KLS Gogte Institute of Technology, Belagavi

Permanently affiliated and an autonomous institute under Visvesvaraya Technological University, Belgavi |Accredited by NAAC A+ and NBA

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

IIC ID IC201810862

IIC 5.0
Annual Report 2022-23

A. About IIC Institute

- Vision / Mission of IIC established at the Institute

   Vision

   To establish an ecosystem to nurture the culture of Innovation amongst the Students and Faculty.

   Mission
   - To conduct various innovation and entrepreneurship-related activities in time bound fashion.
   - Identify and reward innovations and share success stories.
   - Organize periodic workshops/ seminars/ interactions with entrepreneurs, investors, professionals and create a mentor pool for student innovators.
   - Network with peers and national entrepreneurship development organizations.
   - Create an Institution's Innovation portal to highlight innovative projects carried out by institution's faculty and students.
      Organize Hackathons, idea competition, mini challenges etc. with the involvement of industries

- **Journey of IIC established at the Institute**

   Our college has established the Institution's Innovation Council (IIC) for promoting different activities related to innovation, IPR, start up and entrepreneurships. Faculties and students are the members of IIC. The IIC cell conducts quarterly meetings in every quarter to plan the quarterly activities and review quarterly conducted activities. Due to these activities, students get a chance to participate in various innovation related initiatives and competitions organized by MHRD. Students actively interact with renowned businessmen and academicians. They get opportunities to nurture their ideas. GIT's IIC helps students to experiment with the latest technologies to get some

prototype for building their confidence. Overall students get an extremely healthy environment right from ideation to start-ups.

Major focus area of IIC is to create a vibrant local innovation ecosystem, Start-up/ entrepreneurship supporting Mechanism, prepare institute for Atal Ranking of Institutions on Innovation Achievements Framework (ARIIA), Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas and develop better Cognitive Ability amongst Technology Students.

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

Sr. No.	Name of Member	Member Type (Teaching/Nonteaching /External Expert)
1	Dr. Kiran K. Tangod	Teaching faculty
2	Dr. Raviraj M. Kulkarni	Teaching faculty
3	Dr. Manjula Ramannavar	Teaching faculty
4	Prof. Mahesh Kori	Teaching faculty
5	Prof. Shashank Bangi	Teaching faculty
6	Prof. VishweshKumar Aithal	Teaching faculty
7	Prof. Raghavendra Jadhav	Teaching faculty
8	Prof. Swarooprani Manoor	Teaching faculty
9	Prof. P.S.Khanagoudar	Teaching faculty
10	Dr. S C Kulkarni	Teaching faculty
11	Prof. P. S. Upparamani	Teaching faculty
12	Dr. Umesh Kulkarni	Teaching faculty
13	Dr. Vanishree Hundekar	Teaching faculty
14	Prof. Pavanika Anandkumar Patil	Teaching faculty
15	Dr. Padma Dandannavar	Teaching faculty
16	Prof. Vaidehi P Deshpande	Teaching faculty
17	Prof. Amey Marathe	Teaching faculty
18	Prof. Vinay Shetty	Teaching faculty
19	Prof. Shrivatsa D. Perur	Teaching faculty
20	Prof. Shubha G. Sanu	Teaching faculty
21	Prof. Ramesh Koti	Teaching faculty
22	Ms. Seema K. Sawant	Non-Teaching faculty
23	Mr. Prakash Mugali	External Expert
24	Mr. Neelesh Chougule	External Expert
25	Mr. Harsh Pangi	External Expert
26	Mr. Kartik Kumar Choudhary	External Expert

B. Brief mention of key functionaries at the IIC Institute

Name of Member	Member Type (Teaching/ Non-teaching / External Expert)	Key Role/ Position assigned in IIC
Dr. Jayant K. Kittur and Prof. D.A. Kulkarni	Principal	Head of Institute

