



ANNUAL REPORT

2020-21





Institutions Innovation Council Model Institute of Engineering and Technology (Autonomous)

NAAC "A" Grade Accredited

Model Institute of Engineering and Technology (Autonomous), Kot Bhalwal, Jammu-181122

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A. About IIC Institute

Model Institute of Engineering and Technology (Autonomous), hereinafter referred as MIET, is an Autonomous institution in J&K committed to the cause of promoting quality education and research in engineering and allied domains. Innovation has been identified as a core value driving the MIET strategy and its identified objective of emerging as a credible center for innovation and research in the J&K region

- Vision / Mission of IIC established at the Institute
 - o Vision: To promote grass-root innovation leading to incubation of start-ups in the region
 - o Mission: To develop an ecosystem of innovation and entrepreneurship at MIET with adequate infrastructure that can enable students and faculty to innovate, prototype and commercialise their potential ideas

Major Focus of IIC

- o To create a vibrant local innovation ecosystem
- o Start-up/ entrepreneurship supporting Mechanism in HEIs
- o Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas
- o Develop better Cognitive Ability amongst Technology Students

• Functions of IIC

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

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• Journey of IIC established at the Institute

- o In the year 2018, the Ministry of Education (MoE) through MoE's Innovation Cell (MIC) launched the Institution's Innovation Council (IIC) program in collaboration with AICTE for Higher Educational Institutions (HEIs) to systematically foster the culture of innovation and start-up ecosystem in education institutions.
- o Primarily, IIC's role is to engage large number of faculty, students and staff in various innovation and entrepreneurship related activities such as ideation, Problem solving, Proof of Concept development, Design Thinking, IPR, project handling and management at Preincubation/Incubation stage, etc., so that innovation and entrepreneurship ecosystem gets established and stabilized in HEIs.
- o AY 2018-2019: During this year IIC at MIET Jammu participated in following activities
 - Workshop on Cognitive Skills, Design Thinking and Critical Thinking using local resource persons
 - Episode 02 of India First Leadership Talk with Dr. Anand Deshpande, CMD, Persistent Systems Ltd.
 - Episode 03 of India First Leadership Talk with Dr. Ajit Doval, NSA, Govt. of india
 - Episode 04 of India First Leadership Talk with with Prof. Anil D. Sahasrabudhe, Chairman, AICTE
 - Offline workshop on IPR for Students and Faculty Members. Workshop on IPR for Students and Faculty Members.
 - India First Leadership Talk by Shri. Anand Mahindra, Chairman, Mahindra Group
- o AY 2019-2020: During this year IIC at MIET Jammu received 5 stars in performance. Total of 23 IIC activities, 47 MIC activities and 52 Self driven activities were approved across all the four quarters.
- Diversified representation in the IIC established at the institute from industry, Interdisciplinary & Departments/ Units etc
 - o Industry
 - Mr Siddharth Sharma, Start-up/ Alumni Entrepreneur, INR Deals
 - Mr Rajiv Gupta, Banker, HDFC Bank
 - o Interdisciplinary & Departments
 - Mr Anmol Kumar Gupta, Ecosystem Enabler, UIV Consultants
 - Mr Amit Sharma, KAS officer, Ecosystem Enabler, J&K Government

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B. Brief mention of key functionaries at the IIC Institute



- C. Portfolio/graphical/Tabular representation of Resource strength (human capital and Physical capital) of the IIC institution
- Total No. of IIC Members: 67
- Total No. of IAs: 14
- Total No. of Faculty Mentors from Portal: 17
- Pre-Incubation Units:
 - o Center for Research, Innovation and Entrepreneurship.



