



**Kakatiya Institute of Technology & Science-Warangal**  
(An Autonomous Institute under Kakatiya University, Warangal)  
**Institution's Innovation Council (IIC – 5.0)**  
(Institute ID- IC201811135)



**Annual Report - 2022-23**

**A. About IIC Institute**

**Vision:** To create a vibrant local innovation ecosystem for Scouting Ideas and Pre-incubation of Ideas that lead to start-ups and entrepreneurship

**Mission:**

1. To enable the institute to actively engage students, faculty and staff in innovation and entrepreneurship activities
2. To create space for collaboration, co-creation, business relationships and knowledge exchange
3. To conduct various innovation and entrepreneurship-related activities prescribed by Central MIC in time bound fashion.
4. Identify and reward innovations and share success stories.

- Journey of IIC established at the Institute:

IIC KITSW was established in 2018. Ever since its inception it is actively involved in conducting various events. Some of the prominent events are as following.

1. India First Leadership Talks Series- Calendar.
2. IIC KITSW organized **Ideathon 2K19** on 12.03.2019, in coordination with Mechanical Engineering Students Association (MESA). About 50 students participated and presented their innovative ideas.
3. S. Akilesh had participated in a supra event held at Noida on 15<sup>th</sup>-20<sup>th</sup> July 2019 organised by Society for Automobile Engineers (SAE).
4. T. Lavanith presented a paper on his innovative idea- LOOP HEAT PIPES at **NASA Thermal & Fluid Analysis Workshop (TFAWS) 2019** which was conducted at **NASA Langley research centre Virginia, USA** on 26-30<sup>th</sup> August 2019. He received a travel grant of Rs 1 lakh from AICTE.
5. Students were encouraged to participate in **Asian E-Bike Challenge** organized by M/s Imagine 2 Innovate, on 25<sup>th</sup> to 29<sup>th</sup> September 2019.
6. IIC KITSW, organized **Smart India Campus Hackathon (SIH)** on 22.01.2020 and 23.01.2020. About 250 students participated in the event. Eight best innovative ideas were shortlisted for National Smart India Hackathon.
7. IIC KITSW, had been sanctioned with **MSME Business Incubation Centre** by Ministry of MSME, Govt of India (File No: 3(10)/ Inc/7<sup>th</sup> PMAC/2020-21, dated 15.04.2021).
8. IIC KITSW, organized a Workshop on **"A RoadMap to Startup"** on 31.01.2021. in coordination with the Dept. of Computer Science & Engineering.
9. IIC KITSW, organized one day Workshop on **"Intellectual Property Rights (IPR) and IP Management for Startup"** on 27.02.2021. **Mr. M. Radha Krishna Chavahan, Secretary, Metropolitan Legal Services Authority, Hyderabad** was the Chief Guest and resource person.
10. **Sri D. Naveen Kumar**, Asst. Prof of CSE has undergone **Innovation Ambassador training** conducted by **MoE's Innovation Cell and AICTE** during the period from 30<sup>th</sup> June to 30<sup>th</sup> July 2021.

11. On the occasion of “**World Entrepreneurs Day**”, a webinar on “**Journey from Innovation to Entrepreneurship**” was conducted on 21.08.2021. Mr. Srikanth Soni, Founder & Proprietor Srujan Workplace Innovations was the guest speaker.
12. Organized Impact Lecture Series Phase-I and Phase-II with financial support from MoE’s Innovation Cell during the academic years 2021-22 and 2022-23.
13. Following activities were organized as part of IIC 5.0

S. No.	Event / Activity	Date(s)	Type of activity	Student / Faculty		Benefit in terms of Learning
1.	Launch of 5G services	01-10-2022	MIC driven activity	16	32	visualizing the technology shift and scope for interdisciplinary innovation and cross-sector entrepreneurship.
2.	Inter/Intra Institutional Idea Competition/ Challenge/ Hackathon and Reward Best Ideas - Manage through YUKTI-NIR	05-11-2022	MIC driven activity	150	15	participants will present their ideas and exhibit prototypes in competition.
3.	Inter/Intra Institutional Innovation Competition/ Challenge/ Hackathon and Reward Best Innovations - Manage through YUKTI-NIR	10-11-2022 & 11-11-2022	IIC Activity	65	4	Best ideas in the competition will be further recommended for MSME Business Incubator.
4.	National Education Day	11-11-2022	IIC Activity	125	15	Debate on Importance of education in India’s growth and the nation's commitment to all aspects of education.
5.	My Story - Motivational Session by Successful Entrepreneur/ Start-up founder.	28-11-2022	Celebration Activity	80	16	Risk taking opportunity & critical thinking & how to - build a team, raise capital, learn from failure.
6.	National Pollution Control Day	02-12-2022	IIC Activity	115	6	Raise awareness towards the cause of pollution, and to remind participants about the different ways to reduce pollution.
7.	National Energy Conservation Day (India)	14-12-2022	Celebration Activity	54	12	Making participants aware of global warming and climate change and promotes efforts towards saving energy resources and make them to think innovative.
8.	Orientation Session on IIC 5.0 & Features	11-01-2023	Celebration Activity	16	32	Virtual orientation Session on IIC 5.0 to know the key initiatives of the Institutions Innovation Council, MIC, &