Dr. Kiran K. Tangod	President	President
Dr. Raviraj. M. Kulkarni	Teaching	Vice President
Dr. Manjula Ramannavar	Teaching	Convener
Prof. Vishveshkumar Aithal	Teaching	Innovation Activity Coordinator
Prof. Mahesh Kori	Teaching	IPR Activity Coordinator
Prof. Shashank Bangi	Teaching	Social Media Coordinator
Prof. Raghavendra Jadhav	Teaching	Startup Activity Coordinator
Prof. Ramesh Koti	Teaching	ARIIA Coordinator, NIRF Coordinator
Prof. S. H. Manoor	Teaching	Internship Activity Coordinator
Ms. Seema K. Sawant	Non-Teaching faculty	Support staff
Mr. Prakash Mugali	External Expert	Expert from nearby Industry/Industry association/ Ecosystem Enablers
Mr. Neelesh Chougule	External Expert	Start-up/ Alumni Entrepreneur
Mr. Harsh Pangi	External Expert	IPR expert
Mr. Kartik Kumar Choudhary	External Expert	Start-up mentor

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

Total No. of IIC Members	26
Total No. of IAs	13
Total No. of faculty	21
Mentors From Portal	6
Pre-Incubation Units	1
Incubation Units	1
IP Facilitation Unit	1

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

Entrepreneurship in the campus.
- Incubation facility is available in the college
- NAIN pre incubation facility is available in the college

Student Chapters:
- IEEE Student Branch
- ACM Student Chapter
- Computer Society of India (CSI)
- American Society of Mechanical Engineers (ASME)

Student Clubs:
- NASA Club

- RISE – Social and Innovation Club
- Renewable Energy and Smart Innovation Club
- Engineers Without Borders
- Nano Club
- Vayuputras

E. Highlight Achievements (Narrative/Graphical/tabular representation)
- Number and Different types of I&E and IPR activities Conducted - 29
- No. of student's & faculty ideas generated – 163 (94+14+20+35)
  Ideas generated out of Idea Innovation Lab – 94
  The Idea Harvest Challenge – 14
  Startup Sprint - Intra Institutional Innovation Competition – 20
  Dreamscape Innovation-B-Plan – Inter Institutional Start-Up Competition– 35

- No. of student's & faculty Innovation/prototypes developed – 114 (94+20)
  Prototypes generated out of Idea Innovation Lab – 94
  Prototypes generated out of Startup Sprint– 20

- No. of Student & Faculty Start-ups/Ventures established – 2

- No. of IPs generated, published and granted – 04
- Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus – Rs. 70000
- Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR – Rs. 3Lakhs

- Participated in National/International level hackathon/Any competition
  Students Participated – 180 (6+43+69+62)
  Smart India Hackathon – 6
  The Idea Harvest Challenge – 43
  Startup Sprint - Intra Institutional Innovation Competition – 69
  Dreamscape Innovation-B-Plan – Inter Institutional Start-Up Competition– 62

  Student Winners – 14
  The Idea Harvest Challenge – 2
  Startup Sprint - Intra Institutional Innovation Competition – 8
  Dreamscape Innovation-B-Plan – Inter Institutional Start-Up Competition– 14

F. Highlight few best IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum
  Paper submitted by Prof. Shashank C. Bangi: "A modified temperature based model for estimation of potential evapotranspiration over Ghataprabha river basin, south India", has been published in Spatial Information Research journal (Q2) under springer publication in May 2023

G. Highlight selected best Innovations & images with mention of inventor/innovation name
  i. Flow Control Valve
     Name of Inventor: Dr. M.S. Patil

The present disclosure seeks to provide a flow control valve. The present disclosure 10 seeks to provide a solution to the existing problem of manual control of flow control valve, gland leakages and fugitive emissions. An aim of the present disclosure is to provide a solution that overcomes at least partially the problems encountered in prior art, and provides an improved control of the flow control valve via a controller and overcomes gland leakages and fugitive emissions.