- Established in 2019, it houses the state of the art 3D Printing & Prototype Equipment, Workstations with a provision to undertake AI based projects with large databases.
- CRIE builds on a proven research and innovation track-record at MIET with 25 patents filed, 2 IT-products incubated and 650+ research papers published. Some of the major areas that CRIE is working on are Software-Defined Networking, Internet-of-Things (IoT), Web-Mashups, Learning Management, Data Analytics, Machine Learning, Smart Applications, Digitisation and Automation, Strategic Management, Consumer Behaviour and Business Intelligence
- o IOT Test Bed
 - This Innovation centre has been established in 2020
 - This centre has workstations for IPR Cell/Technology Transfer
- Incubation Units, If any: MSME Technology Business Incubator
- IP Facilitation Unit, If any:
 - o IPR Cell
 - Established in 2018
 - The IPR Cell provides funding Support for Idea/Prototype/Innovation Development and implementation

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



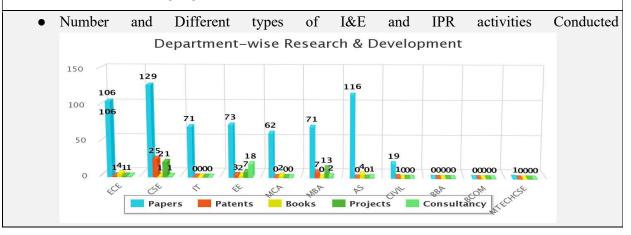


- Mitsubishi Factory and Industrial Robotics Lab: The Mitsubishi Electric FA Lab is the first and exclusive industry-driven center of excellence in the state of J&K in the domain of industrial automation. The Lab is set up with a specific mandate to create awareness and develop industry-relevant skills on the latest equipment and software. Under this collaboration, MEI has supplied high-end automation equipment with all accessories including high-end software for simulation/programming of the equipment to MIET. The training equipment includes the Mitsubishi Electric iQ-R PLC based FA training-kit comprising HMI, VFD, Servo and FX PLC with HMI training kit iQ Platform software (engineering software) with simulation accessories.
- Bentley's BIM Advancement Lab: MIET has achieved the unique distinction of setting up of the first and the only Bentley's BIM Advancement Lab in the state of J&K. The BIM Advancement Lab was inaugurated by Mr. Vinayak Trivedi, Vice President, and Global Head, Bentley on 23th November, 2017. The Bentley BIM Advancement Lab is the first and only industry-driven center of excellence in civil engineering in the state of J&K and among the first few in North India. It will provide access and training to students and faculty members to over 50 world-class software products from the Bentley stable including the famed STAADPro, MxRoad, AECOSim, and MicroStation among others. These software packages have been used in the design and development of world-renowned infrastructure projects from the world's largest malls in Dubai to the Jammu-Udhampur highway.
- IUCEE Student Chapter: This Chapter at Model Institute of Engineering and Technology is a close-knit community that aspires to create an environment for students to grow and instil a sense of giving back to the society.

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- IBM Software Center of Excellence: Under this Center, students of MIET get free training and certification on leading technologies from IBM, besides placement support and participation in The Great Minds Challenge (TGMC), India's most prestigious project competition.
- Center for Software Development: The students are encouraged to undertake design and development of commercial software systems such as to prepare them for jobs in the IT industry. Specialized projects based on the software needs of the institute and external agencies are carried out at the CSDIS. The centre also offers short-term value added courses for the benefit of the students.
- Center for Consultancy Services: The Center for Consultancy Services (CCS) is a humble attempt to reach out to prospective partners from the industry and academia and extend technical or professional support based on the domain expertise and experience of the MIET faculty. We endeavor to deliver the most professional services in a time-bound manner to the full satisfaction of potential customers.
- Center for Research Innovation and Entrepreneurship: The Centre for Research, Innovation and Entrepreneurship is a special initiative at MIET driving applied research through innovative projects. It is a one-of-its-kind multi-disciplinary research center in the state of J&K. One of the major aims of the CRIE is to promote student-driven innovation by addressing important domain-specific challenges and technical problems. Promoting entrepreneurship through the in-house Technology Business Incubator (TBI) under MSME, Govt. of India is also a priority area. The vision of CRIE is to be recognized as a center of excellence in research and innovation. It also has a 3D printer.
- MSME Technology Business Incubator: It is intended to serve as a laboratory to launch new start-ups in emerging domains with a distinctive local context i.e. J&K Focus. MIET is a premier technical institution in J&K attracting the best engineering talent which is committed to start companies generating revenue and creating local employment opportunities. Creating a vibrant start-up ecosystem in J&K will play a key role in ushering in progress in the region which has had a turbulent past. The setting up of the BI at MIET is well-aligned with MIET's objectives of providing thought and technical leadership besides creating significant value for all stakeholders.