S. No.	Event / Activity	Date(s)	Type of activity	Student / Faculty		Benefit in terms of Learning
						understand the features of IIC5.0.
9.	National Youth Day	12-01-2023	MIC driven activity	135	10	Encouraging students to think about developing innovative solutions.
10.	Entrepreneurial Opportunities for MBA Graduands	21-01-2023	Celebration Activity	71	10	Participants will gain the knowledge on various Entrepreneurship opportunities after graduation.
11.	Field/Exposure Visit to Idea Lab	11-02-2023	Self-driven	53	6	Participants gained the knowledge on state-of-the-are equipment used for rapid prototyping in idea lab.
12.	Exposure and field visit for problem identification	16-02-2023	IIC Activity	27	3	Make students & faculty Identity real life problems which need solutions.
13.	Session on Achieving Problem-Solution Fit & Product-Market Fit	16-02-2023	IIC Activity	132	16	Participants were given inputs on how to achieve a market-fit product out of their innovative idea.
14.	National Science Day	28-02-2023	IIC Activity	120	20	Nurturing, and unleashing the scientific temper and innovative mindset for sustainable and inclusive growth.
15.	Session/ Workshop on Business Model Canvas (BMC)	13-03-2023	Celebration Activity	102	41	Participants given training on Business Model Canvas.
16.	Session on “How to plan for Start-up and legal & Ethical Steps”	18-04-2023	IIC Activity	115	10	Young minds will get ignited and try to convert their ideas in to startups.
17.	Creating YUKTI Innovation Repository & Participation in Innovation Challenge	22-04-2023	IIC Activity	83	20	10 Teams have been nominated for YUKTHI Innovation Challenge 2023.
18.	National Technology Week Inaugural Address of Hon'ble Prime Minister of India at 10.00 AM, 11th May 2023	11-05-2023	MIC driven activity	12	36	Young minds will get ignited and try to convert their ideas in to startups.
19.	Organising Innovation & Entrepreneurship Outreach Program in Schools/Community	5-8-2023	MIC driven activity	36	3	Students were given training on how to develop innovations and convert them to an enterprise level.
20.	Workshop on Intellectual Property Rights (IPRs) and IP management for start up	10-08-2023	IIC Activity	184	45	Participants were trained on how to secure their innovations by filing IP.

S. No.	Event / Activity	Date(s)	Type of activity	Student / Faculty		Benefit in terms of Learning
21.	Session on Innovation/ Prototype Validation - Converting Innovation into a Start-up or Session on Achieving "Value Proposition Fit" & "Business Fit"	14-08-2023	IIC Activity	139	39	Participants were trained on how to achieve "Value Proposition Fit" & "Business Fit".
22.	World Entrepreneurs Day	21-08-2023	IIC Activity	192	10	Fueling Ambitions: Embracing Entrepreneurship, Life Skills and Lifestyle for Engineering Students.
23.	Entrepreneurship and Innovation	21-08-2023	Celebration Activity	44	5	Participants gain the knowledge of to convert their ideas in to innovations and how to start their own enterprise.
24.	Idea Lab visit and Centre for Innovation Incubation Research Entrepreneurship (C-i2RE)	22-08-2023	Self-driven	50	5	Know the facilities available in C-i2RE and Idea Lab at KTIS Warangal.
25.	Entrepreneurship and Innovation as Career Opportunities	23-08-2023	Self-driven	40	5	Participants gained knowledge about how to make Entrepreneurship and Innovation as their Career Opportunity.
26.	Session on Accelerators/Incubation - Opportunities for Students & Faculties - Early-Stage Entrepreneurs	30-08-2023	Self-driven	100	10	Highlighted the various Opportunities for Students & Faculties - Early-Stage Entrepreneurs.
27.	Awareness program on startups & Entrepreneurship	30-08-2023	IIC Activity	50	5	Participants will gain the knowledge on How to convert ideas in to startups and then to enterprise.