ii. Solar Heating Arrangement for Heating Water

Name of Inventor: Dr. M.S. Patil

The principal object of the present invention is to provide an effective and efficient solar heating arrangement and method for heating water. Another object of the present invention is to provide a more promising and eco- friendly method of heating water with said solar heating arrangement. 10 Another object of the present invention is to provide instant water heating despite subsequent usages in a period of time. Another object of the present invention is to provide a long-term cost and energy saving method in order to make the arrangement more efficient. Another object of the present invention is to provide a method inhibiting the water 15 wastage in the pipes between usages.

iii. Smart Glove for Hearing Impaired

Name of Inventor: Dr. S. S. Sannakki, G. L. Kulkarni

Gesture recognition approach has a broad scope of utilizations and employments. This method can be utilized to control gadgets only via motions with no manual connection with the particular machine. Using sign identification, an individual can pin out at the computer or at a versatile screen and utilize linguistic communication to pick and utilize totally distinctive implementations within the device. This linguistic communication employed by deaf and mute folks will be understood by the normal person this method and reborn to content so sanctioning and helping higher conversation among the deaf - mute and other individuals cooperating with them. Signal verbalization is one of the useful ways to ease the communication between the deaf and mute and normal society. Though signing may be enforced to speak, the target person should have a thought of the signing that isn't attainable forever. Thus, it reduces such barriers. This Invention was meant to be a typical example to visualize the feasibleness of recognizing sign languages. With this, deaf or mute communities will use the gloves to make gestures in keeping with signing and also the gestures are going to be converted to speech. The system may be a bridge between traditional and dumb\deaf folks; it fills the gaps of communication between dumb\deaf folks and traditional people. The gloves area unit freelance and it's moveable with minimum weight and low power. The system converts the hand gestures to the text and more to speech. If in some conditions the person can't hear the sound produced there is a provision provided into the system of text due to which the person can read and understand what another person wants to convey.

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

H.1 MPSIT LABS PVT LTD

Founder – Dr. Sujata Bhavikatti, CEO and Director and Associate Professor, Dept. of ECE, KLS GIT
Co-founder Kusuma Jolad
Director
Company registration details: pan AAPCM1178H
COMPANY URL
https:mpsitlabs.in

H.2 Eyesec Cyber Security Solutions Pvt. Ltd.
Founder – Prof. Gajendra C. Deshpande, Asst. Prof, Dept. of CSE

H.3 Hydroponics
Shrinivas Kulkarni Mech
Rajat S Hanchte, Mech
Abhishek Noganihal, CSE
Aditya Joshi, ECE