E. Achievements Highlights



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• No. of student's & faculty ideas generated: 21 Nos.

Ideas Generated as part of the Innovation Contest at MIC portal: 15 Nos.

Additional Ideas generated apart from the Innovation Contest.

- o iLOOP S.O.S. Ring: Personal Safety meets Lifestyle
- o Efficient User-Friendly Chatbot
- Vibration exception notifier for mobile
- o Crowd Detection System
- Self Driving Vehicle
- Evaluation of Teaching Effectiveness by Video Streams from Camera
- No. of student's & faculty Innovation/prototypes developed: 3
- No. of IPs generated, published and granted: 29
- No. of Student & Faculty Start-ups/Ventures established: One startup PI360 has been established as a Venture



- Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus: Rs 1,20,000 (One Lakh Twenty Thousands only)
- Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR: Rs 1,74,500 (One Lakh Seventy Four Thousands and Five Hundred only)
- No. of Technology Transfer and Commercialisation happened: One (1 Nos.) Start-up "PI360" has been commercialised.

| F. Highlight few best IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum | | |
|---|---------------------------|---|
| SN | Name | Profile along with Achievements/ Rewards for innovations at different forums |
| 1 | Mr Purnendu Prabhat | He is an Assistant Professor at the Model Institute of Engineering and Technology, Jammu in the Department of Computer Science & Engineering. He has a Masters degree in Computer Science (gold medalist) from Central University of South Bihar. He is the first person in J & K to be an NVIDIA DLI University Ambassador which is a select privileged group of DLI Certified Instructors. He is also a certified AWS cloud solutions architect, an AWS Academy Instructor, UiPath Robotic Process Automation trainer and Huawei ICT Academy certified instructor for Artificial Intelligence. He has filed 9 patents at the IPTO, published 11 papers in international journals and conferences and is keen to mentor students on innovative software and research projects. He is also a founding member of the Center for Research, Innovation and Entrepreneurship (CRIE) at MIET and has 6 years of work experience. He is also the IPR Co-ordinator and Innovation Ambassador |
| 2 | Mr Karan Khajuria | Mr. Karan Khajuria is an Assistant Professor at the Model Institute of Engineering and Technology, Jammu in the Department of Computer Science & Engineering. He has a Masters in Software Engineering from Indian Institute of Information Technology(IIIT), Trichy, Tamil Nadu. His areas of interest include AI, NLP, IoT, and Data Analytics. He has filed 2 patents at the IPTO. He is also a part of the Centre for Software Development(CSDIS) as a senior developer and Training and Placement Cell as a technical mentor. He has close to 3 years of working experience. He is also the Entrepreneurship Co-ordinator and Innovation Ambassador |
| 3 | Dr Anand K Gupta | Dr. Anand Kumar Gupta has over 8 years of experience in Industry, Research and Academics. He has graduated from Jaypee Institute of Information Technology, Noida, Uttar Pradesh with Ph. D. degree in July 2020. He did his post-graduation (MCA) from Gautam Buddha Technical University (Formerly known as UPTU) Lucknow, Uttar Pradesh in 2010 and with B. Sc. (Mathematics, Statistics) degree from DeenDayal Upadhyaya Gorakhpur University, Uttar Pradesh, India, in 2007. He has qualified UGC-NET in 2012. His research interests are in the areas of Data Mining, Social Network Analysis, Link Prediction, Machine Learning, Deep Learning and NLP. He has published several research papers in various international conferences and journals. He is also an Innovation Ambassador |

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





Jatin Abrol Social Media Reputation Management

This project builds a Unified Social Media Management tool for one-click content posting across multiple social media platforms such as FB, Instagram, Linkedin and Twitter. It computes social media engagement metrics on a per post level using IBM Watson to analyze posts and auto-suggests content improvement to make it more engaging.