- Diversified representation in the IIC established at the institute from industry, Interdisciplinary & Departments/ Units etc.

S. No.	Name & Details	Designation & Department	Position	Member Type
	Prof. K. Raja Narendra Reddy <a href="mailto:Krn.r.me@kitsw.ac.in">Krn.r.me@kitsw.ac.in</a>	Professor of Mechanical Engineering	Head, Centre for I <sup>2</sup> RE	Teaching
1	Dr. Srikanth Pabba <a href="mailto:psk.mech.kits@gmail.com">psk.mech.kits@gmail.com</a>	Professor of Mechanical Engineering	Coordinator, NISP	Teaching
2	Dr. S. Sunil Pratap Reddy <a href="mailto:spr.ce@kitsw.ac.in">spr.ce@kitsw.ac.in</a>	Associate Professor of Civil Engineering	President, IIC-5.0	Teaching
3	Sri. K. Ajith <a href="mailto:akreddy.eee@kitsw.ac.in">akreddy.eee@kitsw.ac.in</a>	Assistant Professor of EEE	Convenor, IIC-5.0	Teaching

S. No.	Name & Details	Designation & Department	Position	Member Type
4	Dr. B. Jagadish Kumar <a href="mailto:bjk.eee@kitsw.ac.in">bjk.eee@kitsw.ac.in</a>	Associate Professor of EEE	Coordinator, EDC & Start-up Activity Coordinator, IIC-5.0	Teaching
5	Sri. K. Kishore Kumar, <a href="mailto:kishor.kits@gmail.com">kishor.kits@gmail.com</a>	Assistant Professor of Mechanical Engineering	Convenor, EDC & Member, IIC-5.0	Teaching
6	Dr. B. Sumanth Kumar, <a href="mailto:skb.ce@kitsw.ac.in">skb.ce@kitsw.ac.in</a>	Associate Professor of Civil Engineering	Coordinator, MSME-Business Incubator & Innovation Activity Coordinator, IIC-5.0	Teaching
7	Dr. D. Kumar <a href="mailto:drkumar.csn@kitsw.ac.in">drkumar.csn@kitsw.ac.in</a>	Assistant Professor of CSN	Convenor, MSME-Business Incubator & Member, IIC-5.0	Teaching
8	Sri. D. Naveen Kumar <a href="mailto:dnaveen.cse@kitsw.ac.in">dnaveen.cse@kitsw.ac.in</a>	Assistant Professor of CSE	Convenor, NISP & Member, IIC-5.0	Teaching
9	Dr. S. Vishwa Prasad Rao <a href="mailto:svpr.mh@gmail.com">svpr.mh@gmail.com</a>	Assistant Professor of M&H	Social Media Coordinator, IIC-5.0	Teaching
10	Dr. B. Raghuram <a href="mailto:brr.cse@kitsw.ac.in">brr.cse@kitsw.ac.in</a>	Assistant Professor of CSE	NIRF Coordinator, IIC-5.0	Teaching
11	Dr. V. Raju Reddy <a href="mailto:vr.ece@kitsw.ac.in">vr.ece@kitsw.ac.in</a>	Assistant Professor of ECE	IPR Activity Coordinator, IIC-5.0	Teaching
12	Dr. K. Praveen Kumar <a href="mailto:kpk.it@kitsw.ac.in">kpk.it@kitsw.ac.in</a>	Assistant Professor of IT	ARIIA Coordinator, IIC-5.0	Teaching
13	Sri. M. Srinivas <a href="mailto:mks.eee@kitsw.ac.in">mks.eee@kitsw.ac.in</a>	Assistant Professor of EEE	Internship Activity Coordinator, IIC-5.0	Teaching
14	Sri. T. Mahesh Kumar <a href="mailto:tmk.it@kitsw.ac.in">tmk.it@kitsw.ac.in</a>	Assistant Professor of IT	Member IIC-5.0	Teaching
15	Sri. N. Srikanth <a href="mailto:ns.ce@kitsw.ac.in">ns.ce@kitsw.ac.in</a>	Assistant Professor of Civil Engineering	Member, IIC-5.0	Teaching
16	Sri. K. Jaipal <a href="mailto:jaipal.katukam@kitsw.ac.in">jaipal.katukam@kitsw.ac.in</a>	Assistant Professor of MBA	Member, IIC-5.0	Teaching
17	Sri. P. Anil Kumar <a href="mailto:pak.me@kitsw.ac.in">pak.me@kitsw.ac.in</a>	Assistant Professor of Mechanical Engineering	Member, IIC-5.0	Teaching
18	Dr. S. Kiran <a href="mailto:sk.csn@kitsw.ac.in">sk.csn@kitsw.ac.in</a>	Assistant Professor of CSN	Member, IIC-5.0	Teaching
19	Dr. E. Kalyan Rao <a href="mailto:ekr.pss@kitsw.ac.in">ekr.pss@kitsw.ac.in</a>	Assistant Professor of PSS	Member, IIC-5.0	Teaching
20	Sri. B. Krishna Sandeep <a href="mailto:bks.eie@kitsw.ac.in">bks.eie@kitsw.ac.in</a>	Assistant Professor of E&IE	Member, IIC-5.0	Teaching
21	Sri. Srinivas Thumma <a href="mailto:thumma@sumith.in">thumma@sumith.in</a>	Sumith Electronics Pvt. Ltd.	Expert from nearby Industry	External
22	Sri. A. Dayanand Reddy <a href="mailto:reddy@vasantha.com">reddy@vasantha.com</a>	Vasantha Tool Crafts Pvt. Ltd.	Start-up / Alumni Entrepreneur	External
23	Sri. Narayana Rao <a href="mailto:ibo.warangal@sbi.co.in">ibo.warangal@sbi.co.in</a>	Lead Bank	Bank/Investor	External
24	Sri. J. N. Mishra <a href="mailto:jnmishra97@gmail.com">jnmishra97@gmail.com</a>	MSME-DI	Patent Expert	External