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

I.1 Title: Development of Novel Steel Foams from Machining Waste to Enhance the Safety Ratings of Indian Passenger Vehicles
Faculty Supervisor: Dr. Vinayak Malik
Brief Information: A new kind of metallic foam was developed using an unusual processing route of Microwave Sintering and the machining waste generated during regular industrial operations. The developed foams exhibited very high impact energy absorbing ability, making them an alternative option to use in crash boxes of passenger vehicles. It offers a cost-effective and efficient solution to the existing low safety ratings of Indian passenger vehicles.
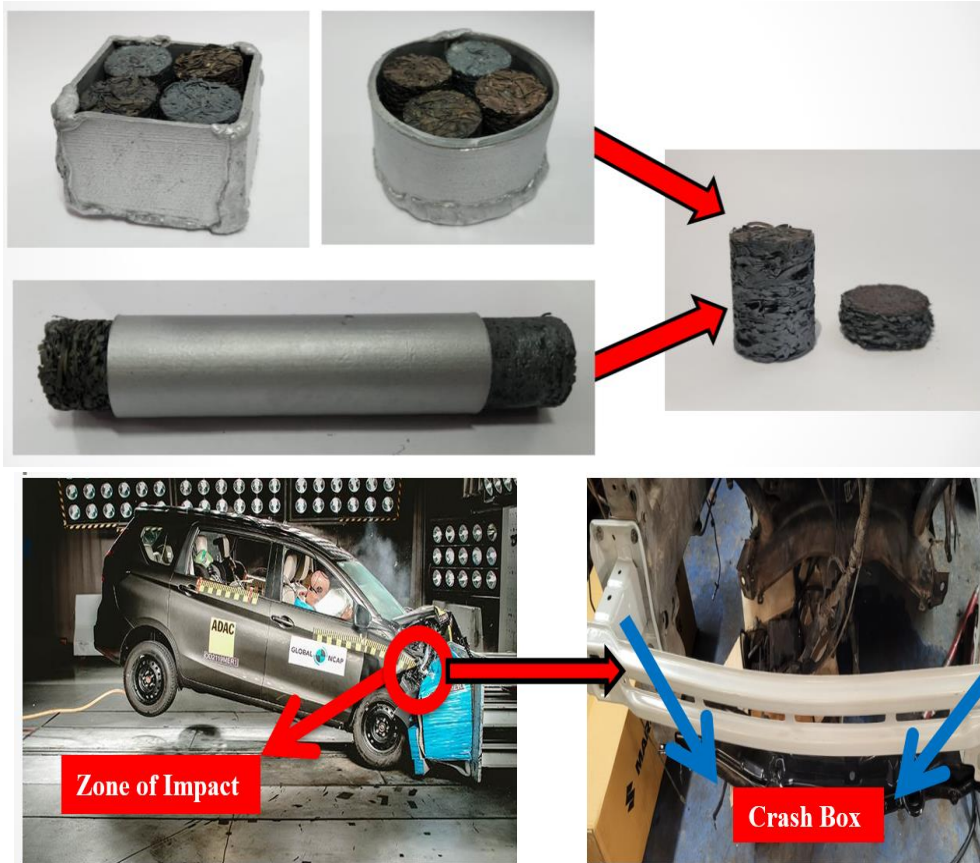
I.2 Title: Microwave Welding of 3D Printed Parts
Faculty Supervisor: Dr. Vinayak Malik, Vivek Kumar Tiwary

Brief Information: A new technique to join longer and more complex parts was developed to overcome the bed size limitations of smaller 3D printed parts. The process was further fine-tuned such that it could be performed using household microwave ovens. This technique helps make bigger parts with better strength and dimensional accuracy, which are generally impossible with smaller 3D printers.

1. 3D Printed in sections — In MW oven
2. After Welding — UAV Wing
3. 3D Printed UAV: the wings joined by MW welding
4. 3D Printed drone structure inside an oven
5. 3D printed Drone: Repaired by household MW oven

I.3 Start-up Sprint Winner Team Innovation: "HYDROPONICS"

Team Members: 1) Shrinivas Kulkarni   2) Rajat Hanchate
              3) Shrutik Jambotkar   4) Amey Kulkarni

Brief description: Team presented an advanced farming technique where the crops are grown using water. The medium soil which is used conventionally to grow crops is replaced by water fed with necessary nutrients and the crops are grown in PVC pipes and able to produce large number crops in a small area. Hydroponics is rewarding and easy on the pocket technique of plant cultivation, moreover, it gives the liberty to use your creativity and get high volume plant production. Hydroponic systems facilitate a consistent supply of water and required nutrients, eliminating the stress and hit and trial involved with growing herbs in the soil. hydroponics uses no soil, this automatically becomes less of a worry. So No soil-borne diseases, no weeding, and the need to introduce those harmful insecticide sprays into your indoor environment are less expected. Team plans to take parts of non-functional spaces like terraces for rent or lease in residential societies and intend to grow vegetables using hydroponics. The society will have their own source of fresh vegetables straight from their rooftops.

A rendered image of the model.

I.4 Start-up Sprint Runner Team Innovation: " YUVA"
Team Members: 1) Koushal Kedari   2) Asadkhan Ustad
                          3) Prathamesh Magadum   4) Ian D'Souza

Brief description: Team presented an idea called YUVA- A Student Information Management, which gives a solution to the complexity in exchanging student information among educational institutions and government entities at various levels of administrations. YUVA is a service based solution, partnered with government to solve complex chain of information exchange of students. The provide unique ID to every student containing all the information about students which includes, student address, grades, achievements, parental information, family background, legal charges and other legal ID like driving licence etc. Accessible by educational institutions, government bodies and banks to retrieve information about student.