Saba Hamid

MIET AI Chatbot

MIET Artificial Intelligencbased Chatbot running on IBM Watson is integrated with the MIET website to auto-respond to web and social media visitors and answer their queries. It captures important details, providing lead management capabilities and provides relevant and contextual information to the visitors reducing the load for human administrators.





Sudhanshu Koul

JKEDU

JKEDU is an AI and RPA
based institute
recommendation website
which gathers and
consolidates information from
the social media handles of
educational institutes across
J&K. Other than providing
details about the courses etc.
it analyses social media
ratings of users to provide a
recommendation to the
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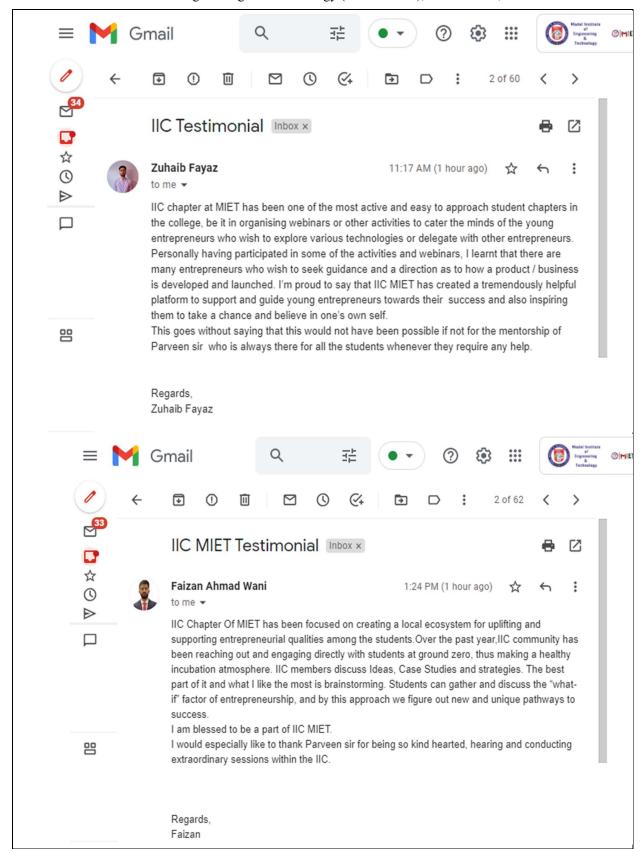
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- **H.** Highlight selected start-ups established by students/faculties with mention of founder/co founder name:
 - One startup PI360 has been established as a Venture as mentioned as achievements at para E above. The Startup has been founded by Prof Ankur Gupta and Dr Sahil Sawhney.
- I. List if any break through Innovations / Technology Developed at the institute (2-3 technology with 2-3 lines about technology and innovation: NIL
- **J.** Participation of IIC-institute in various programs of Central and Stage Govt. Highlighting specially for the schemes or programs
 - ARIIA MIET, Jammu participated in the ARIIA ranking framework.
 - NISP Adoption status MIET IIC has Trained all Faculty about NISP, The Innovation and Start-up Policy has been formulated and published and Implemented. In addition, MIET has established a SEED funding policy and an IPR policy
 - MIET has participated in various Hackathons as under:
 - a. Smart India Hackathon
 - b. Toyacathon
 - c. CSI InApp National Student Project
 - d. Nidhi Prayas Design and Implementation of Ventilator

K. Detail of Social Media & Connections of IIC institute:

- Facebook: The Facebook Page of Institutions Innovation Council at MIET is named as "MIET Institution Innovation Council" and can be accessed through this Link: https://www.facebook.com/MIET-Institution-Innovation-Council-107810634840540
- **Youtube**: The Youtube Channel of Institutions Innovation Council at MIET is named as "MIET IIC" and the same can be accessed through this open Link: https://www.youtube.com/channel/UCaTLaJE7PSL fVoT77q6MXg
- **L.** Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell:







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