**B. Brief mention of key functionaries at the IIC Institute**

- Principal: Dr. K. Ashoka Reddy
- Head, C-I2RE: Dr. K. Raja Narender Reddy, Prof. of ME
- President: Dr. S. Sunil Pratap Reddy, Assoc. Prof. of CE.
- Convenor: Sri. K. Ajith, Asst. Prof. of EEE.

**C. Portfolio/graphical/Tabular representation of Resource strength (human capital and Physical capital) of the IIC institution**

Total No. of IIC Members	Teaching Faculty: 20 External members: 4 Student members: 22
Total No. of Innovation Ambassadors	14
Total Number of Faculty mentors from Portal	20
Pre-Incubation Units, if any	1. Entrepreneurship Development Cell (KITSW-EDC) 2. Innovation Cell (KITSW-IC) 3. KITSW Pre Incubation Centre
Incubation Units, if any	1. AICTE Idea Lab
IP Facilitation Unit, if any	1. IPR Cell - KITSW

IPR policy is adopted and implemented in the institute. The institute has well established Research and Development (R&D) Cell headed by Dean and Associate Dean. Institute encourages the faculty and students to apply for the patents with suitable financial assistance and guidance. The institute has zero tolerance to plagiarism. All the mini projects and major projects are checked against plagiarism on **Turnitin Software**.

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

The institute has established **Centre for Innovation Incubation Research and Entrepreneurship (C-I<sup>2</sup>RE)** headed by Dr. Srikanth Pabba, Head, C-I<sup>2</sup>RE. It aims to encourage research, innovation and entrepreneurship to help the students to develop professional entrepreneurial ability and mindset to set up their own enterprises. The Centre encompasses 4 important avenues for the students to show case their innovative and creative abilities viz., **Institution's Innovation Council (IIC), MSME- Business incubator, Entrepreneurship Development Cell (EDC) and National Innovation Startup Policy (NISP)**. The Centre shall develop the guiding framework to envision an educational system oriented towards start-ups and entrepreneurship opportunities for students, faculty and staff.

Institute has provided all the infrastructure in the form of Idea pitching rooms (4 ) Innovation Incubation seminar halls (2), Centre of excellences (6) to encourage the students and faculty to carry out their innovative projects. **Student Activity Centre (SAC) of the institute is active and has about 9 clubs** for the students to participate in extra-curricular and co-curricular activities. The **“Technical Club”** of SAC supports the C-I<sup>2</sup>RE in promotion and implementation of Innovation and Entrepreneurship in the campus.