J. Participation of IIC-institute in various programs of Central and Stage Govt. Highlighting specially for the schemes or programs
    ARIIA – participation and Rank- Participated
    NISP Adoption status - Trained Faculty, Policy Formulation, Policy Implementation – Work in progress
    Smart India Hackathon – GIT team has participated in the Hackathon

K. Detail of Social Media & Connections of IIC institute
    Facebook: https://www.facebook.com/KLSGITBelagavi
    LinkedIn: https://www.linkedin.com/company/klsgitbelagavi
    Twitter: https://twitter.com/klsgitbelagavi
    Instagram: https://www.instagram.com/klsgitbelagavi/

L. Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell
    Prof. Swarooprani Manoor, Internship Activity Coordinator, IIC, GIT, Belagavi
    As one of the premier Engineering colleges in North Karnataka, KLS Gogte Institute of Technology aims at supporting and developing entrepreneurial start-up business by

young promoters, college students or fresh graduates. IIC is encouraging teachers and students to explore, research, and use all the tools to uncover something new. It works in a very systematic manner. At the start of the term it suggests an array of activities focussing on different aspects of innovation, in its Calendar of Activities. We all wholeheartedly participated in a multitude of activities suggested and conducted by IIC. Our Institute has witnessed a jump in carefully curated activities for its students, setting the pace for the future. To inculcate an innovative and growth-oriented mind-set amongst the students, IIC in our Institute has been actively taking various steps by hosting a multitude of talks, competitions, workshops and extending support to students. IIC at KLS GIT has been successful in paving way for more zealous activities in the times to come.

Prof. Uttam Deshpane, ARIIA/NIRF Coordinator, IIC, GIT, Belagavi
Gogte Institute of Technology, Belagavi is one of the prestigious Technical institute in north Karnataka. MoE's IIC at GIT is involved actively in conducting various activities related to IPR, Innovation, Entrepreneurship, Strat-up, design thinking and Prototype validation and many more. I am extremely happy to be associated with this   council as Innovation Ambassador and ARIIA/NIRF Coordinator. With the help of college management and guidance of AICTE, MoE and IIC, I am sure we will conduct more events in days to come.
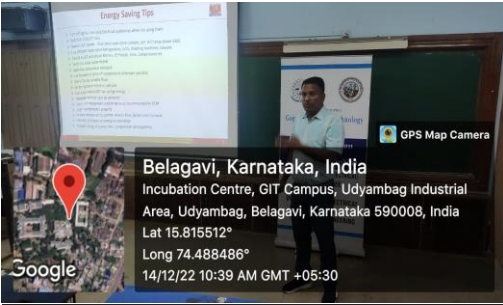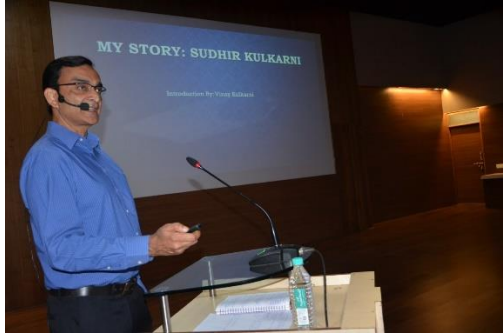
IIC at KLS Gogte Institute of Technology is committed to create a vibrant local innovation ecosystem with the support of entire team of faculty and student members of council, the institute is participating for Atal Ranking of Institutions on Innovation Achievements Framework & implementation NISP policy– Dr. Kiran K. Tangod, President, IIC KLSGIT, Belagavi.
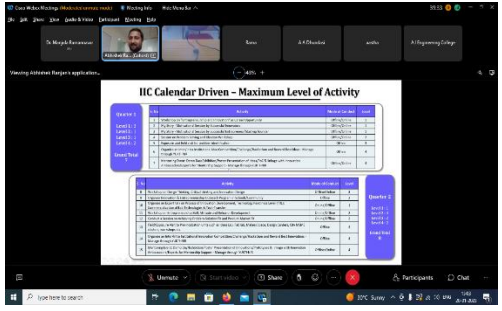
IIC is a very vibrant platform to organize various events related to the innovation, IPR, start-up and entrepreneurship for the benefit of students and faculty fraternity. Due to these activities, students are getting a chance to participate in various innovation related initiatives, idea competitions, Smart India Hackathon & Innovation contests organized by MOE. IIC-MECS has given me an opportunity to attend training programmes at advanced level to be recognized as Innovation Ambassador– Shrivatsa D. Perur, Innovation Ambassador, IIC KLSGIT, Belagavi.

