



# School of Engineering, Cochin University of Science and Technology [ ARI-C-9462 ] C-9462 ]

## Section 1: Policy And Institutionalization Of I&E Activities In HEIs (Academic Calendar Year 2020-21 & 2021-22)

### 1.1) Adoption Level of Innovation and Entrepreneurship (I&E) Policy in HEIs: Registration; Policy Formulation; Policy Implementation

Completion of Action Items (status as on 7th November 2022 )	Status
Registered in the NISP portal for I&E Policy Adoption	Yes
Institute has Formulated an Innovation and Entrepreneurship (I&E) Policy	No
Institute has Action Plans for Implementation of the I&E Policy	No

#### Contact:

Faculty Name:	Dr. Saju K. K
Designation:	Professor
Email ID:	kksaju1970@gmail.com
Mobile No.	9895593988

### 1.2) Performance Level of Institution's Innovation Councils (IICs) Established in HEIs: Scores and Stars Obtained

Annual Performances of IIC Institute	Stars Secured
IIC 1.0 (2018-19)	
IIC 2.0 (2019-20)	
IIC 3.0 (2020-21)	2
IIC 4.0 (2021-22)	3

#### Contact:

IIC President of the Institute:	Dr. Saju K K
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Designation:	Professor
Email ID:	kksaju1970@gmail.com
Mobile No.	9895593988

### 1.3) Activeness of Trained Innovation Ambassadors in Driving Campus I&E Ecosystems in HEIs: Trained IA/HEI and Nos of Prescribed Activities undertaken by IA

Sr. No.	Name of the Faculty IA	Level of Training	No of I&E Expert Talks/Sessions Conducted
1	Nithya Gopinath	Basic	0
2	Rashid Kareem	Basic	1
3	Dr. Renumol V G	Basic	0
4	Lima Johnson	Basic	0
5	Neethu N M	Basic	0
6	Reen Paul	Advance	0
7	Deepthy J	Advance	0

### 1.4) Participation in KAPILA/SIH Program

HEI Registered in the KAPILA Portal	C-9462	No
HEI Participated in the Smart India Hackathon (2022)	C-9462	Yes

## Section 2: Teaching and Learning: Academic Programs related to Innovation and Entrepreneurship (I&E) Offered by the HEI

## 2.1) Academic Courses in Innovation, Entrepreneurship and IPR

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Course Start Date
1	Entrepreneurship Development	GE 15-17L3	2020-21	Core Course	Bachelor	Department of Mechanical Engineering	1	03-08-2020 00:00:00
2	Intellectual Property Rights	SE-15 1804 E4	2020-21	Elective Course	,Bachelor	Division of Safety and Fire Engineering	3	03-08-2020 00:00:00
3	Entrepreneurship Development	GE 15-17L3	2021-22	Core Course	Bachelor	Department of Mechanical Engineering	1	02-08-2021 00:00:00
4	Intellectual Property Rights	SE-15 1804 E4	2021-22	Elective Course	,Bachelor	Division of Safety and Fire Engineering	3	02-08-2021 00:00:00
5	Research Methodology and IPR	18-455-0111	2020-21	Core Course	Master	Division of Safety and Fire Engineering	2	21-09-2020 00:00:00
6	Research Methodology and IPR	18-455-0111	2021-22	Core Course	,Master	Division of Safety and Fire Engineering	2	20-09-2021 00:00:00

## 2.2) Non-Academic Courses in Innovation, Entrepreneurship and IPR

Srno	Title of Course	Academic Year	Type of Certificate Program	Certificate Program/MDP/FDP/EDP Sponsored/Supported by	Certificate Program Offering Department/ Centre/ Unit Name	Program Start Date	Program End Date
No Data Found							

## Section 3: Pre-Incubation and Incubation Infrastructure & Facilities are Currently in Operation to Promote I&E Agenda (AY 2020-21 & 2021-22)

### 3.1) Existence of Pre-Incubation Facility (Tinkering Lab/Makers' Space/Design Centre/New Gen IEDC/IEDC/EDC/Innovation Cell/Startup Cell) (>= 600 Sq. Ft. Floor Area)

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	IEDC	Innovation and Entrepreneurship Development Centre	Dr. K K Saju	989559398	kksaju1970@gmail.com	Mentoring Support, Pre-Incubation Facility Support (Idea to Prototype and Innovative Business Plan Development)

### 3.2) Existence of Incubation Facility (>= 1500 Sq. Ft. Floor Area)

Sr. No.	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	Center for Innovation Technology Transfer and Industry Collaboration	Dr. Sam Thomas	984615212	sam8570@gmail.com	Other Central/State Government

### 3.3) Existence of IPR Cell / Patent Facilitation Unit / Technology Transfer Centre at the institute

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	Technology Transfer Centre /TTO	Inter University Centre for IPR Studies	Dr. M Bhasi	0484257531	mbhasi@gmail.com	Mentoring Support