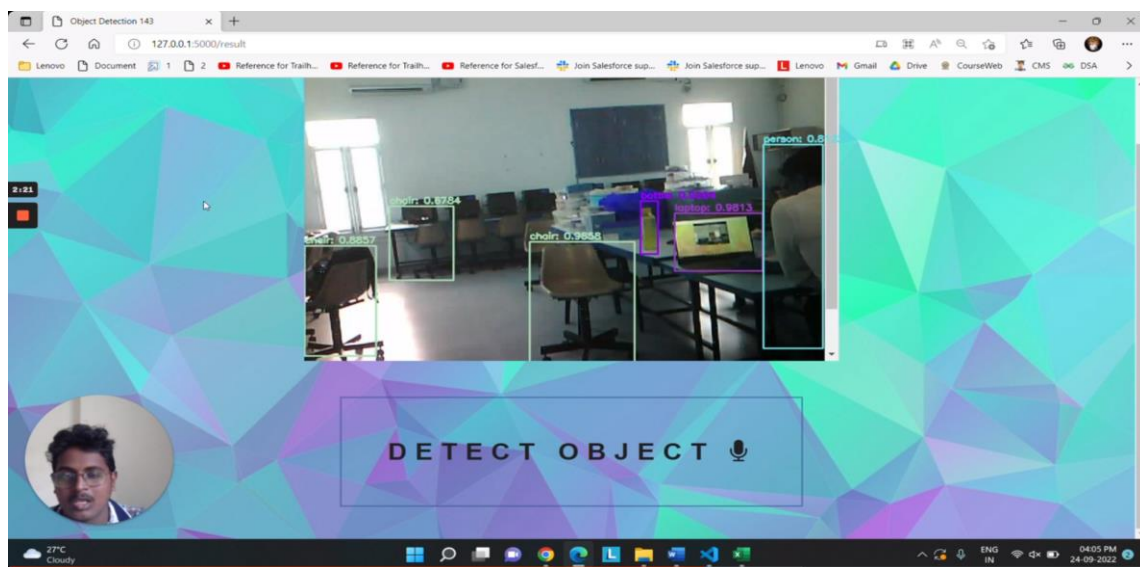
**E. Highlight Achievements (Narrative/Graphical/tabular representation)**

- Number and Different types of I&E and IPR activities Conducted - 27
- No. of student's & faculty ideas generated - 50
- No. of student's & faculty Innovation/prototypes developed - 33
- No. of IPs generated, published and granted - 09
- No. of Student & Faculty Start-ups/Ventures established. - 00
- Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus - 1,00,000/-
- Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR - 1.04 Crore
- No. of Technology Transfer and Commercialisation happened - 00

**F. Highlight few best IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum**

- 1) **Dr. V. Raju Reddy**, Asst. Prof of ECE, received a fund of **Rs 16.4 lakhs** for his innovative project- **Real Time Parking space identification using Computer Vision in Smart Cities**, from **MSME-Business Incubator**.
- 2) **Mr. B. Raghu**, Final year Mechanical student and his team, received a fund of **Rs 15 lakhs** for his innovative project- **Design and fabrication of reaper and binder machine for Leafy vegetables**, from **MSME-Business Incubator**.
- 3) **Mr. B. Nagarjuna** and his team was among the top 3 contestants of National Level Hackathon organized by MIC, **Smart India Hackathon – 2022** & exhibited their solution for the problem statement in the final round.

**G. Highlight selected best Innovations & images with mention of inventor/innovation name**



**Object Detection and Distance Approximation Using ESP32 and Python**



**Design And Fabrication of Attachable Wheel Chair Automator**

**H. Highlight selected start-ups established by students/faculties with mention of founder/cofounder name -Nil**

**I. List if any break through Innovations/ Technology Developed at the institute (2-3 technology with 2-3 lines about technology and innovation**

- 1) IOT based technology was used in the innovative project - “**REAL TIME AUTOMATION OF ELECTRICAL APPLIANCES**” to operate various electrical appliances remotely.
- 2) The php, html, Bootstrap, Ajax, and Css. technologies were used in developing the **PLAGIARISM SOFTWARE USING STRING MATCHING ALGORITHM**. The objective of this project is to ensure zero plagiarism of the projects and mini-projects submitted by the students of the institute. It works as equivalent to any commercial software.
- 3) **EMERGENCY RESPONSIVE SYSTEM** project was developed using latest technologies like php, html, Bootstrap and Css. The objective of this project is to provide the information of nearby Hospitals and automatically the hospital will be notified about the emergency to make necessary arrangements by the time the patient is brought to their hospital.

**J. Participation of IIC-institute in various programs of Central and Stage Govt. Highlighting specially for the schemes or programs**

- Participated in ARIIA 2023 [Band Promising]
- NISP Adoption status - Faculty was trained and institute has started implementing from Academic Year 2021-22.

