEC (IIC@KEC)

Ph : +91-9500-575-414, +91-6382-650-34

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