## Section 4: Generation and Support of Prototypes / Innovations at HEI and Recognition received (AY 2020-21 & 2021-22)

### 4) Total no. of Innovations (Verified and Recommended) in Different TRLs (4-9) are Recorded in the YUKTI National Innovation Repository of the IIC Institute ( Status as on 7th November 2022 )

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020-21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engagement of Team Lead in Institute	Contact No	Emai
No Data Found								

## Section 5: Start-ups/Ventures Established and Supported at HEI and & Recognitions Received (AY 2020-21 & 2021-22)

### 5) Total no of Ventures/Startups (Verified and Recommended) are Recorded in the YUKTI National Innovation Repository of the IIC Institute (Status as on 7th November 2022 )

Sr. No.	Startup/Venture Name	Startup/Venture Registered as	CIN No/LLP/OPC/RC No	GST No	FY of Establishment	Startup/Venture Recognized by DPIIT/Startup India
No Data Found						

## Section 6: Collaboration with Other Incubation Units, HEIs and Industry Associations to Strengthen Better Services and Support to Innovation & Startups at HEI (AY 2020-21 & 2021-22)

### 6) Collaboration with Other Incubation Units, HEIs and Industry Associations to Strengthen Better Services and Support to Innovation & Startups at HEI (AY 2020-21 & 2021-22)

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
No Data Found						

## Section 7: Intellectually Property (IP) Generated and Commercialization

### 7.1) IPR Filed and Published (Copyrights & Design only)

Sr. No.	Title/Name of IP (Copyright/Design Only)	Type of IP	IP Registration Number of Copyright/Design	Date of Filed/Published	Has this IP(Copyright & Designs Only) been Commercialized/Transferred to Industry/Startup/Society?
No Data Found					

## 7.2) Patents Filed by HEI

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
1	FUZZY LOGIC BASED SYSTEM AND METHOD FOR OPTIMIZATION OF THERMAL BARRIER COATING THICKNESS IN INTERNAL COMBUSTION ENGINES	2021101445	30-06-2020
2	FARMCHAIN INTELLIGENT NETWORK SYSTEM (FINS)	202141028508	24-06-2021
3	AN AUTOMATED IRRIGATION SYSTEM BASED ON CROP WATER REQUIREMENT (AISCR) AND ITS METHOD THERE OF	202141054061	23-11-2021
4	AUTOMATE AND QUERY BASED FARMING ASSISTANCE SYSTEM AND METHOD WITH KNOWLEDGE BASE (AQFAK)	202141054862	26-11-2021
5	Deep Transfer Learning based Crop Monitoring and Yield Forecasting	202141002169	18-01-2021
6	Novel Graph Based Community Detection System for early prediction of COVID Spread based using Mobile Data	202141017935	19-04-2021
7	PLANT PROTECTION IoT DEVICE (PPIOT)	202141051849	11-11-2021
8	SYSTEM TO DETECT HANDWRITING DISABILITY AND METHOD THERE OF	202241010421	26-02-2022

## 7.3) Patent Published / Granted Data

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
1	201841031716 A	A SYSTEM AND METHOD FOR ABNORMAL ACTIVITY DETECTION USING AUTOENCODING AND PARALLELE PIPED SPATIO-TEMPORAL REGION	24-08-2018	Published	2019	Other(Individual)

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
2	201841038043	A METHOD FOR IMPLEMENTING CONVOLUTIONAL NEURAL NETWORKS USING WINOGRADMINIMAL FILTERING AND GEMM	10-08-2018	Published	2019	Other(Individual)
3	201941028296	LEAD FREE SOLDER ALLOY FOR MODERATELY HIGH TEMPERATURE APPLICATIONS,	15-07-2019	Granted	2022	Other(Individual)
4	201941005271	LEAD FREE SOLDER ALLOY TIN-COPPER-BISMUTH-SILVER	02-11-2019	Published	2019	Other(Individual)
5	202241010421	SYSTEM TO DETECT HANDWRITING DISABILITY AND METHOD THERE OF	26-02-2022	Published	2022	Other(Individual)
6	202141051849	PLANT PROTECTION IoT DEVICE (PPIOT)	11-11-2021	Published	2021	Other(Individual)
7	2021101445	FUZZY LOGIC BASED SYSTEM AND METHOD FOR OPTIMIZATION OF THERMAL BARRIER COATING THICKNESS IN INTERNAL COMBUSTION ENGINES	30-06-2020	Granted	2021	Other(Individual)
8	202141028508 A	FARMCHAIN INTELLIGENT NETWORK SYSTEM (FINS)	24-06-2021	Granted	2022	Other(Individual)



Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
9	202141054061	AN AUTOMATED IRRIGATION SYSTEM BASED ON CROP WATER REQUIREMENT (AISCR) AND ITS METHOD THERE OF	23-11-2021	Granted	2022	Other(Individual)
10	202141054862	AUTOMATE AND QUERY BASED FARMING ASSISTANCE SYSTEM AND METHOD WITH KNOWLEDGE BASE (AQFAK)	26-11-2021	Granted	2022	Other(Individual)
11	202141051849	PLANT PROTECTION IoT DEVICE (PPIOT)	11-11-2021	Published	2021	Other(Individual)
12	202241010421	SYSTEM TO DETECT HANDWRITING DISABILITY AND METHOD THERE OF	26-02-2022	Published	2022	Other(Individual)
13	201741022304A	BAND PASS DIFFERENTIAL QUANTIFIER BASED ERROR FEEDBACK MODULATOR	26-07-2017	Granted	2022	Other(Individual)
14	202141002169 A	Deep Transfer Learning based Crop Monitoring and Yield Forecasting	18-01-2021	Published	2021	Other(Individual)
15	202141017935	Novel Graph Based Community Detection System for early prediction of COVID Spread based using Mobile Data	19-04-2021	Published	2021	Other(Individual)

## 7.4) IP Commercialized and Transferred to Industry/Startup

Sr. No.	Name of Technology Licenced/Transferred/Commercialized	Technology Type	Patent/Licence Holder name (Institute Co-ownership is Must)	Technology Transferred to	Name of Licensee	D T T
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No Data Found



# Declaration

To,  
The ARIIA Committee  
MHRD's Innovation Cell  
New Delhi

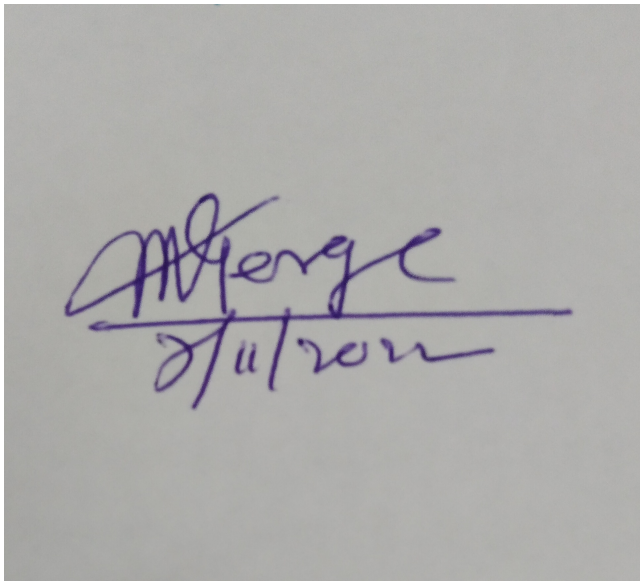
## Joint Declaration by the Head of the Institute and Nodal Officer

**Dear Sir,**

Herewith, myself **Dr. George Mathew** (Head of Institute) and **Dr. K.K.SAJU** (Nodal Officer) jointly declaring on behalf of our institute is that all the information submitted are true and correct to best of our knowledge.

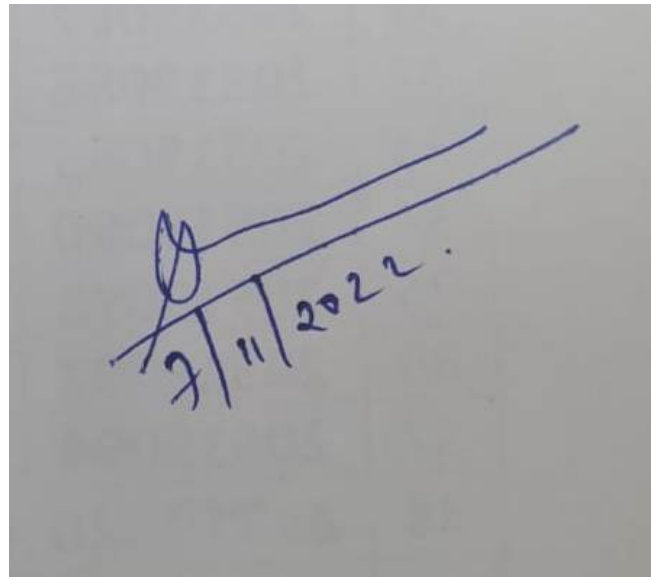
Thank you

The Head of Institute

A photograph of a handwritten signature in blue ink on a light-colored background. The signature reads "George Mathew" and "2/11/2022" below it.

Dr. George Mathew,  
Head of the Institution,  
School of Engineering, Cochin University of Science  
and Technology,  
Cochin, Kerala

Nodal officer

A photograph of a handwritten signature in blue ink on a light-colored background. The signature reads "K.K.SAJU" and "2/11/2022" below it.

Dr. K.K.SAJU,  
Nodal Officer,  
School of Engineering, Cochin University of Science  
and Technology,  
Cochin, Kerala