The IIC has wide area of activities to encourage the students and research scholars to make the start-ups. It guides the young people with explaining and demonstrating through the experienced and also with successful owners of the recent start-ups– Ramesh Koti, -ARIIA & NIRF coordinator, IIC KLSGIT, Belagavi.

M. Images

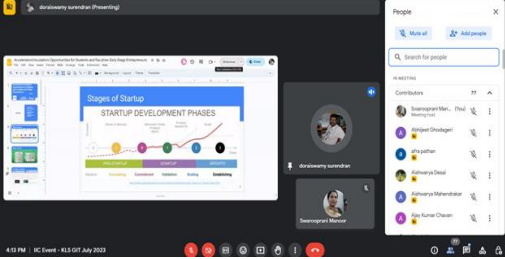| S.No	Activity Name	Type of Activity	Date	Resource Person / Mentor/ Evaluator	Photographs
1	Design with Fun - UI/UX FDP	IIC Calendar driven	07-09-2022 to 09-09-2022	Mr. Vijay Kamat Lead UX Designer, Athenahealth, Bengaluru	
2	"Faculty and Student Development Program on Intellectual Property Rights"	IIC Self Driven	13-09-2022	1) Mr. B Vivek Anand Sagar Consultant and IP Attorney KSCST 2) Mr. Nagarjun M G Project Associate, KSCST	
3	The IDEA SEED - Making the World a Better Place	IIC Calendar driven	28-11-2022	Mrs. Nita Ajith Technical Lead – Cloud Integration Services, United Techno, Chennai, TamilNadu	
4	"THE IDEA HARVEST" Challenge - Making the World a Better Place	IIC Self Driven	28-11-2022 to 30/11/2022	Mrs. Nita Ajith Technical Lead – Cloud Integration Services, United Techno, Chennai, TamilNadu	

5	National Energy Conservation Day(India)	IIC Day Celebration	14-12-2022	Mr. Subhash Nesargi HoD, Electrical and Instrumentation, Plant Energy Auditor Hindalco Industries Ltd. Belagavi, Karnataka	
6	"MY STORY" – A Motivational Talk	IIC Self Driven	26-12-2022	Mr Sudhir Kulkarni GM, Data & AI Platforms Intel Corporation, United States	
7	IPR Awareness Program	IIC Self Driven	10-01-2023	Mr. Jyotish Kumar Patent Examiner (Group A Gazetted Officer), Indian Patent Office	
8	IIC Industrial Visit "Startup and Entrepreneurship Exposure Visits"	IIC Calendar driven	11-01-2023	Mr. Sunil Angolkar Technical Lead Abhishek Alloys Pvt Ltd., Belagavi	

9	National Youth Day Celebrations	IIC Day Celebration	12-01-2023	-	
10	MY STORY- Motivational Session By Successful Startup Founder	IIC Day Celebration - National Startup Day	16-01-2023	Mr. Yogesh Patil Independent Consultant and Entrepreneur FUTURE TECHNOLOGYS, Belagavi	
11	Intellectual Property - From Awareness to Understanding	IIC Self Driven	19-01-2023	Mr. Harsh Pangi Founder - IP-FY Head, IPR Cell, MSME and Startups Forum - Bharat	
12	Orientation Session on IIC 5.0 & Features	IIC MIC Driven	20-01-2023	Mr. Abhishekh Kumar Ranjan Innovation Officer, SWRO MOE Innovation Cell	
13	Webinar on Entrepreneurship Skill, attitude and behavior development	IIC Calendar driven	31-01-2023	Mr. Piyush Yadav Co-founder and CFO IPQuad Partners	