**K. Detail of social media & Connections of IIC institute**

Social media	User Id
twitter	IicKitsw
Instagram	i2re_iic_kitsw

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

*Faculty Mentor, SIH-2022: Dr. V. Raju Reddy, Assistant Professor, ECED.*

*The journey of SIH 2022 has helped our students to gain knowledge which they can utilize in day-to-day life. The students worked on the problem statement and came up with an idea and developed a prototype for exhibition. We thank organizers of Smart India Hackathon-2022 for conducting such a great event which is helping every participant in some or the other way.*



**Team leader, SIH-2022: Bantu Nagarjuna**

*Smart India Hackathon-2022 gave us new experience which we would cherish every moment of our life. In the process of presenting the solution, our team became the best version of ourselves to learn the various methods. I think this is one of its kind experience every student must go through. We sincerely thank all the stakeholders of the Smart India hackathon for providing us the best experience, one could get*



### Testimonial – (Togaru Lavanith)



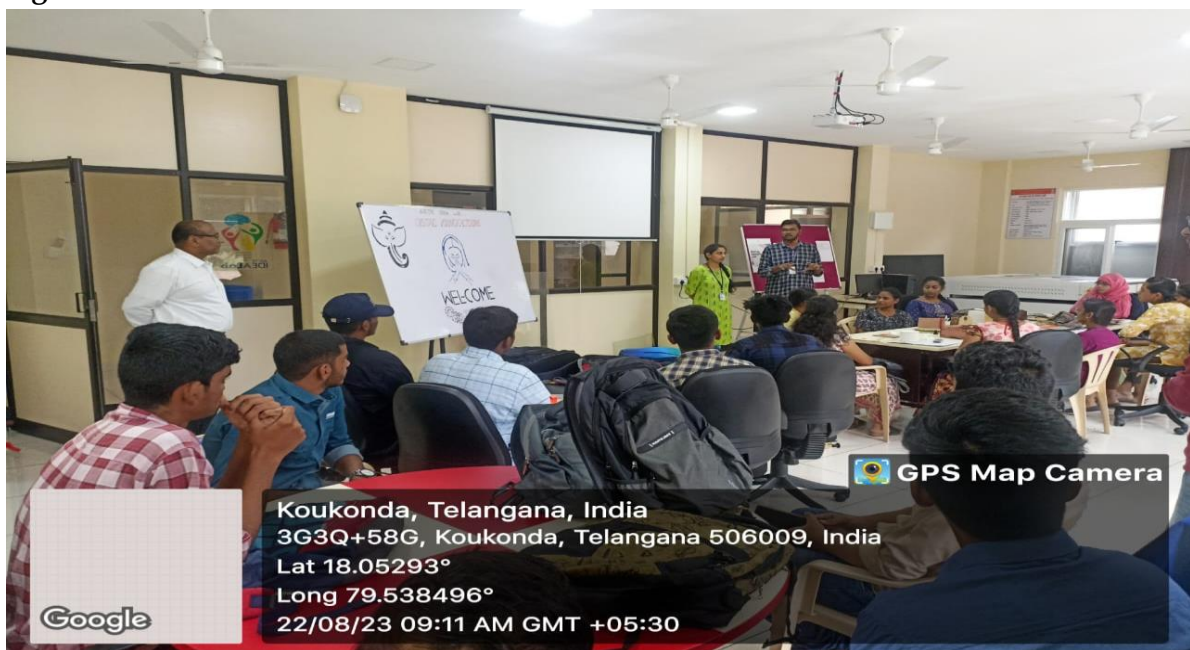
IIC played a very important role in fruition of the project presented at NASA's Thermal and Fluid Analysis Workshop 2019, Virginia, USA. The project at its core is about innovating loop heat pipe technology and ushering it into the modern age and IIC, KITSW is the hub for innovation. The faculty members were very supportive throughout the project and helped me iron out potential problems with the functionality. IIC has ensured I am provided with the necessary software and hardware for the completion of the project. The student community of IIC is very open – minded and they have helped me in setting a clear project timeline. I would like take this opportunity to thank Dr. P. Srikanth, Head, C-I2RE, for all his efforts, right from coordinating with engineering departments and research cell to the approval of my funding to the conference in the United States. I would also like to thank Sri Kishor Kumar, Faculty In- charge IIC, for guiding me in system design of the project. I am confident that IIC will be the hub for many more projects in the years to come.