14	STARTUP SPRINT	IIC Calendar driven	07-02-2023 to 09-02-2023	1) Mr. Supreet Dixit Director, Reputed Marketing Solutions, Belagavi 2) Dr. Govindraj Mane Assistant Professor, Dept of MBA, KLS GIT, BELAGAVI	
15	Framework of Indian Patents, Publications and Grants	IIC Day Celebration – National Science Day	27-02-2023	Dr. Shivaprasad H. Attorney General of Patents and Designs, Chennai, GoI	
16	Leadership Talk with Prof. T. G. Sitharam, Hon'ble Chairman, All India Council for Technical Education (AICTE)	IIC MIC Driven	30-01-2023	Prof. T. G. Sitharam Hon'ble Chairman, All India Council for Technical Education (AICTE)	

17	"Being the Boss of You", A Motivational Talk	IIC Day Celebration - International Women's Day	09-03-2023	Ms. Natasha Ajgaonkar Counselling Psychologist Founder, "Mind In Visible"	
18	"Creativity and Innovation"	IIC Day Celebration - World Creativity and Innovation Day	21-04-2023	Mrs. Samskruti Raikar Learning Consultant, Teachademy,Campus Head of Strategic Development, SamMegh Technologies	
19	Workshop on Business Model Canvas (BMC)	IIC Calendar driven	11-05-2023	Mr. Kartik Kumar Choudhary Assistant Manager at NSRCEL, a Start-Up Hub at IIM, Bengaluru	
20	National Technology Week Inaugural Address of Hon'ble Prime Minister of India	IIC MIC Driven	11-05-2023	--	

21	Data Analytics for Business Decision Making	IIC Day Celebration - National Technology Day	18-05-2023	Mr. Sachin S. L. Senior Analyst, OMG Annalect	
22	Workshop on Process Design and Development	IIC Calendar driven	19-05-2023	Mr. Venkatesh Pattan Co-Founder, Sprint2success, Franchise Partner of CESA, Pune	
23	Design Thinking	IIC Calendar driven	25-05-2023	Prof. Vineeta Gejji Senior IEEE Member and Prof at AGMR college of Engg., Varur	
24	Educational Trail to Vaccine Depot	IIC Day Celebration – World Environment Day	5-06-2023	Ar. Nishita Tadkodkar Prof., KLS GIT	
25	Dreamscape Innovation – B-Plan Inter Institutional	IIC Self Driven	07-07-2023 to 08 -07-2023	1. Dr. Manjula Ramannavar- Faculty KLS GIT	

	Start-Up Competition			2. Ms. Sheetal Bandekar- Faculty KLS GIT 3. Mr. Mallikarjun Karehonna- Founder and CEO, My Van 4. Mr. Jignesh – Entrepreneur 5. Ms. Chetana Sarang- Founder Dattamsh Edu Tech Pvt. Ltd 6. Ms. Ashwini Patil- Professional Banking and Insurance 7. Prof. Pandurang Upparamani- Faculty KLS GIT 8. Prof. Khangoudar- Faculty KLS GIT 9. Prof. Shrivatsa Perur- Faculty KLS GIT	
26	"Accelerators/Incubation Opportunities for Students & Faculty -Early Stage Entrepreneurs"	IIC Calendar Driven	14-07-2023	Dr. Surendran Doraiswamy Founder & CEO – SKS Skill Fasteners Pvt. Ltd. Coimbatore, Tamilnadu	
27	Independence Day- Celebrating Aazadi Ka Amritkal	IIC Day Celebration	15-08-2023		
28	Social Change through Social Entrepreneurship	IIC Day Celebration World	21-08-2023	Mrs. Roopa Cholapache and Mr. Shekhar Cholapache	

| | | Environme nt Day | | Social Entrepreneurs and Founders, Anand Yatri Old Age Home | |

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