### Testimonial – (Naganathan Karthik)



The loop heat pipe wick design involved designing a product compatible with modern technologies of additive manufacturing and IIC has contributed a lot at every step. IIC has played a pivotal role in setting project goals and project milestones. My co – author and I had several discussions with the faculty and students of IIC and it gave us valuable insight in terms of innovative capability and scalability of the project as well as potential applications of the technology. IIC has coordinated with Mechanical Department and R&D cell and provided us with a very capable computer with design and simulation software without which our project would not have been completed. I would like to wholeheartedly thank Dr. P. Srikanth, Head, C-I2RE, for his unwavering support and leadership that helped us cross the finish line. I would also like to thank Sri. K. Kishor Kumar, for his insights in the structural design of the wick. I am very thankful to have such a kind and supportive community. I am certain that IIC, KITSW is going to be the center piece for the innovation in our college and mould students to be future innovators.

### M. Images



Koukonda, Telangana, India  
3G3Q+58G, Koukonda, Telangana 506009, India  
Lat 18.05293°  
Long 79.538496°  
22/08/23 09:11 AM GMT +05:30

Idea Lab KITS Warangal visit



Idea Lab KITS Warangal visit



Intellectual Property Rights Awareness Program

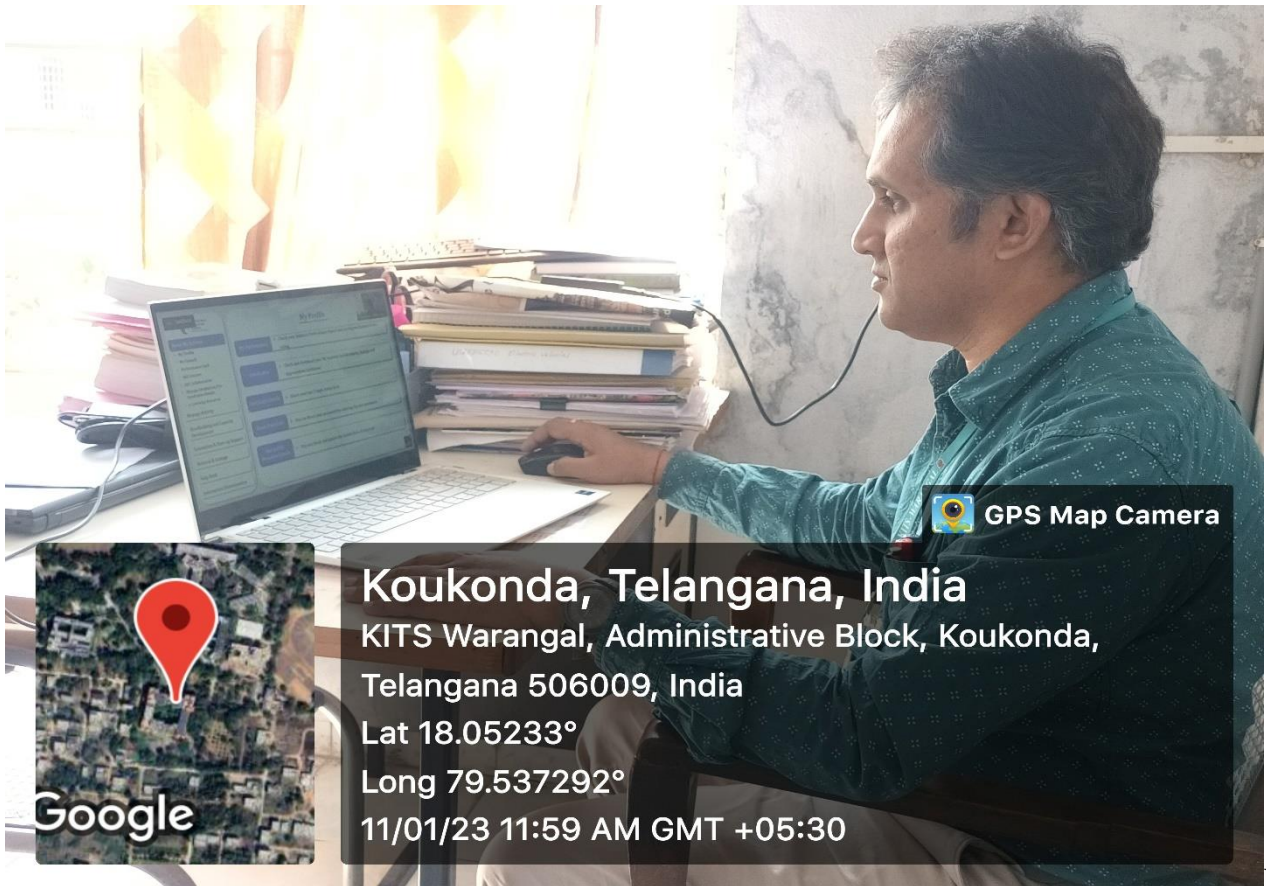


Session on Accelerators Incubation Opportunities for Students and Faculties - Early Stage Entrepreneurs



I & E OUTREACH PROGRAM IN SCHOOLS COMMUNITY

Mr. K. Sandeep Kumar during How to plan for start – ups and legal and ethical steps

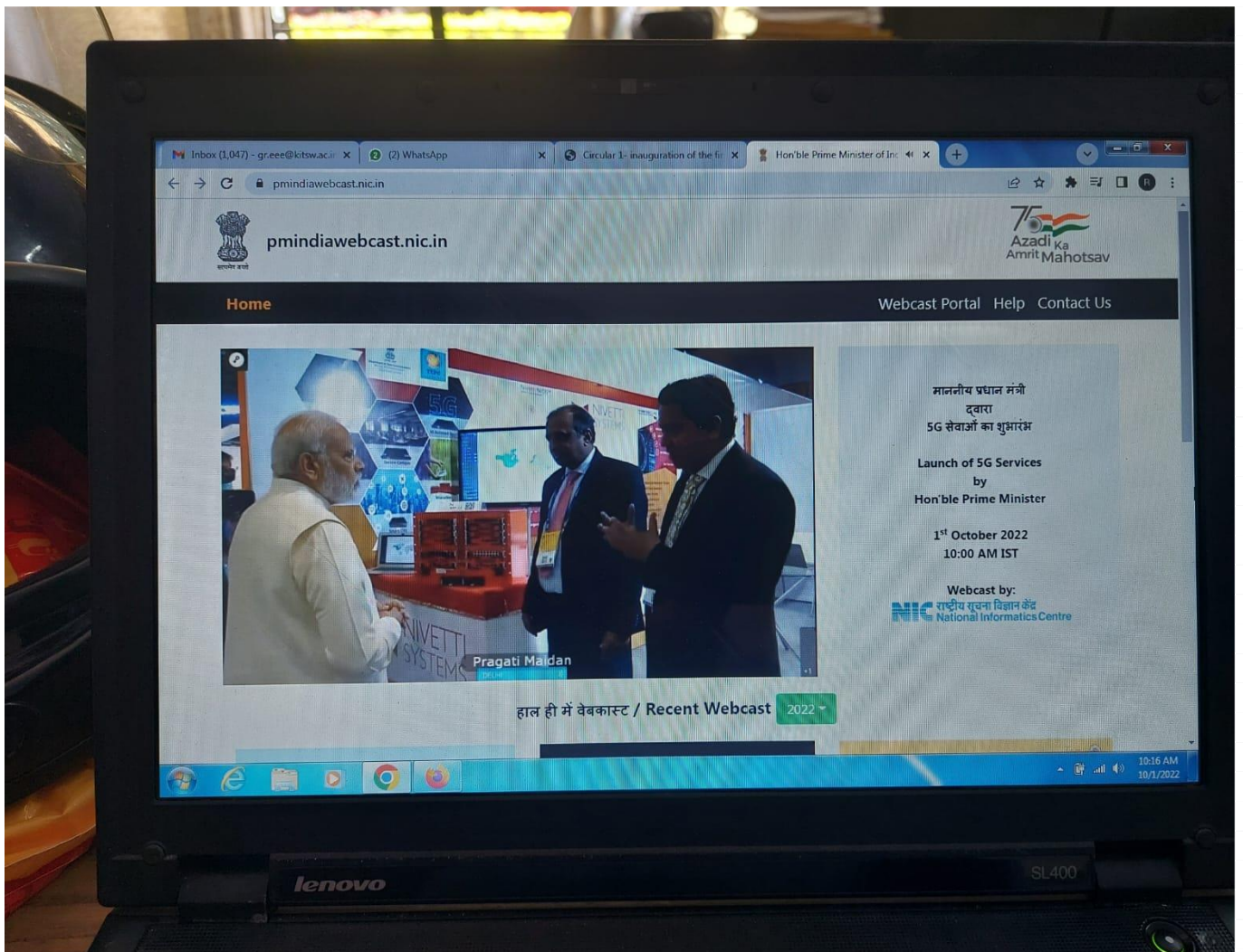


Mr.

Orientation session on IIC 5.0



Inauguration of National Technology Week



Inauguration of the first 5G services by Hon Prime Minister of India



National Energy Conservation Day celebrations



National Science Day celebrations



National Pollution Control day

**N. Contact:**

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